

July 7, 2023

Mr. Joe Rogers
Michigan Department of Environment, Great Lakes and Energy
Technical Support Unit
Hazardous Waste Section
Materials Management Division
Lansing District Office
Constitution Hall
525 West Allegan Street
Lansing, MI 48909

Subject: Southern Area Investigation Report– Former Hayes Lemmerz; Ferndale
Michigan
1600 West 8 Mile Road
Ferndale, Michigan
MID 041 803 123
Waste Data System Number 395519

Dear Mr. Rogers,

Please find enclosed this Southern Area Investigation Report – Former Hayes Lemmerz facility located at 1600 West Mile Road, Ferndale (Site) prepared by TRC Environmental Corporation (TRC) on behalf of Axle Holdings 1, LLC (Detroit Axle).

Pursuant to Title 40, Code of Federal Regulations, Part 270.11(b), I certify that I am authorized as a responsible corporate officer, president, director, secretary, superintendent, treasurer or vice president of the corporation in charge of the principal business function or any other person who performs similar policy or decision-making functions or operations for the corporation (Axle Holdings 1, LLC).

Axle Holdings 1, LLC

Mike Musheinesh

Printed Name

President

Title



Signature



Southern Area Investigation Report

Former Hayes Lemmerz Site

July 2023

Prepared For:

Axle Holdings 1, LLC

Prepared By:

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Andrew Stuart
National Market Director

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1.0 Background

The former Hayes Lemmerz Site, located at West Eight Mile Road, Ferndale, Oakland County, Michigan (Site) is a former hazardous waste facility regulated under Part 111, Hazardous Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and its administrative rules (Act 451). The Site is identified as Environmental Protection Agency (EPA) ID Number MID 041 803 123. Under Part 111, an owner or operator of such facilities is subject to corrective action to establish environmental protection standards based on zoning and intended land use.

Subsequent investigations of the Site Property were completed through 2021, as presented in the Atlas Technical Consultants LLC (Atlas), formerly known as ATC Group Services, LLC (ATC) Resource Conservation and Recovery Act (RCRA) Corrective Actions Description of Current Conditions and Interim Measures Report (CCR), dated April 5, 2021, and revised September 21, 2021.

Atlas also submitted a RCRA Corrective Action Facility Investigation (RFI) Work Plan (Work Plan) for the Site to EGLE for approval on February 17, 2022. The February 2022 Work Plan scope was later updated after EGLE provided a comment letter dated July 2022. The updated scope was submitted by TRC in a Revised RCRA Corrective Action Facility Investigation Work Plan dated September 2022 (updated work plan). The RFI summarized the proposed work scopes for the Areas of Concern (AOCs). The Site has been divided into 20 AOCs, based upon past use, identified solid waste management units (SWMUs), geophysical anomalies, electromagnetic induction (EMI) survey data and soil, groundwater and soil vapor concentrations within those specific AOCs.

The first work scope to be completed beginning in 4Q2022 into 2023 as part of the RFI Work Plan is the Southern Area scope which constitutes the majority of the former building and operational areas west of Pinecrest Dr. Areas and potential contaminants east of Pinecrest Dr. are being investigated as part of the Eastern Boundary work scope, with the recent findings of the Eastern Boundary investigation and next steps submitted in the Continued Eastern Boundary Investigation Report – Former Hayes Lemmerz dated April 3, 2023. As part of the Southern Area scope, AOCs 3, 7, 8, 9, 10, 11 and 12 were to be investigated. In addition, a Site Wide Investigation (site geology and utility pathway assessment) was proposed to be completed during the Southern Area investigation.

The AOCs within the Southern Area are as follows:

- AOC 3: The area designated as SWMU-3 (as originally defined in a Preliminary Assessment/Visual Site Inspection Report (PRC Environmental, 1994) is located within the eastern portion of the Site, within the northwest corner of the paved parking lot area. This location was a former burial area for various wastes utilized by Ethyl Corporation from approximately 1939 until 1955.
- AOC 7: This area contained historical Building H, which was utilized for fuel and oil blending. This former building was situated in between former Building B, which was utilized for experimental operations, a machine shop, and vehicle servicing and former Building C, which was utilized for engine research and dynamometer, fuel testing and control testing.

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- AOC 8: This area contained historical Building D, of which the former operations occurring at this building are unknown. This former building was situated in between former Building DA, which was utilized for chemical research and former Building C, which was utilized for engine research and dynamometer, fuel testing and control testing.
 - AOC 9: The area of a former neutralization basin and former underground storage tank (UST) is located along the southeastern portion of the Southern Area.
 - AOC 10: EMI conducted indicated the presence of deep and shallow voids within the subsurface of this area, which is located within the southern-central portion of the Southern Area. Furthermore, a ground penetrating radar (GPR) survey conducted within this area indicated an anomaly within the subsurface. According to historical documentation, a former heating oil UST was located within this area.
 - AOC 11: Electromagnetic induction conducted indicated the presence of deep and shallow voids within the subsurface of this area, which is located within the southern-central portion of the Southern AOC Area. According to historical documentation, USTs were formerly located within this area.
 - AOC 12: EMI conducted indicated the presence of a large deep void within the subsurface of this area, which is located within the southern portion of the Southern AOC Area. Furthermore, a GPR survey conducted within this area indicated an anomaly within the subsurface.

The updated work plan was approved by the EGLE in a letter dated October 17, 2022. Upon approval, TRC then proceeded with the implementation of the updated work plan scope in December 2022 to May 2023. This report documents the investigation of the Southern Area and the Side Wide Investigation as proposed in the RFI.

2.0 Investigation Activity Summary

The following activities were completed December 2022 through May 2023 as proposed in the RFI at each of the AOCs within the Southern Area and the work proposed as part of the Sitewide investigation. First general practices followed during this investigation are discussed, and then the work by AOC is detailed after.

2.1 MISS DIG

MISS DIG, Michigan's one-stop underground utility clearance network, was notified of the pending subsurface investigation on December 1, 2022 (Ticket numbers: 2022101001293, 2022101001248, 2022101001228, 2022101001209, 2022101001108, 2022101001084, and 202210100105122120102621), at least 72 hours prior to commencing the subsurface investigation activities. MISS DIG's markings only extend to public properties and right-of-ways.

2.2 Private Utility Locating

Ground Penetrating Radar Systems LLC (GPRS) was retained by Job Site Services, Inc. (JSS) to locate and mark private underground utilities, including any buried utilities that might be present on Site. TRC and GPRS conducted a ground penetrating radar and electromagnetic survey on December 12 and 13, 2022, to identify and mark the location of any potential buried utilities relative to planned monitoring well installation, test pit excavation, and soil boring activities.

2.3 Monitoring Well and Soil Boring Installation

TRC supervised JSS in the installation of fifteen monitoring wells, MW-22-07 to MW-22-21, and two soil borings, SB-01 and SB-02, from December 12 to 16, 2022. The installation of the monitoring wells and soil borings was conducted via a track mounted Geoprobe 7822 unit utilizing direct push technology and over drilled using hollow stem augers. Soils were continuously logged by TRC geologist using the Unified Soil Classification System and to verify the depth to groundwater and the underlying low conductivity clay layer. The two soil borings were installed to 10-foot bgs, while the actual depth of monitoring well installation was determined based on the depth of the underlying clay layer, the bottom of the well screens were placed at the top of the clay/base of the sand layer at approximately 17.5 to 22 feet below ground surface. All soil boring logs are provided in **Appendix A**.

The monitoring wells were constructed using a 2-inch inside diameter poly vinyl chloride (PVC) casing with a 5-foot screen. The filter packs were comprised of medium washed silica sand and extends approximately two feet above the top of the screen. Following placement of the well screen sand, the well annulus was sealed with bentonite chips and the remaining annulus sealed with concrete approximately 0.5 feet ground surface (ft bgs). The wells were finished with riser mount protective metal cover, which was set approximately 1-foot into the concrete surface seal and approximately 4 feet above the ground surface. Well development was performed using pump and surge methods to remove debris from within the well casing and establish good communication with groundwater. Soil cuttings and development water were containerized in drums onsite for characterization and subsequent proper disposal. The well construction and development details are documented in the diagrams provided in **Appendix A**.

2.4 Deep Monitoring Well Installation

TRC supervised Stock Drilling, Inc. in the installation of one monitoring well into the underlying bedrock aquifer, MW-22-22D, from December 19 to 22, 2022 as part of the Site Wide Investigation. The installation of the monitoring well was conducted via a track mounted Terra Sonic 150 CC unit utilizing sonic drilling technology. A larger diameter outer casing was installed into the clay layer from the surface to 25 feet bgs. Soils were continuously logged by TRC geologist using the Unified Soil Classification System and to verify the depth to groundwater and the underlying shale bedrock. The actual depth of monitoring well installation was determined based on the depth of bedrock, the bottom of the well screen was placed within the shale bedrock at approximately 150 feet bgs. Soil boring logs are provided in **Appendix A**.

The monitoring well was constructed using a 2-inch inside diameter PVC casing with a 10-foot screen. The filter packs were comprised of medium washed silica sand and extends approximately two feet above the top of the screen. Following placement of the well screen sand, the well annulus was sealed with two feet of bentonite chips, followed by quick grout tremie filled to approximately 3 feet bgs, and the remaining annulus sealed with concrete to ground surface (ft bgs). The well was finished with riser mount protective metal cover, which was set approximately 1-foot into the concrete surface seal and approximately 4 feet above the ground surface. Well development was performed using pump and surge methods to remove debris from within the well casing and establish good communication with groundwater. Soil cuttings and development water were containerized in drums onsite. The well construction and development details are documented in the diagram provided in **Appendix A**.

2.5 Test Pit Excavations

TRC supervised JSS in the excavation of thirteen test pit excavations, AOC3-TP01 to AOC3-TP03, AOC10-TP01 and AOC10-TP02, AOC11-TP01 to AOC11-TP04, and AOC12-TP01 to AOC12-TP04 from December 13 to 15, 2022. The excavation of the test pits was conducted via a small track-mounted excavator to approximately 10 feet bgs. Soils at sample locations were logged by a TRC geologist using the Unified Soil Classification System. Test pit excavation dimensions were approximately 2.5 feet wide, 6 to 8 feet long, and final depths for the excavations were to 10 feet bgs and/or the depth of obstructions. Test pits shallower than 10 feet bgs were due to obstructions encountered. The test pit excavation locations are presented on Figure 2.

2.6 Monitoring Well and Test Pit Survey

The top of casing elevations and/or locations of the monitoring wells, test pits, and soil borings installed in December 2022 were professionally surveyed by BMJ Engineers and Surveyors, Inc. (BMJ) on December 22, 2022, and are shown on **Figure 2**.

2.7 Static Groundwater Elevations

Static groundwater elevation measurements were collected from the existing and new Southern Area monitoring wells on December 12 to 20, 2022, during the first groundwater sampling event. A second round of static groundwater elevations were collected from the existing Southern Area monitoring wells and new monitoring wells installed in December 2022 on March 20, 2023,

during the second groundwater sampling event. Static groundwater elevations collected from sampled monitoring wells in December 2022 and March 2023 are summarized in **Table 1** and presented on **Figures 3 and 4**, December 2022 and March 2023 Groundwater Contour Maps. The predominant groundwater flow direction along the Eastern Site Boundary is east.

2.8 Groundwater Sampling

Groundwater samples were collected for two events, the first in December 2022 and the second in March 2023 from the following Southern Area monitoring wells: MW-22-07 to MW-22-21, MW-22-22D, MW-101, MW-103, MW-128, and MW-129. MW-102 did not contain any water and was therefore not gauged or sampled for either event. Existing wells proposed to be sampled during these events (MW-122, MW-124, MW-125, MW-126, MW-126, MW-127, MW-130, MW-131, MW-132, MW-133) were not sampled as they could not be located and are assumed to be destroyed. The groundwater samples were collected using low-flow sampling procedures following stabilization according to United States Environmental Protection Agency (EPA) Low-Flow Ground-Water Sampling Procedures guidance. During both the December 2022 event and March 2023 event, three blind field duplicate samples, a field blank and an equipment blank were collected for quality assurance/quality control (QA/QC) purposes. The groundwater locations sampled during these events are presented on **Figure 2**. The groundwater samples were packed with “wet” ice and transported under chain of custody in a chilled cooler following collection to Merit Laboratories, Inc. (Merit) in Lansing, Michigan to be analyzed for the following at some or all sample locations:

- Full Michigan Part 201 Volatile Organic Compounds (VOCs) List + Tentatively Identified Compounds (TICs) by USEPA Method 8260B;
- 1,4 dioxane by USEPA Method 8260B
- Full Michigan Part 201 Semi-Volatile Organic Compounds (SVOCs) List + TICs by USEPA Method 8270D;
- Full Michigan Part 201 Total Metals List by USEPA Methods 6010B/6020A;
- Polychlorinated Bisphenols (PCBs) by USEPA Method 608.3; and
- Michigan List 31 Polyfluoroalkyl and perfluoroalkyl substances (PFAS) by ASTM Method D7979.

Additionally, groundwater samples from both events were transported under chain of custody to the Eurofins Environment Testing in Savannah, Georgia (Eurofins) to be analyzed for the following:

- Tetraethyl Lead by USEPA Method 8270D (select samples);
- Thorium by USEPA Method 6020B; and
- Alcohols (methanol, ethanol, and n-butanol) by USEPA Method 8015B;

Field notes for the groundwater sampling events are included as **Appendix B**.

2.9 Soil Sampling

Soil samples were collected during the December 2022 event from soil borings associated with monitoring wells MW-22-07 to MW-22-21, soil borings SB-01 and SB-02, and test pit excavations AOC3-TP01 to AOC3-TP03, AOC10-TP01 and AOC10-TP02, AOC11-TP01 to AOC11-TP04, and AOC12-TP01 to AOC12-TP04. The depths of the soil samples collected from the monitoring well soil borings and the stand-alone soil borings were at the 2 to 4 foot bgs interval and at the two foot interval immediately above the static water table at approximately 10 to 12 feet bgs. Test pit sample locations were located on the north, south, west, and east walls (designated as N, S, W and E) approximately 5 feet bgs and the floor/bottom of the excavation approximately 8.5 to 10 feet bgs (designated as B). Twelve blind field duplicate samples were collected for quality assurance/quality control (QA/QC) purposes. The monitoring well, test pit, and soil boring locations sampled during these events are presented on **Figure 2**. The soil samples were packed with “wet” ice and transported under chain of custody in a chilled cooler following collection to Merit in Lansing, Michigan to be analyzed for the following at some or all sample locations:

- Full Michigan Part 201 VOCs List + TICs by USEPA Method 8260B;
- 1,4 dioxane by USEPA Method 8260B
- Full Michigan Part 201 SVOCs List + TICs by USEPA Method 8270D;
- Full Michigan Part 201 Total Metals List by USEPA Methods 6010B/6020A;
- Polychlorinated Bisphenols (PCBs) by USEPA Method 608.3; and
- Michigan List 31 Polyfluoroalkyl and perfluoroalkyl substances (PFAS) by ASTM Method D7979.

Additionally, soil samples were transported under chain of custody to the Eurofins to be analyzed for the following:

- Tetraethyl Lead by USEPA Method 8270D (select samples);
- Thorium by USEPA Method 6020B; and
- Alcohols (methanol, ethanol, and n-butanol) by USEPA Method 8015C;

2.10 Quality Assurance Program

This section provides a summary of quality assurance procedures followed for sampling, analysis, and data evaluation for the sampling events. Project quality assurance was accomplished by implementing the quality control procedures detailed below.

2.10.1 Contaminant Free Sample Containers / Preservation Methods

Pre-cleaned and pre-preserved sample containers for all soil and groundwater samples were acquired from Merit. Upon collection, the samples were placed in a cooler containing sufficient ice sealed in plastic bags to cool and maintain each sample’s temperature at 4°C (± 1°C) through receipt by the laboratory. The temperature in the cooler was measured when samples were received at the laboratory, confirming that the 4°C temperature was maintained throughout the shipping/transport process.

2.10.2 Holding Times

Merit provided the holding times for the parameters to be analyzed. Holding times of each sample were compared to allowable holding times per each method of analysis. All analyses were performed within the allowable holding time (**Appendix C**).

2.10.3 Sample Documentation

Each sample was labeled with the following:

- Site identification
- Sampling date and time
- Sample identification or location and depth
- Sampling team
- Sample preservation method

2.10.4 Sample Transport and Delivery

Samples were picked up and transported under standard chain of custody (COC) procedures by Merit courier. The tetraethyl lead, thorium, and alcohols analysis was subcontracted from Merit to Eurofins.

2.10.5 Blind Field Duplicates

Blind field duplicate soil and groundwater samples were generally collected at a minimum 10 percent frequency. These samples were prepared by splitting a single sample between two separate containers. Locations where duplicate samples were collected were selected by field personnel to provide a range of expected contamination concentrations in the field and were submitted as blind duplicates to the laboratory.

2.10.6 Data Quality Review

Data from each round were evaluated for completeness, overall quality and usability, method-specified sample holding times, precision and accuracy, and potential sample contamination. The data were found to be complete and usable for the purposes of this report.

2.11 AOC 3 – SWMU 3 – Former Burial Area

The area designated as SWMU-3 (as originally defined in a Preliminary Assessment/Visual Site Inspection Report (PRC Environmental, 1994) is located within the eastern portion of the Site, within the northwest corner of the paved parking lot area. This location was a former burial area for various wastes utilized by Ethyl from approximately 1939 until 1955.

Constituents of Concern Previously Observed/Objective:

Soil -

Previously, as reported in the Atlas RFI work plan, a total of six soil borings (with three being converted to temporary monitoring wells) and four permanent monitoring wells were completed within and surrounding this AOC. Of the six soil borings installed, five soil samples were

analyzed between the years 2012 and 2015: SB/TMW-8 (1-2'), SB- 11 (10-12'), SB-12 (10-12'), SB-20 (10-12'), and PSB-144 (8-9'). Soil samples were not analyzed for borings SB/TMW-8R or monitoring wells MW-8, MW-9, MW-10 or MW-H. Only bolded COCs had concentrations that exceeded their most restrictive cleanup criteria:

The following chemicals of concern (COCs) were detected between 2012 and 2015:

- VOCs: 2-methylnaphthalene at SB-11 (10-12') and SB-12 (10-12') and trichloroethylene at SB-12 (10-12').
- Polynuclear aromatics (PNAs) (full scan SVOC analysis was not conducted): none detected at PSB-144 (8-9'). The remainder of the soil samples were not analyzed for PNAs.
- Metals: arsenic, barium, chromium, copper, lead, and zinc at SB/TMW-8 (1-2') and PSB-144 (8-9'). Mercury was also detected at SB/TMW-8 (1-2').
- PCBs: none detected at SB/TMW-8 (1-2'). The remainder of the soil samples were not analyzed for PCBs.

Groundwater -

As reported in the Atlas RFI work plan, previous groundwater analytical data for monitoring well MW-8 has not been disclosed and/or the well was not sampled historically. Groundwater samples collected in 2012 from MW-9, MW-10 and MW-H; as well as groundwater samples collected in 2015/2016 from temporary monitoring wells SB/TMW-8 and SB/TMW-8R, had the following detected COCs (only bolded COCs had concentrations that exceeded their most restrictive cleanup criteria):

- VOCs: **1,2-dichlorobenzene (SB/TMW-8 and SB/TMW-8R); trichloroethylene (MW-9 and MW-10)**; chlorobenzene (MW-9) and 1,4-dichlorobenzene (SB/TMW-8 and SB/TMW-8R).
- PNAs/SVOCs (full scan SVOC analysis was not completed): none detected above laboratory reporting levels (RLs).
- Metals: barium, copper and/or zinc (MW-10 and SB/TMW-8). The remainder of the wells did not have groundwater samples analyzed for metals.
- PCBs: groundwater samples were not analyzed for PCBs.

Further delineation of VOCs and metals detected (in particular, 2-methylnaphthalene, trichloroethylene and 1,2-dichlorobenzene) in soil and groundwater for COCs potentially associated with the reported buried laboratory wastes, and physical and chemical characterization and vertical and horizontal delineation of potential groundwater impacts form the objective for this AOC investigation. The unspecified laboratory wastes could be associated with virtually any chemicals used, stored, managed, or disposed onsite. COCs should target a broad spectrum of analysis to ensure current comprehensive analyses are completed.

2022-2023 Completed Assessment

Provided the historical use of this area as a former burial pit for various unidentified wastes, TRC provided oversight for the planned assessment including the completion of four test pits (AOC3-TP01 through AOC3-TP-04) on December 14, 2022. Soil samples were collected from each north, south, east and west sidewall and the bottom of each test pit, with sampling completed

biased to the most contaminated interval if any were identified.

TRC provided oversight for the installation of two permanent monitoring wells MW-22-11 and MW-22-12 on December 13, 2022, within the northwestern and southeastern portions of SWMU-3 to evaluate soil and groundwater conditions in a cross-gradient direction. The monitoring wells were screened to the base of the sand unit and in contact with the underlying clay unit at 12.5-17.5 ft bgs and 15-20 ft bgs respectively. Soil samples were collected from these borings at 2-4 ft bgs and just above the water table at 8-10 ft bgs.

Groundwater sampling at newly installed monitoring wells MW-22-11 and MW-22-12 was completed via low flow techniques in December 2022 and March 2023. Existing monitoring wells MW-130 and MW-131 were to be sampled as well but could not be located. These wells will be attempted to be located as part of the next work plan discussed in Section 5.0. If the wells are found in good condition, they will be sampled one time as discussed in Section 5.0. If the wells are found to be destroyed, they will be properly abandoned.

Soil and groundwater samples collected from each test pit and soil boring/monitoring wells were analyzed by Merit for the following COCs as proposed in the RFI:

- Full Michigan Part 201 VOC list + TICs
- 1-4 dioxane
- Alcohols (methanol, ethanol, and n-butanol)
- Full Michigan Part 201 SVOC list + TICs
- Full Michigan Part 201 Total Metals list
- Polychlorinated Biphenyls (PCBs) (by individual Aroclor). PCBs in groundwater were not analyzed during the March 2023 event due to no detections in the December 2022 event. This was accepted by Joe Rogers of the EGLE during a phone call on March 15, 2023 and confirmed in an EGLE email dated March 28, 2023.
- Michigan List 31 PFAS

2.12 AOC 7 – PCE/TCE

AOC 7 contained historical Building H, which was utilized for fuel and oil blending. This former building was situated in between former Building B, which was utilized for experimental operations, a machine shop, and vehicle servicing and former Building C, which was utilized for engine research and dynamometer, fuel testing and control testing.

Constituents of Concern Previously Observed/Objective:

Soil -

Previously, as reported in the Atlas RFI, a total of six soil borings (with three being converted to temporary monitoring wells and one converted to a permanent monitoring well) were evaluated within and surrounding this AOC. Of the six soil borings installed, seven soil samples were analyzed between the years 2012 and 2020: SB-3 (10-12'), SB-4 (10-12'), SB/TMW-15 (1-2'), SB/TMW-16 (1-2'), SB/TMW-18 (7-8') and MW-126 (4-5') and (7.5-8.5'). Additionally, two temporary soil vapor points, E-3 and E-4 were installed in 2019.

The following COCs were previously detected (only bolded COCs had concentrations that exceeded their most restrictive cleanup criteria):

- VOCs: **naphthalene**, 2-methylnaphthalene and trichlorofluoromethane at **TMW/SB-18 (7-8')**. VOCs were not detected in remaining samples analyzed.
- PNAs/SVOCs: Full scan SVOC analysis was only completed at the MW-126 location. **Up to 14 PNAs were detected at SB/TMW-18 (7-8') with multiple constituents exceeding the most restrictive cleanup criteria.** Select PNAs/SVOCs were also detected at SB-3 (10-12'), SB/TMW-16 (1-2'), SB/TMW-18 (7-8') and MW-126 (4-5'), below their respective cleanup criteria.
- Metals: multiple metals (including arsenic, barium, cadmium, chromium etc.) were detected at all samples analyzed. **Mercury was detected at SB/TMW-16 (1-2') and SB/TMW-18 (7-8') above default background levels** and at SB-3 (10-12') below the default background level.
- PCBs: Were not detected above the RLs.

Groundwater –

According to prior reports, groundwater samples were not collected from temporary monitoring well SB/TMW-15. Groundwater samples collected in 2016 from temporary monitoring wells SB/TMW-16 and SB/TMW-18, as well as groundwater samples collected in 2020 from monitoring well MW-126, detected the following COCs (only bolded COCs had concentrations that exceeded the most restrictive cleanup criteria):

- VOCs: **tetrachloroethylene at SB/TMW-16, SB/TMW-18 and MW-126; trichloroethylene at MW-126;** trichlorofluoromethane at SB/TMW-16 and SB/TMW-18; and 1,1-dichloroethylene at SB/TMW-18.
- SVOCs: Were not detected above the RLs.
- Metals: up to 10 metals were detected in each sample collected, including **aluminum, boron, iron, manganese, and vanadium at MW-126.**

PCBs: none detected at MW-126. Groundwater samples collected from SB/TMW-16 and SB/TMW-18 were not analyzed for PCBs.

2022-2023 Completed Assessment

TRC provided oversight for the installation of two permanent monitoring wells MW-22-08 and MW-22-09 on December 12, 2022, located within the central and northwestern portions of the AOC. The monitoring wells were screened to the base of the sand unit and in contact with the underlying clay unit at 15-20 ft bgs and 17-22 ft bgs respectively. Soil samples were collected from these borings at 2-4 ft bgs and just above the water table at 8-10 ft bgs.

Groundwater sampling at newly installed monitoring wells MW-22-08 and MW-22-09 was completed via low flow techniques in December 2022 and March 2023. Existing monitoring well MW-126 was to be sampled but could not be located. This well will be attempted to be located as part of the next work plan discussed in Section 5.0. If the well is found in good condition, it will be sampled one time as discussed in Section 5.0. If the well is found to be destroyed, it will be properly abandoned and replaced.

Soil and groundwater samples collected from each test pit and soil boring/monitoring wells were analyzed by Merit for the following as proposed in the RFI:

- Full Michigan Part 201 VOC list + TICs
- 1-4 dioxane
- Alcohols (methanol, ethanol, and n-butanol)
- Full Part 201 SVOC list + TICs
- Full Part 201 Total Metals list
- PCBs (by individual Aroclor). PCBs in groundwater were not analyzed during the March 2023 event due to no detections in the December 2022 event. This was accepted by Joe Rogers of the EGLE during a phone call on March 15, 2023, and confirmed in an EGLE email dated March 28, 2023.
- Michigan List 31 PFAS
- Tetraethyl Lead. Tetraethyl lead in groundwater was not analyzed during the March 2023 event due to no detections in the December 2022 event. This was accepted by Joe Rogers of the EGLE during a phone call on March 15, 2023, and confirmed in an EGLE email dated March 28, 2023.

2.13 AOC 8 – PFOA/PFOS

AOC 8 contained historical Building D, of which the former operations occurring at this building are unknown. This former building was situated in between former Building DA, which was utilized for chemical research and former Building C, which was utilized for engine research and dynamometer, fuel testing and control testing.

Constituents of Concern Previously Observed/Objective:

Soil-

Previously, as reported in the Atlas RFI, a total of seven soil borings (with two being converted to temporary monitoring wells and four converted to a permanent monitoring well) were evaluated within and surrounding this AOC. Of the seven soil borings installed, nine soil samples were analyzed between the years 2012 and 2020: SB/TMW-20 (1-2'), SB-21 (10-12'), SB/TMW-30 (8-9'), MW-128 (4-5') and (8-9'), MW-129 (3-4'), MW-132 (5.5-6.5') and MW-133 (3-4') and (10-11').

The following COCs were detected (only bolded COCs had concentrations that exceeded the most restrictive cleanup criteria):

- VOCs: Were not detected above the RLs.
- PNAs/SVOCs: Full scan SVOC analysis was only completed at MW-128, MW-129, MW-132 and MW-133 locations. Multiple SVOCs were detected with **benzo(b)pyrene, carbazole, dibenzofuran, fluoranthene, naphthalene and/or phenanthrene exceeding the most restrictive cleanup criteria at each sample**. PNAs were not detected in remaining samples analyzed.

- Metals: multiple metals (including arsenic, barium, cadmium, chromium etc.) were detected at all samples analyzed, with the exception of SB-20 and SB/TMW-30, which were not analyzed for metals. **Mercury was detected at MW-129 (3-4'), MW-132 (5.5-6.5'), MW-133 (3-4') and (10-11') above default background levels and VIAP screening levels.**
- PCBs: Were not detected above the RLs.

Groundwater –

Previously, as reported in the Atlas RFI, groundwater samples collected in 2016 from temporary monitoring wells SB/TMW-20 and SB/TMW-30, as well as groundwater samples collected in 2020 from monitoring wells MW-128, MW-129, MW-132 and MW-133, detected the following COCs (only bolded COCs had concentrations that exceeded their most restrictive cleanup criteria):

- VOCs: trichlorofluoromethane at SB/TMW-20 and SB/TMW-30; and 1,1-dichloroethylene at SB/TMW-20; **tetrachloroethylene at MW-128; trichloroethylene at MW-129;** acetone, chloromethane, 1,4-dioxane, **ethylbenzene, naphthalene,** toluene, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, xylene and **methanol at MW-132;** and chloromethane and **naphthalene at MW-133.**
- SVOCs: **carbazole,** fluoranthene, **naphthalene,** 2-nitrophenol, 4-nitrophenol, **phenanthrene** and phenol at **MW-132;** **carbazole,** fluoranthene, naphthalene and **phenanthrene at MW-133.**
- Metals: multiple metals (including arsenic, barium, cadmium, chromium etc.) were detected at all samples analyzed, with the exception of SB/TMW-30, which was not analyzed for metals. **Boron was detected in MW-128, MW-129 and MW-133.**
- PCBs: Were not detected above the RLs.
- PFAS: A total of ten PFAS compounds were detected at MW-128, MW-129, MW-132 and MW-133 with **Perfluorooctanoic acid (PFOA), Perfluorononanoic acid (PFNA) and/or Perfluorooctane sulfonic acid (PFOS)** exceeding the most restrictive cleanup criteria.

2022-2023 Completed Assessment

TRC provided oversight for the installation of two permanent monitoring wells MW-22-18 and MW-22-19 on December 15, 2022, along the eastern/southeastern border of this area to determine if PFAS concentrations are migrating in a horizontal downgradient direction. The monitoring wells were screened to the base of the sand unit and in contact with the underlying clay unit at 16-21 ft bgs and 17-22 ft bgs respectively. Soil samples were collected from these borings at 2-4 ft bgs and just above the water table at 8-10 ft bgs. Wells were installed in contact with the underlying clay unit due to the presence of chlorinated solvents in this area. Attempting to identify the source of PFAS concentrations was also included in the assessment activities.

Groundwater sampling at newly installed monitoring wells MW-22-18 and MW-22-19 and existing monitoring wells MW-128 and MW-129 was completed via low flow techniques in December 2022 and March 2023. Existing monitoring wells MW-132 and MW-133 were to be sampled as well but could not be located. These wells will be attempted to be located as part of the next work plan discussed in Section 5.0. If the wells are found in good condition, they will be sampled one time per Section 5.0. If they are found destroyed, they will be properly abandoned.

Soil and groundwater samples collected from each test pit and soil boring/monitoring wells were analyzed by Merit for the following as proposed in the RFI:

- Full Michigan Part 201 VOC list + TICs
- 1-4 dioxane
- Alcohols (methanol, ethanol, and n-butanol)
- Full Michigan Part 201 SVOC list + TICs
- Full Michigan Part 201 Total Metals list
- Polychlorinated Biphenyls (PCBs) (by individual Aroclor). PCBs in groundwater were not analyzed during the March 2023 event due to no detections in the December 2022 event. This was accepted by Joe Rogers of the EGLE during a phone call on March 15, 2023 and confirmed in an EGLE email dated March 28, 2023.
- Michigan List 31 PFAS

2.14 AOC 9 – Neutralization Basin/Former UST Area

The area of a former neutralization basin and former UST is located along the southeastern portion of the Southern Area.

Constituents of Concern Previously Observed/Objective:

Soil -

Previously, as reported in the Atlas RFI, a total of five soil borings (with three being converted to temporary monitoring wells and two permanent monitoring wells) were completed within and surrounding this AOC. Of the soil borings installed, four soil samples were analyzed between the years 2012 and 2016: SB-8 (10-12'), SB/TMW-19 (1-2'), SB/TMW-20 (1-2') and SB/TMW-31 (7-8'). Soil samples were not collected during the installation of monitoring wells MW-D and MW-E.

The following COCs were detected (only bolded COCs had concentrations that exceeded their most restrictive cleanup criteria):

- VOCs: trichloroethylene at SB/TMW-19 (1-2'); 2-methylnaphthalene, naphthalene and 1,2,4-trimethylbenzene at SB-8 (10-12'). VOCs were not detected above the RLs in the remaining samples analyzed.
- PNAs (full scan SVOC analysis was not conducted): Were not detected above the RLs.
- Metals: arsenic, barium, chromium, copper, lead and zinc at SB/TMW-19 (1-2') and SB/TMW-20 (1-2'). Remaining soil samples were not analyzed for metals.
- PCBs: Were not detected above RLs.

Groundwater –

Previously, groundwater samples collected in 2012 from monitoring wells MW-D and MW-E, as well as from temporary monitoring wells SB/TMW-19, SB/TMW-20 and SB/TMW-31 in 2015 and 2016, detected the following COCs (only bolded COCs exceeded their most restrictive cleanup criteria):

- VOCs: chlorobenzene, 1,1-dichloroethylene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene and/or trichlorofluoromethane at SB/TMW-19, SB/TMW-20 and SB/TMW-31.
- Tetrachloroethylene at MW-E. No detections above the RLs at MW-D.
- PNAs (full scan SVOC analysis was not completed): Diethyl phthalate at MW-E. No PNAs were detected in groundwater above RLs at remaining wells.
- Metals: arsenic, barium, copper and/or zinc at SB/TMW-19 and SB/TMW-20. Groundwater samples collected from SB/TMW-31, MW-D and MW-E were not analyzed for metals.
- PCBs: Groundwater samples were not analyzed for PCBs.

2022-2023 Completed Assessment:

TRC provided oversight for the completion of soil borings SB-01 and SB-02 on December 14, 2022, within the area of the identified electromagnetic anomalies present in the central-southern/southeastern portions of the area, which coincide with the location of the former USTs. The soil borings were advanced to the base of the sand unit and in contact with the underlying clay unit at 20 ft bgs. Soil samples were collected from these borings at 2-4 ft bgs and just above the water table at 8-10 ft bgs to evaluate for the presence of buried orphaned tanks/sumps/vaults.

TRC provided oversight for the installation of three permanent monitoring wells MW-22-13, MW-22-14, and MW-22-15 by on December 14, 2022, within the northern, eastern, southeastern and western portions of the AOC to evaluate soil and groundwater conditions in a cross-gradient direction. Wells were screened to the base of the sand unit and in contact with the underlying clay unit at 13-18 ft bgs, 13-18, and 14-19 ft bgs, respectively. Soil samples were collected from these borings at 2-4 ft bgs and just above the water table at 8-10 ft bgs.

Groundwater sampling at newly installed monitoring wells MW-22-13, MW-22-14, and MW-22-15 was completed via low flow techniques in December 2022 and March 2023.

Soil and groundwater samples collected from each test pit and soil boring/monitoring wells were analyzed by Merit for the following as proposed in the RFI:

- Full Michigan Part 201 VOC list + tentatively identified compounds (TICs)
- 1-4 dioxane
- Alcohols (methanol, ethanol, and n-butanol)
- Full Michigan Part 201 SVOC list + TICs
- Full Michigan Part 201 Total Metals list
- Polychlorinated Biphenyls (PCBs) (by individual Aroclor). PCBs in groundwater were not analyzed during the March 2023 event due to no detections in the December 2022 event. This was accepted by Joe Rogers of the EGLE during a phone call on March 15, 2023, and confirmed in an EGLE email dated March 28, 2023.
- Michigan List 31 PFAS

- Tetraethyl Lead. Tetraethyl lead in groundwater was not analyzed during the March 2023 event due to no detections in the December 2022 event. This was accepted by Joe Rogers of the EGLE during a phone call on March 15, 2023, and confirmed in an EGLE email dated March 28, 2023.

2.15 AOC 10 – Former Heating Oil UST/EMI Interference – GPR Anomaly

Electromagnetic induction conducted indicated the presence of deep and shallow voids within the subsurface of this area, which is located within the southern-central portion of the Southern Area. Furthermore, a GPR survey conducted within this area indicated an anomaly within the subsurface. According to historical documentation, a former heating oil UST was located within this area.

Constituents of Concern Previously Observed/Objective:

Soil –

Previously, as reported in the Atlas RFI, a total of seven soil borings (with one being converted to a temporary monitoring well and two permanent monitoring wells) were completed within and surrounding this AOC. Of the seven soil borings installed, seven soil samples were analyzed between 2012 and 2020: SB-7 (10- 12'), SB-25 (10-12'), SB-26 (12-14'), SB-27 (10-12'), SB/TMW-32 (8-9') and MW-127 (6-7') and (10-11'). Soil samples were not collected during the installation of monitoring well MW-C.

The following COCs were detected (only bolded COCs had concentrations that exceeded their most restrictive cleanup criteria):

- VOCs: A total of 26 VOCs were detected from samples collected at SB-7 (10-12'), SB-25 (10-12'), SB-26 (12-14') and SB-27 (10-12'). Specifically, **benzene, chlorobenzene, ethylbenzene, 2-methylnaphthalene, naphthalene, toluene, 1,2,3-, 1,2,4- and 1,3,5-trimethylbenzene, xylenes, and/or 1,2-, 1,3- and 1,4-dicholobenzene were detected in excess of cleanup criteria at these sample locations.** Samples collected from SB/TMW-32 (8-9') and MW-127 (6-7') and (10-11') did not have VOCs detected above their respective RLs.
- PNAs/SVOCs: Full scan SVOC analysis was only completed at the MW-127 location. Up to 10 PNAs were detected at the SB-7 (10-12'), SB-25 (10-12'), SB-27 (7-8') and MW-127 (10-11') with **acenaphthene, acenaphthylene, anthracene, chrysene, fluorene and/or phenanthrene exceeding the most restrictive cleanup criteria.** SB/TMW-32 (8-9') did not have any PNA detections. SB-26 (12-14') was not analyzed for PNAs.
- Metals: arsenic, barium, chromium, copper, lead, selenium and/or zinc at SB-7 (10-12'), SB-25 (10-12') and SB-27 (10-12'). Mercury was also detected at SB-27 (10-12') below default background levels. Expanded metal analysis was completed at MW-127 (6-7') and (10-11') which indicated 16 metals including **aluminum, cobalt, iron and manganese above their most restrictive cleanup criteria.** SB-26 (12-14') was not analyzed for metals.
- PCBs: Were not detected above RLs.

Groundwater –

Previously, as reported in the Atlas RFI, groundwater samples collected in 2016 from temporary monitoring well SB/TMW-32, as well as groundwater samples collected in 2020 from monitoring well MW-127, detected the following COCs (only bolded COCs exceeded their most restrictive cleanup criteria):

- VOCs: **chlorobenzene, 2-methylnaphthalene and naphthalene** at SB/TMW-32; chlorobenzene, 2-methylnaphthalene, **naphthalene**, trichlorofluoromethane, 1,2,4- and 1,3,5- trimethylbenzene, and xylenes at MW-127.
- PNAs/SVOCs (full scan SVOC analysis was only completed at MW-127): acenaphthylene, fluorene, **naphthalene, phenanthrene and 2-methylnaphthalene** at SB/TMW-32; benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, **fluoranthene and phenanthrene** at MW-127.
- Metals: A total of 11 metals were detected at MW-127. Specifically, **aluminum, iron, manganese and vanadium** exceeded the most restrictive cleanup criteria at MW-127. Groundwater at SB/TMW-32 was not analyzed for metals.
- PCBs: Were not detected above RLs at MW-127. Groundwater at SB/TMW-32 was not analyzed for PCBs.
- PFAS: Seven PFAS compounds were detected at MW-127 with **PFOA and PFOS** exceeding the most restrictive cleanup criteria.

2022-2023 Completed Assessment:

Provided the historical use of this area as a location for heating oil USTs, TRC provided oversight for the planned assessment including the completion of two test pits, within the area of the identified electromagnetic anomalies present in the near monitoring well MW-127. Test Pits (AOC10-TP01 and AOC10-TP-02) were excavated on December 12, 2022. Soil samples were collected from the sidewalls and the bottom of each test pit, with sampling completed biased to the most qualitatively contaminated interval, if any were identified.

TRC provided oversight for the installation of two permanent monitoring wells MW-22-16 and MW-22-17 on December 14 and 15, 2022. The monitoring wells were screened to the base of the sand unit and in contact with the underlying clay unit at 15-20 and 14-19 ft bgs respectively. Soil samples were collected from these borings at 2-4 ft bgs and just above the water table at 8-10 ft bgs.

Groundwater sampling at newly installed monitoring wells MW-22-14, MW-22-15, and MW-22-16 was completed via low flow techniques in December 2022 and March 2023. Existing monitoring wells MW-122, MW-123, and MW-127 were to be sampled as well but could not be located. These wells will be attempted to be located as part of the next work plan discussed in Section 5.0. If the wells are found to be damaged, they will be properly abandoned and MW-127 will be replaced. If the wells are found in good condition and not damaged, groundwater samples will be collected one time from each well for the analyte list discussed in section 5.0.

Soil and groundwater samples collected from each test pit and soil boring/monitoring wells were analyzed by Merit for the following as proposed in the RFI:

- Full Michigan Part 201 VOC list + tentatively identified compounds (TICs)

- 1-4 dioxane
- Alcohols (methanol, ethanol, and n-butanol)
- Full Michigan Part 201 SVOC list + TICs
- Full Michigan Part 201 Total Metals list
- Polychlorinated Biphenyls (PCBs) (by individual Aroclor). PCBs in groundwater were not analyzed during the March 2023 event due to no detections in the December 2022 event. This was accepted by Joe Rogers of the EGLE during a phone call on March 15, 2023, and confirmed in an EGLE email dated March 28, 2023.
- Michigan List 31 PFAS

2.16 AOC 11 – Former UST Area/EMI Interference

Electromagnetic induction conducted indicated the presence of deep and shallow voids within the subsurface of this area, which is located within the southern-central portion of the Southern AOC Area. According to historical documentation, USTs were formerly located within this area.

Constituents of Concern Previously Observed/Objective:

Soil -

Previously, as reported in the Atlas RFI, a total of nine soil borings (with one being converted to a temporary monitoring well and five permanent monitoring wells) were evaluated within and surrounding this AOC. Of the nine soil borings installed, six soil samples were analyzed between the years 2012 and 2020: SB-5 (10-12'), SB-6 (10-12'), SB-14 (10-12'), SB/TMW-14 (1-2'), MW-124 (4-5') and MW-125 (4-5'). Soil samples were not collected during the installation of monitoring wells MW-A or MW-B. Additionally four temporary soil vapor points, C-3, C-4, D-3 and D-4 were installed in 2019.

The following COCs were detected (only bolded COCs had concentrations that exceeded their most restrictive cleanup criteria):

- VOCs: 2-methylnaphthalene, naphthalene, n-propylbenzene, 1,2,3- 1,2,4- and 1,3,5-trimethylbenzene at SB-6 (10-12'); n-butylbenzene, sec-butylbenzene, chlorobenzene at SB-14 (10-12'); **n-butylbenzene, sec-butylbenzene, isopropylbenzene, ethylbenzene, 2-methylnaphthalene, naphthalene**, p-isopropyltoluene, **n-propylbenzene, 1,2,3- 1,2,4- and 1,3,5-trimethylbenzene, xylenes at SB-5 (10-12')**. VOCs were not detected above their respective RLs in remaining samples analyzed.
- PNAs/SVOCs: Full scan SVOC analysis was only completed at MW-124 and MW-125 locations. Up to nine PNAs were detected at the SB/TMW-14 (1-2') location with none exceeding the most restrictive cleanup criteria. Eleven SVOCs were detected at the MW-125 (4-5') sample with **phenanthrene exceeding the most restrictive cleanup criteria**. SVOCs were not detected in MW-124 (4-5'). Samples collected from SB-5 (10-12'), SB-6 (10-12') and SB-14 (10-12') were not analyzed for PNAs.
- Metals: arsenic, barium, cadmium, chromium, copper, lead and zinc were detected at SB/TMW-14 (1-2'), along with **mercury which was detected in exceedance of its default background level**. Expanded metal analysis was completed at MW-124 (4-5') and MW-125 (4-5') which indicated 21 metals detected, of which **aluminum, cobalt, iron, manganese**

and/or silver above their most restrictive cleanup criteria. Additionally, mercury was detected exceeding VIAP screening levels at MW-125 (4-5’). SB-5 (10-12’), SB-6 (10-12’) and SB-14 (10-12’) were not analyzed for metals.

- PCBs: Were not detected above RLs.

Groundwater –

Previously, as reported in the Atlas RFI, groundwater samples were not collected from MW-B. Groundwater samples collected in 2012 from monitoring well MW-A, groundwater samples collected in 2015 from temporary monitoring well SB/TMW-14, as well as groundwater samples collected in 2020 from monitoring wells MW-124 and MW-125, detected the following COCs (only bolded COCs had concentrations that exceeded their most restrictive cleanup criteria):

- VOCs: 1,2-dichlorobenzene at MW-A; and chloroethane, trichlorofluoromethane and **vinyl chloride at SB/TMW-14**. VOCs were not detected above RLs in groundwater samples collected from MW-124 or MW-125.
- PNAs/SVOCs (full scan SVOC analysis was only completed at MW-124 and MW-125): Were not detected above RLs in groundwater samples collected from SB/TMW-14, MW-124 and MW-125. Groundwater at MW-A was not analyzed for PNAs/SVOCs.
- Metals: arsenic and barium at SB/TMW-14. A total of nine metals, of which **aluminum, iron and manganese were detected at levels exceeding the most restrictive cleanup criteria at MW- 124 and MW-125**. Groundwater at MW-A was not analyzed for metals.
- PCBs: Were not detected above RLs at MW-125. Groundwater samples collected from SB/TMW-14, MW-A and MW-124 were not analyzed for PCBs.

Soil Gas –

Previously, as reported in the Atlas RFI, soil gas samples collected from temporary soil gas points C-3, C-4, D-3 and D-4, set at a depth of 5 feet bgs detected multiple VOCs and/or SVOCs. However, all concentrations were below their respective VIAP screening levels with the exception of **trichloroethylene at C-3**.

2022-2023 Completed Assessment:

Provided the historical use of this area as a former location of multiple USTs, TRC provided oversight for the planned assessment including the completion of up to four test pits (AOC11-TP01 through AOC11-TP-04) on December 14, 2022, which were completed to either the obstruction from concrete at 8.5 to 9.5 feet bgs or to the extent of the excavator approximately 10 feet bgs. Soil samples were collected from the sidewalls and the bottom of each test pit, with sampling completed biased to the most contaminated interval if any were identified.

TRC provided oversight for the installation of two permanent monitoring wells MW-22-07 and MW-22-10 on December 13, 2022. The monitoring wells were screened to the base of the sand unit and in contact with the underlying clay unit at 14-19 ft bgs and 15-20 ft bgs respectively. Soil samples were collected from these borings at 2-4 ft bgs and just above the water table at 8-10 ft bgs.

Groundwater sampling at newly installed monitoring wells MW-22-07 and MW-22-10 was completed via low flow techniques in December 2022 and March 2023. Existing monitoring wells MW-124 and MW-125 were to be sampled as well but could not be located. These wells will be attempted to be located as part of the next work plan discussed in Section 5.0. If the wells are found in good condition, they will be sampled one time per Section 5.0. If they are found destroyed, they will be properly abandoned.

Soil and groundwater samples collected from each test pit and soil boring/monitoring wells were analyzed by Merit for the following as proposed in the RFI:

- Full Michigan Part 201 VOC list + TICs
- 1-4 dioxane
- Alcohols (methanol, ethanol, and n-butanol)
- Full Michigan Part 201 SVOC list + TICs
- Full Michigan Part 201 Total Metals list
- Polychlorinated Biphenyls (PCBs) (by individual Aroclor). PCBs in groundwater were not analyzed during the March 2023 event due to no detections in the December 2022 event. This was accepted by Joe Rogers of the EGLE during a phone call on March 15, 2023, and confirmed in an EGLE email dated March 28, 2023.
- Michigan List 31 PFAS
- Tetraethyl Lead. Tetraethyl lead in groundwater was additionally not analyzed during the March 2023 event due to no detections in the December 2022 event. This was accepted by Joe Rogers of the EGLE during a phone call on March 15, 2023, and confirmed in an EGLE email dated March 28, 2023.

Also, if the source of soil gas vapors was identified, three soil gas vapor points were planned to be installed within the subsurface (one upgradient and two downgradient) targeting that location. The source of the soil gas impacts was not encountered, therefore additional soil gas vapor points were not installed. Refer to the Results section for additional information.

2.17 AOC 12 – EMI Interference – GPR Anomaly

Electromagnetic induction conducted indicated the presence of a large deep void within the subsurface of this area, which is located within the southern portion of the Southern AOC Area. Furthermore, a GPR survey conducted within this area indicated an anomaly within the subsurface.

Constituents of Concern Previously Observed/Objective:

Soil –

Previously, as reported in the Atlas RFI, a total of three soil borings (all of which were converted to permanent monitoring wells) were evaluated surrounding this AOC. Of the three soil borings installed, three soil samples were analyzed in 2020: MW-101 (2-3'), MW-102 (2-3') and MW-132 (5.5-6.5'). Additionally, two temporary soil vapor points, F-3 and F-4 were installed in 2019.

The following COCs were detected (only bolded COCs had concentrations that exceeded their most restrictive cleanup criteria):

- VOCs: Were not detected above RLs at MW-132 (5.5-6.5'). The soil samples collected from MW-101 (2-3') and MW-102 (2-3') were not analyzed for VOCs.
- PNAs/SVOCs: Multiple SVOCs were detected with **naphthalene and phenanthrene exceeding the most restrictive cleanup criteria at MW-132 (5.5-6.5')**. The soil samples collected from MW-101 (2-3') and MW-102 (2-3') were not analyzed for SVOCs.
- Metals: arsenic, barium and/or chromium were detected at MW-101 (2-3') and MW-102 (2-3'). Multiple metals were detected at **MW-132 (5.5-6.5') with arsenic, boron, iron, magnesium, manganese and molybdenum exceeding the most restrictive cleanup criteria**. Additionally, **mercury was detected exceeding the VIAP screening level at MW-102 (2-3') and MW-132 (5.5-6.5')**.
- PCBs: Were not detected above RLs at MW-132 (5.5-6.5'). The soil samples collected from MW-101 (2-3') and MW-102 (2-3') were not analyzed for PCBs.

Groundwater –

Previously, as reported in the Atlas RFI, Groundwater samples collected in 2020 from monitoring wells MW-101, MW-102 and MW-132, detected the following COCs (only bolded COCs had concentrations that exceeded their most restrictive cleanup criteria):

- VOCs: acetone, chloromethane, 1,4-dioxane, **ethylbenzene, naphthalene**, toluene, 1,2,4- and 1,3,5-trimethylbenzene, xylene and **methanol** were detected at **MW-132**. VOCs were not detected above their respective RLs at MW-101 or MW-102.
- SVOCs: **carbazole**, fluoranthene, **naphthalene**, 2- and 4-nitrophenol, **phenanthrene** and phenol were detected at MW-132. SVOCs were not detected above their respective RLs at MW-101 or MW-102.
- Metals: a total of ten metals, of which **aluminum and lead were detected at levels exceeding the most restrictive cleanup criteria at MW-132**. MW-101 and MW-102 had no detections above their respective RLs for the select metals analyzed.
- PCBs: Were not detected above the RLs at MW-132. The groundwater samples collected from MW-101 and MW-102 were not analyzed for PCBs.
- PFAS: Nine PFAS compounds were detected between MW-101, MW-102 and MW-132, with **PFOA and PFOS** exceeding the most restrictive screening levels at **MW-132**.

Soil Gas –

Soil gas samples collected from temporary soil gas points F-3 and F-4, set at a depth of 5 feet bgs, detected multiple VOCs and/or SVOCs, however all detections were below their respective VIAP screening levels.

2022-2023 Completed Assessment:

Provided the presence of a large deep void within the subsurface, TRC provided oversight for the planned assessment including the completion of up to three test pits (AOC12-TP01 through AOC12-TP-03) on December 15, 2022. Soil samples were collected from the sidewalls and the bottom of each test pit, with sampling completed biased to the most contaminated interval if any

were identified.

TRC provided oversight for the installation of two permanent monitoring wells MW-22-20 and MW-22-21 on December 13, 2022, on December 15 and 16, 2022 respectively. The monitoring wells were screened to the base of the sand unit and in contact with the underlying clay unit at 17-22 ft bgs. Soil samples were collected from these borings at 2-4 ft bgs and just above the water table at 8-10 ft bgs.

Groundwater sampling at newly installed monitoring wells MW-22-20 and MW-22-21 and existing monitoring wells MW-101 and MW-103 was completed via low flow techniques in December 2022 and March 2023. Existing monitoring well MW-102 was dry for both events and was unable to be sampled. Due to MW-102 being dry and likely filled in with sediment, this well will be properly abandoned and replaced as part of the next work plan discussed in Section 5.0.

Soil and groundwater samples collected from each test pit and soil boring/monitoring wells were analyzed by Merit for the following as proposed in the RFI:

- Full Michigan Part 201 VOC list + TICs
- 1-4 dioxane
- Alcohols (methanol, ethanol, and n-butanol)
- Full Michigan Part 201 SVOC list + TICs
- Full Michigan Part 201 Total Metals list
- Polychlorinated Biphenyls (PCBs) (by individual Aroclor). PCBs in groundwater were not analyzed during the March 2023 event due to no detections in the December 2022 event. This was accepted by Joe Rogers of the EGLE during a phone call on March 15, 2023 and confirmed in an EGLE email dated March 28, 2023.
- Michigan List 31 PFAS

2.18 Site Wide Investigation

The purpose of the Site Wide Investigation is to create a holistic, site-wide approach to the investigation of the Site. Activities to be performed during the Site Wide Investigation include 1) the vertical delineation of overburden to provide a better understanding of the overall deep lithology (greater than the current maximum explored depth of 25 feet bgs); and 2) assess potential preferential pathways created by utility corridors and/or known underground tunnels on the Site.

The Site Wide Investigation ran in tandem with the proposed assessment of the Southern Area, as all known tunnels and the majority of the known utilities are located within the Southern Area as well as the planned deep well. Locations of the sampling for the Site Wide Investigation is shown primarily on **Figure 2**.

2022-2023 Completed Assessment:

Vertical delineation of overburden

Based on the data collected to date, there is reasonable knowledge of site-related COCs present in the overburden, particularly at the water table interface. The scope of proposed RFI work in various individual AOCs was to supplement the knowledge base regarding the presence of the presumed continuous shallow clay surface across the Site and how that affects migration potential in this water-bearing zone. Additional RFI work scopes supplemented knowledge of the continuity of the presumed clay by tagging the sand/clay interface at a number of locations within individual AOCs allowing horizontal delineation to be better assessed and understanding more complete. However, without penetrating deeper through the shallow clay surface, interpretation on vertical delineation of COCs below the clay could not be determined.

In order to assess the deeper clay lithology, TRC provided oversight for one deep monitoring well within the Southern Area of the Site. Based upon Wellogic records obtained from EGGLE's online database, a well installed by Consumers Energy approximately one mile northwest (upgradient) of the Site indicated a water bearing zone within the shale present at approximately 130 feet bgs. The purpose of the deep, water bearing well on-site was to vertically profile the underlying lithologic and hydrogeologic conditions beneath the Site.

Therefore, TRC oversaw the installation of a deep, double-cased monitoring well MW-22-22D was installed in the gray shale and screened at 140-150 feet bgs on December 19 through 22, 2022 by Stock Drilling (Stock), for vertical delineation purposes and targeting the next water-bearing zone below the overburden. A sonic drill rig was used to advance an outer casing to a depth of 25 feet bgs that was five feet into the underlying clay unit to isolate the upper sand rich unit from the water bearing shale. The inner borehole was drilled to a depth of 150 feet bgs. Two-inch inner diameter Schedule 40 PVC surface casing was installed, and the annular space was sealed using a cement quick grout placed using a tremie pipe. The annular seal was allowed to cure overnight prior to well development.

The monitoring well was constructed using Schedule 40 PVC threaded riser and 10 feet of factory machine-slotted threaded, 2-inch diameter screen (0.010 slot size). Clean silica medium grained sand pack was placed around the screen interval to a height of two feet above the top of the screen. Above the screen, a two-foot seal was installed with hydrated sodium bentonite. A locking, above ground protective cover was installed to approximately 4 feet above ground surface and cement apron were installed. The monitoring well was developed after installation using a pump and surge method until suspended solids were significantly reduced. All development water was collected and contained for proper disposal.

Underground Tunnels and Subsurface Utility Corridors

Multiple utility corridors and historical underground pedestrian tunnels on-site connecting former buildings were investigated. The initial focus of the site wide assessment of these former and current features was to identify and map their locations for delineation purposes. Secondly, risks associated with the presence of utility corridors (which are typically shallow, set at an average of 3- 5 feet bgs) can exacerbate impacts to soil, groundwater and/or soil gas through

migration of COCs along preferential pathways provided by the surrounding fill material of the utility line or through residual void space of the crushed tunnels.

Although it has been demonstrated that overburden within the Site is typically sand, fill material surrounding utility lines may present a preferential pathway concern. Therefore, the termination of on-site utility corridors into off-site mains within both Pinecrest Drive and 8 Mile Road were evaluated within the right-of-way of each respective roadway and along the locations of the tunnels and the paths of the underground utility corridors.

Utility corridors were evaluated during assessment of the Southern Area. These tunnels were reported to have been crushed and compacted with fill during demolition activities in 2012/2013. Specifically, during test pit evaluation and soil boring/monitoring well boring advancement in the Southern Area, subsurface investigations extended at least to the terminus depth of approximately 10 feet bgs which is the approximate depth of the tunnels.

Migration of VOCs and/or SVOCs as well as mercury vapor (likely occurring from confirmed presence of an unknown source of mercury onsite) in soil and groundwater has been identified at the Site, particularly within the Southern Area. Trichloroethylene specifically has been identified in soil gas samples collected within the eastern right-of-way of Pinecrest Drive, within a residential area. As such, identification and delineation of the location of the tunnels and utility corridors and the effect these may contribute to COCs within soil/groundwater/soil gas will also be completed as part of the site-wide AOC as well as in individual AOCs. The findings of this assessment are presented in **Section 3.10**

3.0 Results

3.1 Site Geology and Hydrogeology

3.1.1 Regional Geology

Regionally, the unconsolidated and consolidated geology beneath the Southern Area is described as:

“LAKE SAND AND GRAVEL – Yellowish-brown or pale-brown to gray, calcareous fine to coarse sand with local lenses of rounded medium gravel or pebble layers. Commonly crossbedded; lenticular bedding or tabular foreset bedding locally. Generally, well sorted, without significant silt or clay. Clast composition varies, reflecting compositions of materials transported by waves and currents. Nearshore, strand, and deltaic deposits of former glacial and postglacial lakes and present Great Lakes. Includes deposits of beach ridges, offshore bars, and spits; also includes small areas of lake silt and clay (lca), complex lake deposits (lcc), and bedrock outcrop. Locally overlain by eolian sand and silt (ed, eu), alluvium (al), peat (hp), or swamp deposits (hs). Mapped only where extensive. Thickness generally 1-10 m, locally more than 30 m.” (Quaternary Geologic Map of the Lake Erie 4 Degree by 6 Degree Quadrangle, United States and Canada; Edited and Integrated by Fullerton and Richmond, 1991).

Below the sand and clay unit, is the Antrim Shale which is a dark gray or brown to largely black, highly carbonaceous, thinly laminated shale with meager fossil content except for profuse algal spores. Large dark brown, bituminous and pyritic limestone concretions occur in the lower Antrim and are typically from 0.96 to 1.5 m in diameter. Secondary unit description from USGS Geologic Names lexicon (ref. MI016). Milstein, Randall L. (compiler), 1987, Bedrock geology of southern Michigan: Geological Survey Division, Michigan Dept. of Natural Resources, scale 1:500,000.

3.1.2 Site Geology

The Site is situated at an elevation of approximately 660 ft above mean sea level. The topographic gradient at the Site was observed to be generally slightly sloping towards the east. Precipitation is managed through infiltration and combined storm drains located on Pinecrest Street.

The soil encountered at the Site generally appeared to be one to two feet of non-native (fill) sandy gravel and clay soils underlain by approximately 15 to 20 feet of native sand underlain by a low permeability, stiff, dry clay. For additional stratigraphic information see the soil boring logs and monitoring well construction diagrams in **Appendix A**.

3.1.3 Hydrogeology

Groundwater at the Site was encountered at depths ranging from approximately 5 to 13 feet bgs during the December 2022 groundwater monitoring event and 4 to 14 ft bgs during the March 2023 groundwater monitoring event. Most of the variability in the depth of groundwater is related to Site topography. Based on water elevation data collected during the December 2022 and

March 2023 groundwater monitoring events, which included groundwater elevation measurements from Eastern Boundary monitoring wells, the general direction of shallow groundwater flow on the Site under ambient steady state conditions is generally toward the East. The groundwater contour map for the December 2022 groundwater monitoring event is presented in **Figure 4** and the groundwater contour map for the March 2023 groundwater monitoring event is presented in **Figure 5**.

3.2 Laboratory Analytical Results

Groundwater and soil analytical results were compared to applicable 2012 EGLE non-residential Michigan Part 201 cleanup criteria and screening levels. Specifically, groundwater concentrations were compared to non-residential Drinking Water Criteria (NR-DWC), Groundwater Surface water Interface Criteria (GSIC), non-residential Groundwater Contact Criteria (NR-GWCC), and non-residential Volatilization to Indoor Air Pathway (NR-VIAP) screening levels. Soil analytical results were compared to non-residential Drinking Water Protection Criteria (NR-DWPC), Groundwater Surface water Interface Protection Criteria (GSIPC), and non-residential VIAP screening levels, non-residential Groundwater Contact Protection Criteria (NR-GWCPC) and non-residential Direct Contact Criteria (NR-DCC). The VIAP screening levels were used to screen for soil vapor intrusion risk instead of the 2012 groundwater volatilization to indoor air inhalation criteria (GVIIC) and soil volatilization to indoor air inhalation criteria (SVIIC) due to site conditions (shallow groundwater) that is more appropriate for use of the VIAP. Soil and groundwater analytical laboratory reports are included as **Appendix C**.

3.3 AOC 3 – SWMU 3 – Former Burial Area

2022 Soil Results

The following are soil results for the test pits AOC3-TP01 – AOC3-TP04 and monitoring well soil borings MW-22-11 and MW-22-12 within AOC-3. No buried waste was encountered.

- Full Michigan Part 201 VOCs List + TICs: Hexachlorobutadiene was detected above GSIPC and NR-VIAP in AOC3-TP04. No VOC TICs were identified in AOC-3.
- 1,4 dioxane: Was not detected above its RL.
- Alcohols: methanol was detected in MW-22-11 and MW-22-12 above the NR-DWPC.
- Full Michigan Part 201 SVOC List + TICs: Hexachlorobenzene was detected in AOC3-TP04-S. No SVOC TICs were identified in AOC-3.
- Full Michigan Part 201 Metals List: Chromium was detected above the GSIPC at select test pit samples.
- PCBs: Were not detected above RLs.
- Michigan List 31 PFAS: Were not detected above RLs.

2022-2023 Groundwater Results

The following are groundwater results for the newly installed monitoring wells MW-22-11 and MW-22-12 that were installed upgradient and downgradient of AOC-3. Existing monitoring wells

MW-130 and MW-131 were to be sampled as part of AOC-3 but could not be located.

- Full Michigan Part 201 VOC List + TICs: VOCs were not detected above RLs in the groundwater samples collected from MW-22-11 and MW-22-12. No VOC TICs were identified in AOC-3.
- 1,4 dioxane: Was not detected, except for 1.0 microgram per liter (ug/L) in the groundwater sample collected from MW-22-12 in December 2022 (which is below the most restrictive cleanup criteria (GSIC) of 280 ug/L).
- Alcohols: Were not detected above the RL.
- Full Michigan Part 201 SVOC List + TICs: Were not detected above their respective RLs. No SVOC TICs were identified in AOC-3.
- Full Part 201 Metals List: manganese was detected in both MW-22-11 and MW-22-12 above NR-DWC in December 2022 and March 2023. Aluminum and Iron were at concentrations above the NR-DWC during the December 2022 event but were below the NR-DWC in the March 2023 event.
- PCBs: Were not detected above RLs.
- Michigan List 31 PFAS: Perfluorobutane sulfonic acid (PFBS), Perfluorohexane sulfonic acid (PFHxS), PFHxS-LN, and PFOA were detected in both MW-22-11 and MW-22-12 at concentrations below their respective NR cleanup criteria.

Refer to **Tables 2-10**, **Figures 6-7** and **Appendix C** for soil and groundwater results.

3.4 AOC 7 – PCE/TCE

2022 Soil Results

The following are soil results for monitoring well soil borings MW-22-08 and MW-22-09 within AOC-7.

- Full Michigan Part 201 VOCs List + TICs: Naphthalene at a concentration above the GSIPC and Trichlorofluoro-methane (Freon 11) at a concentration above the NR-VIAP were detected in MW-22-09 (8-10'). No PCE, no TCE or VOC TICs were identified in AOC-7 in soil.
- 1,4 dioxane: Was not detected above the RL.
- Alcohols: Methanol was detected in sample MW-22-08 (8-10') at a concentration above the NR-DWPC.
- Full Part 201 SVOC List + TICs: Fluoranthene and phenanthrene were detected in select samples at concentrations above the GSIPC and/or NR-VIAP. The SVOC TIC benzo(e)pyrene was identified in MW-22-08 (2-3'), MW-22-09 (2-4'), and MW-22-09 (8-10'), however there is no Part 201 cleanup criteria for this constituent.
- Full Part 201 Metals List: Aluminum, boron, chromium, mercury, selenium, and zinc were detected at concentrations above the NR-DWPC, GSIPC, and/or NR-VIAP (mercury) in one or more soil samples.
- PCBs: Was not detected above the RLs.
- Michigan List 31 PFAS: PFOS was detected at a concentration above the GSIPC in MW-22-09 (8-10').

- Tetraethyl Lead: Was not detected above the RL.

2022-2023 Groundwater Results

The following are groundwater results for the newly installed MW-22-08 and MW-22-09 in the southeast and northwest areas on AOC-7. MW-126 was to be sampled as part of AOC-7, however this well could not be located.

- Full Michigan Part 201 VOC List + TICs: VOCs were not detected above their respective RLs in MW-22-08 and MW-22-09. No PCE, TCE or VOC TICs were identified in AOC-7 in groundwater.
- 1,4 dioxane: Was not detected above the RL.
- Alcohols: Was not detected above the RL.
- Full Part 201 SVOC List + TICs: Were not detected above their respective RLs. No SVOC TICs were identified in AOC-7.
- Full Part 201 Metals List: aluminum, iron, and manganese were detected in the groundwater samples from MW-22-18 and MW-22-09 at concentrations above the NR-DWC in December 2022. Aluminum and Iron were both detected at concentrations above the NR-DWC during the December 2022 event but were below the NR-DWC in the March 2023 event.
- PCBs: Was not detected above the RL.
- Michigan List 31 PFAS: PFBS, Perfluorobutanoic acid (PFBA), Perfluoroheptanoic acid (PFHpA), PFHxS-BR, PFHxS-LN, Perfluorohexanoic acid (PFHxA), Perfluorooctane sulfonic acid (PFOS), PFOS-LN, PFOA, and Perfluoropentanoic acid (PFPeA) were detected, but were all at concentrations below their respective NR cleanup criteria.
- Tetraethyl Lead: Was not detected above the RL.

Refer to **Tables 2-10, Figures 6-7** and **Appendix C** for soil and groundwater results.

3.5 AOC 8 – PFOA/PFOS

AOC 8 contained historical Building D, of which the former operations occurring at this building are unknown. This former building was situated in between former Building DA, which was utilized for chemical research and former Building C, which was utilized for engine research and dynamometer, fuel testing and control testing.

2022 Soil Results

The following are soil results for monitoring well soil borings MW-22-18 and MW-22-19 within AOC-8.

- Full Michigan Part 201 VOCs List + TICs: none detected above the RL. No VOC TICs were identified in AOC-8.
- 1,4 dioxane: Was not detected above the RL.
- Alcohols: Was not detected above the RL.

- Full Part 201 SVOC List + TICs: Several SVOCs were detected but were below cleanup criteria. SVOC TIC benzo(e)pyrene was identified in MW-22-18 (2-4') and MW-22-19 (2-4'), however there is no Part 201 cleanup criteria for this constituent.
- Full Part 201 Metals List: Chromium was detected above GSIPC in MW-22-18 and MW-22-19, and selenium was detected above GSIPC in MW-22-18 (2-4').
- PCBs: Was not detected above the RL.
- Michigan List 31 PFAS: PFOS was detected in sample MW-22-19 (8-10') but is below cleanup criteria. No other PFAS were detected in soil.

2022-2023 Groundwater Results

The following are groundwater results for the newly installed MW-22-18 and MW-22-19 in the southeast and northwest areas on AOC-8 and existing wells MW-128 and MW-129. MW-132 and MW-133 that were to be sampled as part of the AOC-8 investigation, could not be located and were therefore not sampled.

- Full Michigan Part 201 VOC List + TICs: VOC tetrachloroethene was detected above NR-DWC at MW-128 for both December 2022 and March 2023 events, all other VOCs were either non detect or below cleanup criteria. VOC TICs for Ethane, 1-chloro-1-fluoro-, dichlorofluoromethane, and chlorofluoromethane were identified in AOC-7 however none of these constituents have Part 201 cleanup criteria.
- 1,4 dioxane: Was not detected above the RL.
- Alcohols: Was not detected above the RL.
- Full Michigan Part 201 SVOC List + TICs: Were not detected above the RL. No SVOC TICs were identified in AOC-8.
- Full Part 201 Metals List: aluminum, iron, and manganese were detected in both MW-22-18 and MW-22-09 above NR-DWC in December 2022. Aluminum and Iron were both detected above NR-DWC during the December 2022 event but were not confirmed in the March 2023 event. Manganese and Boron was detected in MW-128 and MW-129 above NR-DWC.
- PCBs: Were not detected above RLs.
- Michigan List 31 PFAS: PFOS was detected above NR-DWC and GSIC and PFOA were detected above NR-DWC during the December 2022 and March 2023 events in MW-128 and MW-129.

3.6 AOC 9 – Neutralization Basin/Former UST Area

The area of a former neutralization basin and former UST is located along the southeastern portion of the Southern Area.

2022 Soil Results

The following are soil results for monitoring well soil borings MW-22-13, MW-22-14, and MW-22-15 and soil borings SB-01 and SB-02 within AOC-9.

- Full Michigan Part 201 VOCs List + TICs: none detected above cleanup criteria. No VOC TICs were identified in AOC-8.

- 1,4 dioxane: not detected above cleanup criteria.
- Alcohols: Methanol was detected above NRDWPC at MW-22-13 (8-10').
- Full Michigan Part 201 SVOC List + TICs: not detected above cleanup criteria. SVOC TICs benzo(e)pyrene was identified in SB-02 (2-4') however there is no cleanup criteria for this constituent.
- Full Michigan Part 201 Metals List: Chromium and were detected above GSIPC in SB-02. Mercury was detected above GSIPC and NR-VIAP in SB-02.
- PCBs: Not detected above RLs.
- Michigan List 31 PFAS: not detected above cleanup criteria.

2022-2023 Groundwater Results

The following are groundwater results for the newly installed MW-22-13, MW-22-14, and MW-22-15 within the northern, eastern, southeastern and western portions of the AOC to evaluate soil and groundwater conditions in a cross-gradient direction.

- Full Michigan Part 201 VOC List + TICs: none detected above cleanup criteria. VOC TICs for Ethane, 1-chloro-1-fluoro-, dichlorofluoromethane, and/or chlorofluoromethane were identified in MW-22-13 and/or MW-22-14 however this is no cleanup criteria for these constituents.
- 1,4 dioxane: Not detected above RLs.
- Alcohols: Not detected above RLs.
- Full Part 201 SVOC List + TICs: none detected above RLs. No SVOC TICs were identified in AOC-9.
- Full Part 201 Metals List: copper was detected in MW-22-14 above GSIC in March 2023. Manganese was detected in MW-22-13, MW-22-14 and MW-22-15 above NR-DWC during the both the December 2022 event and the March 2023 event.
- PCBs: Not detected above RLs.
- Michigan List 31 PFAS: PFOS was detected above NR-DWC and GSIC in MW-22-13 and PFOA was detected above NR-DWC in MW-22-13, MW-22-14 and MW-22-15 during the December 2022 and March 2023 events.

Refer to **Tables 2-10, Figures 6-7** and **Appendix C** for soil and groundwater results.

3.7 AOC 10 – Former Heating Oil UST/EMI Interference – GPR Anomaly

Electromagnetic induction conducted indicated the presence of deep and shallow voids within the subsurface of this area, which is located within the southern-central portion of the Southern Area. Furthermore, a GPR survey conducted within this area indicated an anomaly within the subsurface. According to historical documentation, a former heating oil UST was located within this area.

GPR Anomaly

No buried waste or USTs were encountered during the subsurface work in AOC-10.

2022 Soil Results

The following are soil results for the test pits AOC10-TP01 – AOC10-TP02 and monitoring wells MW-22-16 and MW-22-17 within AOC-10. Full Michigan Part 201 VOCs List + TICs: none detected above cleanup criteria. VOC TIC 4,7-Dichloroquinoline was identified in AOC10-TP02-N however there is no cleanup criteria for this constituent.

- 1,4 dioxane: Not detected above RLs.
- Alcohols: Not detected above RLs.
- Full Michigan Part 201 SVOC List + TICs: SVOCs fluoranthene and phenanthrene were detected above GSIPC in AOC10-TP01 and MW-22-17 (8-10'). The SVOC TIC Benzo(e)pyrene was detected in several samples and 11H-Benzo[a]fluorene was identified in AOC10 at MW-22-17 (8-10') however there is no cleanup criteria for these constituents.
- Full Michigan Part 201 Metals List: Chromium was detected above GSIPC in AOC10-TP01-N, AOC10-TP01-S, AOC10-TP02-B, MW-22-16 and MW-22-17 and mercury was detected above GSIPC at AOC10-TP01-N, AOC10-TP01-S, AOC10-TP02-B and AOC10-TP02-W and NR-VIAP at AOC10-TP02-B and AOC10-TP02-W.
- PCBs: None detected above RLs.
- Michigan List 31 PFAS: PFOS was detected above GSIPC at AOC10-TP01 and MW-22-17.

2022-2023 Groundwater Results

The following are groundwater results for the newly installed MW-22-16 and MW-22-17 upgradient and downgradient of AOC-10. MW-127 that was to be sampled as part of the AOC-10 investigation, could not be located and was therefore not sampled.

- Full Part 201 VOC List + TICs: VOCs were not detected in MW-22-11 and MW-22-12. No VOC TICs were identified in AOC-10.
- 1,4 dioxane: Not detected above the RL.
- Alcohols: Not detected above the RL.
- Full Part 201 SVOC List + TICs: none detected. No SVOC TICs were identified in AOC-10.
- Full Part 201 Metals List: manganese was detected in both MW-22-16 and MW-22-17 above NR-DWC in December 2022 and March 2023.
- PCBs: Not detected above the RL.
- Michigan List 31 PFAS: PFBS, Perfluoroheptanoic acid (PFHpA), Perfluorohexane sulfonic acid (PFHxS), PFHxS-LN, Perfluorohexanoic acid (PFHxA), Perfluoropentanoic acid (PFPeA) and were detected, but below cleanup criteria. PFOA was detected above NR-DWC in both MW-22-16 and MW-22-17.

Refer to **Tables 2-10, Figures 6-7** and **Appendix C** for soil and groundwater results.

3.8 AOC 11 – Former UST Area/EMI Interference

Electromagnetic induction conducted indicated the presence of deep and shallow voids within the subsurface of this area, which is located within the southern-central portion of the Southern AOC Area. According to historical documentation, USTs were formerly located within this area.

Former UST Area/EMI Interference

During the investigation in AOC-11, the EMI anomalies were confirmed to be concrete pads and steel tie downs at around 8.4 feet bgs in AOC11-TP02 and 9.3 feet bgs in AOC11-TP01. These concrete pads are likely UST Deadman for the former USTs. No USTs or buried waste were encountered.

2022 Soil Results

The following are soil results for the test pits AOC11-TP01 – AOC11-TP04 and monitoring well soil borings MW-22-07 and MW-22-11 within AOC-11.

- Full Part 201 VOCs List + TICs: none detected in the test pits and none detected above cleanup criteria in MW-22-07 and MW-22-10. VOC TIC hexadecane was identified in AOC-11 however, there is no cleanup criteria for this constituent.
- 1,4 dioxane: none detected above cleanup criteria.
- Alcohols: none detected above cleanup criteria.
- Full Part 201 SVOC List + TICs: SVOC benzo(a)pyrene was detected in test pit samples AOC11-TP03-E and AOC11-TP04-W above NR-DCC, and fluoranthene and/or phenanthrene were detected above GSIPC in AOC11-TP01-E, AOC11-TP01-N, AOC11-TP02-W, AOC11-TP03-E and AOC11-TP04-W. SVOC TIC benzo(e)pyrene, 11H-Benzo[a]fluorene, and 1,2:3,4-dibenzpyrene were identified in several samples in AOC-11, however these constituents do not have cleanup criteria.
- Full Part 201 Metals List: Chromium was detected above GSIPC at AOC11-TP02-W and mercury was detected above GSIPC at AOC11-TP02-S, AOC11-TP03-W, AOC11-TP04-N, AOC11-TP04-S and AOC11-TP04-W and NR-VIAP at AOC11-TP02-S and AOC11-TP03-W.
- PCBs: none detected above the RLs.
- Michigan List 31 PFAS: PFOS was detected above GSIPC at AOC11-TP01, AOC11-TP04, and MW-22-07.
- Tetraethyl Lead: None detected above the RLs.

2022-2023 Groundwater Results

The following are groundwater results for the newly installed MW-22-07 and MW-22-10 downgradient of AOC-11. MW-124 and MW-125 to be sampled as part of the AOC-11 investigation, could not be located and were therefore not sampled.

- Full Part 201 VOC List + TICs: VOCs were not detected in MW-22-07 and MW-22-10. No VOC TICs were identified in AOC-10.
- 1,4 dioxane: none detected above RLs.
- Alcohols: none detected above RLs.
- Full Part 201 SVOC List + TICs: none detected. No SVOC TICs were identified in AOC-11
- Full Part 201 Metals List: aluminum was detected above NR-DWC in MW-22-10 during the December 2022 event, it was not conformed during the March 2023 event. Manganese was detected in both MW-22-07, March 2023 only, and MW-22-10, both December 2022 and March 2023 above NR-DWC.

- PCBs: none detected above RLs.
- Michigan List 31 PFAS: PFBS, Perfluorobutanoic acid (PFBA), Perfluoroheptanoic acid (PFHpA), Perfluorohexane sulfonic acid (PFHxS), PFHxS-LN, Perfluorohexanoic acid (PFHxA), Perfluorooctane sulfonic acid (PFOS), and Perfluoropentanoic acid (PFPeA) and were detected, but below cleanup criteria. PFOA was detected above NR-DWC.
- Tetraethyl Lead: not detected above RLs.

As no VOC exceedances were observed above cleanup criteria, additional soil gas point installation and sampling was not completed during this assessment per the RFI.

Refer to **Tables 2-10**, **Figures 6-7** and **Appendix C** for soil and groundwater results.

3.9 AOC 12 – EMI Interference – GPR Anomaly

Electromagnetic induction conducted indicated the presence of a large deep void within the subsurface of this area, which is located within the southern portion of the Southern AOC Area. Furthermore, a GPR survey conducted within this area indicated an anomaly within the subsurface.

EMI Interference – GPR Anomaly

Buried fill material, concrete foundation remnants and bricks were encountered at about 10 feet bgs in AOC12-TP01. No buried hazardous substance waste was encountered.

2022 Soil Results

The following are soil results for the test pits AOC12-TP01 – AOC12-TP03 and monitoring well soil borings MW-22-20 and MW-22-21 within AOC-12. Full Michigan Part 201 VOCs List + TICs: none detected above cleanup criteria in the test pits or monitoring wells. No VOC TICs were identified in AOC12.

- 1,4 dioxane: was detected but below cleanup criteria in MW-22-21 (2-4').
- Alcohols: methanol was detected but below cleanup criteria in AOC12-TP02 and AOC12-TP03.
- Full Michigan Part 201 SVOC List + TICs: SVOC benzo(a)pyrene was detected in test pit samples above NR-DCC, and fluoranthene, naphthalene and/or phenanthrene were detected above GSIPC in in several test pit and MW-22-20 and MW-22-21 samples. Naphthalene and phenanthrene were detected above NR-VIAP in test pit samples. SVOC TIC benzo(e)pyrene and 1,2:3,4-dibenzpyrene were identified in several samples in AOC-12 however there is no cleanup criteria for this constituent.
- Full Michigan Part 201 Metals List: Aluminum, boron, and manganese samples were detected above NR-DWPC, chromium, manganese and mercury were detected above GSIPC, and mercury samples was detected above NR-VIAP.
- PCBs: PCBs were detected in sample AOC12-TP01-B but were below cleanup criteria.
- Michigan List 31 PFAS: PFOS was detected above GSIPC at AOC12-TP01, AOC12-TP02, and MW-22-21.

2022-2023 Groundwater Results

The following are groundwater results for the newly installed MW-22-20 and MW-22-21 in AOC-12 and existing monitoring wells MW-101, MW-102, and MW-103 near the south edge of AOC-12.

- Full Michigan Part 201 VOC List + TICs: VOC hexachlorobutadiene was detected above GSIC in MW-103 during the March 2023 event, all other VOCs were not detected above RLs. No VOC TICs were identified in AOC-12.
- 1,4 dioxane: not detected.
- Alcohols: none detected above RLs.
- Full Part 201 SVOC List + TICs: none detected. No SVOC TICs were identified in AOC-12
- Full Part 201 Metals List: aluminum was detected above NR-DWC in MW-101 during the March 2023 event and manganese was detected above NR-DWC in MW-103 in March 2023, and MW-22-2 and MW-22-21 for both December 2022 and March 2023.
- PCBs: none detected above RLs.
- Michigan List 31 PFAS: 6:2 Fluorotelomer sulfonic acid (6:2 FTS), PFBS, Perfluorobutanoic acid (PFBA), Perfluoroheptanoic acid (PFHpA), Perfluorohexane sulfonic acid (PFHxS), PFHxS-BR, PFHxS-LN, Perfluorohexanoic acid (PFHxA), PFOS-BR, PFOS-LN, Perfluoropentane sulfonic acid (PFPeS), and Perfluoropentanoic acid (PFPeA) and were detected, but below cleanup criteria. Perfluorooctane sulfonic acid (PFOS) was detected above NR-DWC and GSIC and PFOA was detected above NR-DWC in MW-103.

Refer to **Tables 2-10, Figures 6-7** and **Appendix C** for soil and groundwater results.

3.10 Site Wide Investigation

The purpose of the Site Wide Investigation is to create a holistic, site-wide approach to the investigation of the Site. Activities performed during the Site Wide Investigation include 1) the vertical delineation of overburden to provide a better understanding of the overall deep lithology (greater than the current maximum explored depth of 25 feet bgs) by completing the installation of MW-22-22D; and 2) assess potential preferential pathways created by utility corridors and/or known underground tunnels on the Site by completing a GPR, electromagnetic pipe locator, traceable rodder and EMI survey along the southern and eastern property boundaries, and in the interior of the Site with focus on the storm sewer on May 5, 2023. Select utilities were also pot holed to determine the depth and backfill.

2022-2023 Groundwater Results

The following are groundwater results for the newly installed deep monitoring well MW-22-22D located between AOC-8 and AOC-9.

- Full Michigan Part 201 VOC List + TICs: VOC benzene was detected above NR-DWC during both the December 2022 and the March 2023 events, toluene was detected but below cleanup criteria, all other VOCs were not detected above their applicable RLs. Several VOC TICs including propane, butane, 1-pentene, cyclopropane, methyl-cyclopentane were identified in MW-22-22D. The nature of the VOC TIC contaminants encountered in this well are indicative of what is typically found in wells installed within the shale. Hydrocarbons commonly referred to as

Bitumens are common in shale aquifers and have been found in the Antrim shale throughout the State of Michigan (*Chemical Composition of the Antrim Shale in the Michigan Basin*, Leddy, Sandel, Swartz, Kenny, Gulick and Khadem, August 1980). This may explain why Consumers Energy has an exploratory well installed within the Shale within one mile of the Site. These contaminants (benzene, toluene and the identified TICs) in MW-22-22D are not found on the Site property and are separated from the Site contaminants by a double cased monitoring well and 105 feet of very low permeability clay.

- 1,4 dioxane: Was not detected above the RL.
- Alcohols: Was not detected above the RL.
- Full Michigan Part 201 SVOC List + TICs: Were not detected above their respective RLs. No SVOC TICs were identified in MW-22-22D.
- Full Michigan Part 201 Metals List: aluminum and iron were detected in the December 2022 event, and boron, manganese and sodium in the December 2022 and March 2023 event were detected at concentrations above their respective NR-DWC in MW-22-22D. Barium, selenium, and sodium were detected at concentrations above their respective GSIC in December 2022 and March 2023 events.
- PCBs: Was not detected above the RLs.
- Michigan List 31 PFAS: none detected.

Refer to **Tables 2-10, Figures 6-7** and **Appendix C** for groundwater results.

Utility Corridor Assessment Results

The utility GPR, electromagnetic pipe locator, traceable rodder and EMI survey conducted along the southern and eastern property boundaries and select locations within the Site including the storm sewer was completed May 5, 2023, by GPRS. The survey indicated no new utilities or anomalies along these locations that may be aiding in off-site migration. It was confirmed that the water main along the south side of the Site and the gas main utility on the east side are shallow in the sub surface at depths of approximately 5.2-6.2 feet bgs and approximately 2.1-3.5 feet bgs respectively and therefore are likely are not aid in off-site migration of contaminants via groundwater and soil vapor due to their shallow depth. The storm sewer was noted to extend below the water table in the interior of the Site, starting at a depth of approximately 5.5 feet bgs in the west near AOC-11 to 14 feet bgs to the east of AOC-09. One manhole north of AOC-9 and one manhole within AOC-10 were observed by GPRS to be filled with sand. An additional assessment of the storm sewer on-site and off-site is planned to determine the potential migration pathway as discussed in Section 5.0. Future use of the storm sewer or potential abandonment of the storm sewer will be reviewed.

The findings of the utility locate, and EMI survey can be found on **Figure 3**.

4.0 Summary and Conclusions

4.1 AOC 3 – SWMU 3 – Former Burial Area

Former waste burial areas in AOC-3 were not identified during the test pit excavations and monitoring well installation. Based on the results of soil and groundwater analytical data obtained during the December 2022 and March 2023 events, select soil constituents at test pits AOC3-TP01 through AOC3-TP03 and soil borings for MW-22-11 and MW-22-12 and select groundwater constituents for MW-22-11 and MW-22-12 are present at concentrations exceeding one or more applicable NR Michigan Part 201 cleanup criteria in AOC-3. Those include the following:

4.1.1 Soil

- Total Metals:
 - Chromium in some samples had concentrations that exceeded the Michigan Part 201 generic GSIPC at AOC3-TP01, AOC3-TP02, AOC3-TP03 and to AOC3-TP04 based on the potential for hexavalent chromium (chromium VI) in soil. These potential impacts are likely naturally occurring in soil as all the concentrations detected are below the Part 201 default background criteria for total chromium, however speciated analysis for hexavalent chromium (to likely demonstrate hexavalent chromium is not present) is recommended to confirm that the Part 201 default background criteria apply to this AOC. Chromium concentrations within groundwater at down gradient wells MW-22-11, MW-106 and MW-107 is not observed above the chromium GSI cleanup criteria, therefore potential migration of chromium to the nearest GSI (combined storm sewer in Pinecrest Dr.) is not occurring, and therefore this pathway is incomplete.
 - Hexachloro-butadiene had concentrations that exceeded the Michigan Part 201 generic GSIPC and NR-VIAP at in some soil samples at AOC3-TP04. These impacts are isolated to the shallow sidewalls (5 ft bgs) and do not extend to the bottom. Hexachloro-butadiene in groundwater within down gradient wells MW-22-11, MW-106 and MW-107 is not observed above the GSI or NR-VIAP, therefore Hexachloro-butadiene does not appear to be migrating beyond AOC-3. The VIAP is also incomplete at this time due to no buildings existing at the Site. Should buildings be built near or at AOC-3 in the future, institutional controls will require soil vapor assessment and/or vapor intrusion evaluation and if merited vapor mitigation be completed prior to/or coincident with constructing a building intended for regular human occupation.
- Alcohols:
 - Methanol concentrations exceeded the Michigan Part 201 NR-DWPC at MW-22-11 and MW-22-12. Methanol is not observed in downgradient monitoring wells MW-106 and MW-107, therefore methanol does not appear to be migrating beyond AOC-3. The drinking water pathway is also incomplete due to the area using municipal water and TRC would recommend future Site institutional controls.

- SVOCs:
 - Hexachlorobenzene concentrations exceeded the Michigan Part 201 generic GSIPC and NR-VIAP at AOC3-TP04. Hexachlorobenzene is not observed in downgradient monitoring well MW-22-11, therefore hexachlorobenzene does not appear to be migrating beyond AOC-3. The VIAP is also incomplete at this time due to no buildings existing at the Site. Should buildings be built near or at AOC-3 in the future, institutional controls will require soil vapor assessment/or vapor intrusion evaluation and if merited vapor mitigation be completed prior to/or coincident with constructing a building intended for regular human occupation.

4.1.2 Groundwater

- Total Metals:
 - Aluminum concentrations exceeded the Michigan Part 201 generic NR-DWC at MW-22-11 and MW-22-12 in December 2022. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls.
 - Iron concentrations exceeded the Michigan Part 201 generic NR-DWC at MW-12 in December 2022. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls.
 - Manganese concentrations exceeded the Michigan Part 201 generic NR-DWC at MW-11 and MW-12 in both December 2022 and March 2023. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls.
- VOCs:
 - Previous groundwater impacts of 1,2-dichlorobenzene (SB/TMW-8 and SB/TMW-8R) and TCE (MW-9 and MW-10) above Part 201 clean up criteria observed in 2012 and 2015/2016 were not observed in new monitoring wells MW-22-12 (upgradient of AOC-3) and MW-22-11 (downgradient of AOC-3). Previous impacts of 1,2-dichlorobenzene above Part 201 clean up criteria is delineated by downgradient monitoring wells MW-106, MW-107 and MW-108. TCE above Part 201 criteria is observed in downgradient monitoring well MW-107. It should be noted that no soil impacts of TCE above RLs were observed in AOC-3.

4.1.3 Next Steps

- MW-130 and MW-131 that were to be sampled as part of the AOC-3 investigation, could not be located and are presumed destroyed. Prior impacts in these monitoring wells consisted of various metals and PFAS exceeding NR-DWC and GSIC. Given off-site migration is being monitored by various wells in AOC-3 and along Pinecrest, it is not recommended these wells be replaced at this time. These wells will be attempted to be located as part of the next steps work plan discussed in Section 5.0, and if located, will be properly abandoned.
- Two hand auger borings are planned to be completed in AOC3-TP02 and to AOC3-TP04 to collect soil samples for chromium VI to determine if the chromium is naturally occurring to be able to compare total chromium data to the statewide background levels.

- Given buried hazardous substance waste was not encountered in AOC-3 during subsurface investigations, the pathways are incomplete for soil impacts and the soil impacts are not migrating to groundwater, AOC-3 should be considered completely assessed with no additional assessment necessary except for what is discussed above.

4.2 AOC 7 – PCE/TCE

PCE and TCE were not identified in AOC-7. Based on the results of soil and groundwater analytical data obtained during the December 2022 and March 2023 events, select soil constituents at soil borings for MW-22-08 and MW-22-09 and select groundwater constituents for MW-22-08 and MW-22-09 are present at concentrations exceeding one or more applicable Michigan Part 201 cleanup criteria in AOC-7. Those include the following:

Soil

- Total Metals:
 - Aluminum exceeded Michigan Part 201 generic NR-DWPC at MW-22-09. These soil impacts are delineated below Part 201 clean up criteria by soil samples collected from MW-22-08. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls.
 - Boron exceeded Michigan Part 201 generic NR-DWPC at MW-22-09. These soil impacts are delineated below Part 201 cleanup criteria by soil samples collected from MW-22-08. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls.
 - Chromium exceeded Michigan Part 201 generic GSIPC at MW-22-08 and MW-22-09 based on the potential for chromium VI in soil. These potential impacts are likely naturally occurring in soil as all the concentrations detected are below the Part 201 default background criteria for total chromium, however speciated analysis for hexavalent chromium (to likely demonstrate hexavalent chromium is not present) is recommended to confirm that the Part 201 default background criteria apply to this AOC. The GSI may be a potential pathway due to a nearby storm sewer and the occurrence of deeper impacts of chromium near the water table. It should be noted the storm sewer flows to a combined sewer system in Pinecrest Drive which is treated at the publicly owned treatment works (POTW) prior to discharge, however additional evaluation of this storm sewer is planned to determine the migration potential as part of next steps for the Southern Area. It also should be noted that chromium was not encountered above Part 201 cleanup criteria in groundwater at MW-22-08 and MW-22-09 which indicates the soil impacts observed are not migrating in groundwater.
 - Mercury exceeded Michigan Part 201 generic GSIPC and NR-VIAP at MW-22-08 and MW-22-09 however these impacts are delineated to below Part 201 clean up criteria by soil samples collected at MW-22-18 and MW-22-19 and are not observed to be migrating to groundwater in MW-22-08 and MW-22-09. The GSI may be a potential pathway due to a nearby storm sewer and the occurrence of deeper impacts of mercury near the water table. It should be noted the storm sewer flows to a combined sewer system in Pinecrest Drive which is treated at the POTW prior to discharge, however additional evaluation of this storm sewer is planned to determine the migration potential as part of next steps for the Southern Area. The VIAP is incomplete at this time due to no buildings existing at the Site. Should buildings be built near or at AOC-7 in the future,

institutional controls will require soil vapor assessment and or protective measures be completed prior to building or at the time of construction.

- Selenium exceeded Michigan Part 201 generic GSIPC at MW-22-09 but is delineated to below Part 201 clean up criteria by soil samples collected at MW-22-08 are not observed to be migrating to groundwater in MW-22-08 and MW-22-09. The GSI may be a potential pathway due to a nearby storm sewer and the occurrence of deeper impacts of selenium near the water table. It should be noted the storm sewer flows to a combined sewer system in Pinecrest Drive which is treated at the POTW prior to discharge, however additional evaluation of this storm sewer is planned to determine the migration potential as part of next steps for the Southern Area.
- Zinc exceeded Michigan Part 201 generic GSIPC at MW-22-09 but is delineated to below Part 201 clean up criteria by soil samples collected at MW-22-08 are not observed to be migrating to groundwater in MW-22-08 and MW-22-09. The GSI may be a potential pathway due to a nearby storm sewer and the occurrence of deeper impacts of zinc near the water table. It should be noted the storm sewer flows to a combined sewer system in Pinecrest Drive which is treated at the POTW prior to discharge, however additional evaluation of this storm sewer is planned to determine the migration potential as part of next steps for the Southern Area.
- VOCs:
 - Naphthalene exceeded Michigan Part 201 generic GSIPC at MW-22-09 but is delineated to below Part 201 clean up criteria by soil samples collected at MW-22-08 are not observed to be migrating to groundwater in MW-22-08 and MW-22-09. The GSI may be a potential pathway due to a nearby storm sewer and the occurrence of deeper impacts of naphthalene near the water table. It should be noted the storm sewer flows to a combined sewer system in Pinecrest Drive which is treated at the POTW prior to discharge, however additional evaluation of this storm sewer is planned to determine the migration potential as part of next steps for the Southern Area.
 - Trichlorofluoro-methane (Freon 11) exceeded Michigan Part 201 NR-VIAP at MW-22-09 but is delineated to below Part 201 clean up criteria by soil samples collected at MW-22-08 are not observed to be migrating to groundwater in MW-22-08 and MW-22-09. The VIAP is incomplete at this time due to no buildings existing at the Site. Should buildings be built near or at AOC-7 in the future, institutional controls will require soil vapor assessment and or protective measures be completed prior to building or at the time of construction.
- Alcohols:
 - Methanol exceeded Michigan Part 201 generic NR-DWPC at MW-22-08 however these impacts are delineated to below Part 201 clean up criteria by soil samples collected at MW-22-18 and MW-22-19 and are not observed to be migrating to groundwater in MW-22-08 and MW-22-09. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls.
- SVOCs:
 - Fluoranthene exceeded Michigan Part 201 generic GSIPC at MW-22-09 but is delineated to below Part 201 clean up criteria by soil samples collected at MW-22-08 are not observed to be migrating to groundwater in MW-22-08 and MW-22-09. The GSI may be a potential pathway due to a nearby storm sewer and the occurrence of deeper

impacts of fluoranthene near the water table. It should be noted the storm sewer flows to a combined sewer system in Pinecrest Drive which is treated at the POTW prior to discharge, however additional evaluation of this storm sewer is planned to determine the migration potential as part of next steps for the Southern Area.

- Phenanthrene exceeded Michigan Part 201 generic GSIPC at MW-22-08 and MW-22-09 but is delineated to below Part 201 clean up criteria by soil samples collected at MW-22-18 and MW-22-19 are not observed to be migrating to groundwater in MW-22-08 and MW-22-09. The GSI may be a potential pathway due to a nearby storm sewer and the occurrence of deeper impacts of phenanthrene near the water table. It should be noted the storm sewer flows to a combined sewer system in Pinecrest Drive which is treated at the POTW prior to discharge, however additional evaluation of this storm sewer is planned to determine the migration potential as part of next steps for the Southern Area.

- PFAS:

- PFOS exceeded Michigan Part 201 generic GSIPC at MW-22-09 but is delineated to below Part 201 clean up criteria by soil samples collected at MW-22-08 are not observed to be migrating to groundwater in MW-22-08 and MW-22-09. The GSI may be a potential pathway due to a nearby storm sewer and the occurrence of deeper impacts of PFOS near the water table. It should be noted the storm sewer flows to a combined sewer system in Pinecrest Drive which is treated at the POTW prior to discharge, however additional evaluation of this storm sewer is planned to determine the migration potential as part of next steps for the Southern Area.

Groundwater

- Total Metals:

- Aluminum exceeded Michigan Part 201 generic NR-DWC at MW-22-08 and MW-22-09 in December 2022 but was not confirmed in March 2023. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls.
- Iron exceeded Michigan Part 201 generic NR-DWC at MW-22-08 and MW-22-09 in December 2022 but was not confirmed in March 2023. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls.
- Manganese exceeded Michigan Part 201 generic NR-DWC at MW-22-08 in December 2022 and MW-09 in both December 2022 and March 2023. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls.
- Vanadium was previously detected above Part 201 cleanup criteria in MW-126. The vanadium impacts are delineated below Part 201 clean up criteria by the new monitoring wells installed upgradient (MW-22-09) and downgradient (MW-22-08) of AOC-7.

- VOCs:

- PCE at SB/TMW-16, SB/TMW-18 and MW-126 and TCE at MW-126 were previously detected above Part 201 cleanup criteria. These PCE and TCE impacts are delineated below Part 201 clean up criteria by the new monitoring wells installed upgradient (MW-22-09) and downgradient (MW-22-08) of AOC-7.

4.2.1 Next Steps

- MW-126 that was to be sampled as part of the AOC-7 investigation, could not be located and is presumed destroyed. Prior impacts in this well included PCE and various metals. Therefore, it is recommended this well be replaced.
- Two hand auger borings are planned to be completed at MW-22-08 and MW-22-09 to collect soil samples for chromium VI to determine if the chromium is naturally occurring to be able to compare the total chromium data to the statewide background levels.
- Given buried hazardous substance waste was not encountered in AOC-7 during subsurface investigations, the soil impacts are delineated to AOC-7 and the soil impacts are not migrating to groundwater AOC-7 should be considered completely assessed with no additional assessment necessary except for what is discussed above. The storm sewer in this AOC will be further assessed as discussed in Section 5.0.

4.3 AOC 8 – PFOA/PFOS

PFOA and PFOS were identified in AOC-8. Based on the results of soil and groundwater analytical data obtained during the December 2022 and March 2023 events, select soil constituents at soil borings for MW-22-18 and MW-22-19 and select groundwater constituents for MW-22-18, MW-22-19, MW-128, and MW-129 are present at concentrations exceeding one or more applicable Michigan Part 201 cleanup criteria in AOC-8. Those include the following:

Soil

- Total Metals:
 - Chromium exceeded Michigan Part 201 generic GSIPC at MW-22-18 and MW-22-19 based on the potential for chromium VI in soil. These potential impacts are likely naturally occurring in soil as all the concentrations detected are below the Part 201 default background criteria for total chromium, however speciated analysis for hexavalent chromium (to likely demonstrate hexavalent chromium is not present) is recommended to confirm that the Part 201 default background criteria apply to this AOC. The GSI may be a potential pathway due to a nearby storm sewer and the occurrence of deeper impacts of chromium near the water table. It should be noted the storm sewer flows to a combined sewer system in Pinecrest Drive which is treated at the publicly owned treatment works (POTW) prior to discharge, however additional evaluation of this storm sewer is planned to determine the migration potential as part of next steps for the Southern Area. Chromium in groundwater is not observed in nearby MW-22-18, MW-22-19, MW-128 and MW-129.
 - Selenium exceeded Michigan Part 201 generic GSIPC at MW-22-18 but is delineated to below Part 201 cleanup criteria by soil samples collected from MW-22-13 and MW-22-14. The selenium impacts are shallow (2-4 ft bgs) and are not likely to migrate in groundwater. The GSI may be a potential pathway due to a nearby storm sewer and the occurrence. It should be noted the storm sewer flows to a combined sewer system in Pinecrest Drive which is treated at the publicly owned treatment works (POTW) prior to discharge, however additional evaluation of this storm sewer is planned to determine the migration potential as part of next steps for the Southern Area. Selenium in groundwater is not observed in nearby MW-22-18, MW-22-19, MW-128 and MW-129.

Groundwater

■ Total Metals:

- Aluminum exceeded Michigan Part 201 generic NR-DWC at MW-22-18 and MW-22-19 in December 2022 but was not confirmed in March 2023. These impacts are also delineated by downgradient MW-22-13 and MW-22-14. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls.
- Boron exceeded Michigan Part 201 generic NR-DWC at MW-128 and MW-129 in both December 2022 and March 2023 events but is delineated below Part 201 cleanup criteria by downgradient MW-22-18 and MW-22-19. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls.
- Iron exceeded Michigan Part 201 generic NR-DWC at MW-22-18 and MW-22-19 in December 2022 but not confirmed in March 2023. These impacts are delineated to below Part 201 cleanup criteria at downgradient monitoring wells MW-22-13 and MW-22-14. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls.
- Manganese exceeded Michigan Part 201 generic NR-DWC at MW-128, MW-129, MW-22-18, and MW-22-19 in both December 2022 and March 2023. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls.

■ VOCs:

- PCE exceeded Michigan Part 201 generic NR-DWC at MW-128 in both December 2022 and March 2023. These impacts are delineated to below Part 201 cleanup criteria at downgradient monitoring wells MW-22-13 and MW-22-14. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls.

■ PFAS:

- PFOS exceeded Michigan Part 201 generic NR-DWC and GSIC at MW-128, MW-129, and MW-22-19 in both December 2022 and March 2023. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls. The GSI may be a potential pathway due to a nearby storm sewer. It should be noted the storm sewer flows to a combined sewer system in Pinecrest Drive which is treated at the publicly owned treatment works (POTW) prior to discharge, however additional evaluation of this storm sewer is planned to determine the migration potential as part of next steps for the Southern Area.
- PFOA exceeded Michigan Part 201 generic NR-DWC at MW-128, MW-129, MW-22-18, and MW-22-19 in both December 2022 and March 2023. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls. There is not a storm sewer located near AOC-8 and the Site storm sewer (while not located near AOC-8) flows to a combined sewer system in Pinecrest Drive which is treated at the POTW prior to discharge. Additional evaluation of this storm sewer is planned to determine the migration potential as part of next steps for the Southern Area.

4.3.1 Next Steps

- Two hand auger borings are planned to be completed at MW-22-18 and MW-22-19 to collect soil samples for chromium VI to determine if the chromium is naturally occurring to be able to compare the total chromium data to the statewide background levels.
- Given buried hazardous substance waste was not encountered in AOC-8 during subsurface investigations, the soil impacts are delineated to AOC-8 and the soil impacts are not migrating to groundwater AOC-8 should be considered completely assessed with no additional assessment necessary except for what is discussed above. The storm sewer in this AOC will be further assessed as part of a site wide investigation.

4.4 AOC 9 – Neutralization Basin/Former UST Area

Based on the results of soil and groundwater analytical data obtained during the December 2022 and March 2023 events, select soil constituents at soil borings for MW-22-13, MW-22-14, MW-22-15, SB-01 and SB-02 and select groundwater constituents for MW-22-13, MW-22-14, and MW-22-15 are present at concentrations exceeding one or more applicable Michigan Part 201 cleanup criteria in AOC-9. Those include the following:

Soil

- Total Metals:
 - Chromium exceeded Michigan Part 201 generic GSIPC at SB-02 based on the potential for chromium VI in soil. These potential impacts are likely naturally occurring in soil as all the concentrations detected are below the Part 201 default background criteria for total chromium, however speciated analysis for hexavalent chromium (to likely demonstrate hexavalent chromium is not present) is recommended to confirm that the Part 201 default background criteria apply to this AOC. However, given the chromium detection is shallow (2-4 ft bgs), migration to the nearby storm sewer is not likely. Chromium is not observed in groundwater above Part 201 cleanup criteria at this AOC.
 - Mercury exceeded Michigan Part 201 generic GSIPC and NR-VIAP at SB-02. However, given the mercury impact is shallow (2-4 ft bgs), migration to the nearby storm sewer is not likely. Mercury is not observed in groundwater above Part 201 cleanup criteria at this AOC. The VIAP is incomplete at this time due to no buildings existing at the Site. Should buildings be built near or at AOC-9 in the future, institutional controls will require soil vapor assessment and or protective measures be completed prior to building or at the time of construction.
- Alcohols:
 - Methanol exceeded Michigan Part 201 generic NR-DWPC at MW-22-13 however methanol is not observed to be migrating to groundwater in MW-22-13. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls. Methanol is not observed above Part 201 cleanup criteria in downgradient MW-121.

Groundwater

- Total Metals:

- Copper exceeded Michigan Part 201 generic GSIC at MW-22-14 in March 2023. The GSI may be a potential pathway due to a nearby storm sewer. It should be noted the storm sewer flows to a combined sewer system in Pinecrest Drive which is treated at the POTW prior to discharge, however additional evaluation of this storm sewer is planned to determine the migration potential as part of next steps for the Southern Area.
- Manganese exceeded Michigan Part 201 generic NR-DWC at MW-22-13, MW-22-14, and MW-22-15 in both December 2022 and March 2023. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls.
- PFAS:
 - PFOS exceeded Michigan Part 201 generic NR-DWC and GSIC at MW-22-13 in both December 2022 and March 2023. GSI may be a potential pathway due to a nearby storm sewer. It should be noted the storm sewer flows to a combined sewer system in Pinecrest Drive which is treated at the POTW prior to discharge, however additional evaluation of this storm sewer is planned to determine the migration potential as part of next steps for the Southern Area.
 - PFOA exceeded Michigan Part 201 generic NR-DWC at MW-22-13, MW-22-14, and MW-22-15 in both December 2022 and March 2023. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls.

4.4.1 Next Steps

- One hand auger boring is planned to be completed at SB-02 to collect soil samples for chromium VI to determine if the chromium is naturally occurring to be able to compare the total chromium data to the statewide background levels.
- Installation of two monitoring wells east of AOC-9, one south of the storm sewer and one directly east of the neutralization basin. The wells will be installed to the base of the sand/surface of the clay unit.
- Although hazardous substance buried waste or USTs were not encountered in AOC-9 during subsurface investigations, test pitting was not completed in the area of the anomaly. It is recommended one test pit be completed in the area of the anomaly to confirm the status of any potential buried USTs. The storm sewer in this AOC will be further assessed as part of a site wide investigation.

4.5 AOC 10 – Former Heating Oil UST/EMI Interference – GPR Anomaly

No evidence of a former UST or buried anomaly area were found during test pit excavation and monitoring well installation in AOC-10. Only native sand was encountered during the assessment work. Based on the results of soil and groundwater analytical data obtained during the December 2022 and March 2023 events, select soil constituents at test pits AOC10-TP01 and AOC10-TP02 and soil borings for MW-22-16 and MW-22-17 and select groundwater constituents for MW-22-16 and MW-22-17 are present at concentrations exceeding one or more applicable Michigan Part 201 cleanup criteria in AOC-10. Those include the following:

Soil

- Total Metals:

- Chromium exceeded Michigan Part 201 generic GSIPC at AOC10-TP01, AOC10-TP02, MW-22-16, and MW-22-17 based on the potential for chromium VI in soil. These potential impacts are likely naturally occurring in soil as all the concentrations detected are below the Part 201 default background criteria for total chromium, however speciated analysis for hexavalent chromium (to likely demonstrate hexavalent chromium is not present) is recommended to confirm that the Part 201 default background criteria apply to this AOC. The GSI may be a potential pathway due to a nearby storm sewer. It should be noted the storm sewer flows to a combined sewer system in Pinecrest Drive which is treated at the POTW prior to discharge, however additional evaluation of this storm sewer is planned to determine the migration potential as part of next steps for the Southern Area.
- Mercury exceeded Michigan Part 201 generic GSIPC at AOC10-TP01 and AOC10-TP02 and NR-VIAP at AOC10-TP02. However, these soil impacts are not migrating in groundwater. The GSI may be a potential pathway due to a nearby storm sewer. It should be noted the storm sewer flows to a combined sewer system in Pinecrest Drive which is treated at the POTW prior to discharge, however additional evaluation of this storm sewer is planned to determine the migration potential as part of next steps for the Southern Area. The VIAP is incomplete at this time due to no buildings existing at the Site. Should buildings be built near or at AOC-9 in the future, institutional controls will require soil vapor assessment and or protective measures be completed prior to building or at the time of construction.

- SVOCs:

- Fluoranthene exceeded Michigan Part 201 generic GSIPC at AOC10-TP01 and MW-22-17. However, these soil impacts are not migrating to groundwater. The GSI may be a potential pathway due to a nearby storm sewer. It should be noted the storm sewer flows to a combined sewer system in Pinecrest Drive which is treated at the POTW prior to discharge, however additional evaluation of this storm sewer is planned to determine the migration potential as part of next steps for the Southern Area.
- Phenanthrene exceeded Michigan Part 201 generic GSIPC at AOC10-TP01 and MW-22-17. However, these soil impacts are not migrating to groundwater. The GSI may be a potential pathway due to a nearby storm sewer. It should be noted the storm sewer flows to a combined sewer system in Pinecrest Drive which is treated at the POTW prior to discharge, however additional evaluation of this storm sewer is planned to determine the migration potential as part of next steps for the Southern Area.

- PFAS:

- PFOS exceeded Michigan Part 201 generic GSIPC at AOC10-TP01 and MW-22-17. The GSI may be a potential pathway due to a nearby storm sewer. It should be noted the storm sewer flows to a combined sewer system in Pinecrest Drive which is treated at the POTW prior to discharge, however additional evaluation of this storm sewer is planned to determine the migration potential as part of next steps for the Southern Area.

Groundwater

- Total Metals:
 - Manganese exceeded Michigan Part 201 generic NR-DWC at MW-22-16, and MW-22-17 in both December 2022 and March 2023. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls.
- PFAS:
 - PFOA exceeded Michigan Part 201 generic NR-DWC at MW-22-17 in December 2022 and at MW-22-16 in March 2023. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls.

4.5.1 Next Steps

- MW-127 that was to be sampled as part of the AOC-10 investigation, could not be located and is presumed destroyed. Prior impacts in this well included PCE and various metals. Therefore, it is recommended this well be replaced.
- Two hand auger borings are planned to be completed at AOC10-TP01, AOC10-TP02 to collect soil samples for chromium VI to determine if the chromium is naturally occurring to be able to compare the total chromium data to the statewide background levels.
- Given buried hazardous substance waste or USTs were not encountered in AOC-10 during subsurface investigations and the soil impacts are not migrating to groundwater AOC-10 should be considered completely assessed with no additional assessment necessary except for what is discussed above. The storm sewer in this AOC will be further assessed as part of a site wide investigation.

4.6 AOC 11 – Former UST Area/EMI Interference

EMI interference in this location is likely due to former UST concrete slabs and steel tie-downs found during test pit excavations in AOC-11, these are likely former UST Deadman that were left in place. No USTs were encountered. Based on the results of soil and groundwater analytical data obtained during the December 2022 and March 2023 events, select soil constituents at test pits AOC11-TP01 through AOC11-TP04 and soil borings for MW-22-07 and MW-22-10 and select groundwater constituents for MW-22-07 and MW-22-10 are present at concentrations exceeding one or more applicable Michigan Part 201 cleanup criteria in AOC-11. Those include the following:

Soil

- Total Metals:
 - Chromium exceeded Michigan Part 201 generic GSIPC at AOC11-TP02, MW-22-07, and MW-22-10 based on the potential for chromium VI in soil. These potential impacts are likely naturally occurring in soil as all the concentrations detected are below the Part 201 default background criteria for total chromium, however speciated analysis for hexavalent chromium (to likely demonstrate hexavalent chromium is not present) is recommended to confirm that the Part 201 default background criteria apply to this AOC. The GSI may be a potential pathway due to a nearby storm sewer. It should be noted these soil impacts are not migrating to groundwater and the storm sewer flows to a

combined sewer system in Pinecrest Drive which is treated at the POTW prior to discharge, however additional evaluation of this storm sewer is planned to determine the migration potential as part of next steps for the Southern Area.

- Mercury exceeded Michigan Part 201 generic GSIPC at AOC11-TP01 through AOC-TP04, MW-22-07, and MW-22-10 and NR-VIAP at AOC11-TP02, AOC-TP03, MW-22-07, and MW-22-10, however these impacts are not migrating to groundwater. The GSI may be a potential pathway due to a nearby storm sewer. It should be noted the storm sewer flows to a combined sewer system in Pinecrest Drive which is treated at the POTW prior to discharge, however additional evaluation of this storm sewer is planned to determine the migration potential as part of next steps for the Southern Area. The VIAP is incomplete at this time due to no buildings existing at the Site. Should buildings be built near or at AOC-9 in the future, institutional controls will require soil vapor assessment and or protective measures be completed prior to building or at the time of construction.

- SVOCs:

- Benzo(a)pyrene exceeded Michigan Part 201 generic NR-DCC at AOC11-TP03 and AOC11-TP04. These DCC exceedances are located at 5 ft bgs and are delineated by the bottom samples at 10 ft bgs. There is not an immediate concern for direct contact due to the property being fenced to the public and workers not working in this area of the Site. However, due to planned construction on the Site, this area will either be beneath a building or beneath a pavement cap parking lot to prevent future exposure.
- Fluoranthene exceeded Michigan Part 201 generic GSIPC at AOC-11-TP01, AOC11-TP03, and AOC11-04, however these impacts are not migrating to groundwater. The GSI may be a potential pathway due to a nearby storm sewer. It should be noted the storm sewer flows to a combined sewer system in Pinecrest Drive which is treated at the POTW prior to discharge, however additional evaluation of this storm sewer is planned to determine the migration potential as part of next steps for the Southern Area.
- Phenanthrene exceeded Michigan Part 201 generic GSIPC at AOC11-TP01 through AOC11-TP04, however these impacts are not migrating to groundwater. The GSI may be a potential pathway due to a nearby storm sewer. It should be noted the storm sewer flows to a combined sewer system in Pinecrest Drive which is treated at the POTW prior to discharge, however additional evaluation of this storm sewer is planned to determine the migration potential as part of next steps for the Southern Area.

- PFAS:

- PFOS exceeded Michigan Part 201 generic GSIPC at AOC11-TP01, AOC11-TP04, and MW-22-07. The GSI may be a potential pathway due to a nearby storm sewer. It should be noted the storm sewer flows to a combined sewer system in Pinecrest Drive which is treated at the POTW prior to discharge, however additional evaluation of this storm sewer is planned to determine the migration potential as part of next steps for the Southern Area.

Groundwater

- Total Metals:
 - Aluminum exceeded Michigan Part 201 generic NR-DWC at MW-22-10 in December 2022. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls.
 - Manganese exceeded Michigan Part 201 generic NR-DWC at MW-22-10 in December 2022 and at MW-22-07 and MW-22-10 in March 2023. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls.
- PFAS:
 - PFOA exceeded Michigan Part 201 generic NR-DWC at MW-22-10 in December 2022. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls.

4.6.1 Next Steps

- Two hand auger borings are planned to be completed at AOC11-TP02 and MW-22-10 to collect soil samples for chromium VI to determine if the chromium is naturally occurring to be able to compare the total chromium data to the statewide background levels.
- MW-124 and MW-125 to be sampled as part of the AOC-11 investigation, could not be located and are presumed destroyed. These wells were below Part 201 cleanup criteria for VOCs and SVOCs and therefore will not be replaced with new shallow wells in this AOC. These wells will be attempted to be located, and if located in good condition, will be sampled as discussed in Section 5.0. If the wells are located and are damaged, the wells will be properly abandoned.
- Given hazardous substance buried waste or USTs were not encountered in AOC-11 during subsurface investigations, the anomaly was observed to be concrete UST Deadman left in place and observed soil impacts are not migrating to groundwater, AOC-11 should be considered completely assessed with no additional assessment necessary except for what is discussed above. The storm sewer in this AOC will be further assessed as part of a site wide investigation.

4.7 AOC 12 – EMI Interference – GPR Anomaly

Buried fill material, concrete foundation remnants and bricks were encountered during the test pits and soil borings. No hazardous substance buried waste was encountered. Based on the results of soil and groundwater analytical data obtained during the December 2022 and March 2023 events, select soil constituents at test pits AOC12-TP01 through AOC12-TP03 and soil borings for MW-22-20 and MW-22-21 and select groundwater constituents at MW-101, MW-102, MW-103, MW-22-20, and MW-22-21 are present at concentrations exceeding one or more applicable Michigan Part 201 cleanup criteria in AOC-12. Those include the following:

Soil

■ Total Metals:

- Aluminum exceeded Michigan Part 201 generic NR-DWPC at AOC12-TP01 but is delineated to below Part 201 cleanup criteria by MW-22-20 and AOC12-TP03. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls.
- Boron exceeded Michigan Part 201 generic NR-DWPC at AOC12-TP01 and MW-22-21 but is delineated to below Part 201 criteria by MW-22-20, MW-22-19 and MW-22-08. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls. These impacts are not migrating to groundwater.
- Chromium exceeded Michigan Part 201 generic GSIPC at AOC12-TP01 through AOC12-TP03, MW-22-20, and MW-22-21 based on the potential for chromium VI in soil. These potential impacts are likely naturally occurring in soil as all the concentrations detected are below the Part 201 default background criteria for total chromium, however speciated analysis for hexavalent chromium (to likely demonstrate hexavalent chromium is not present) is recommended to confirm that the Part 201 default background criteria apply to this AOC. The GSI is not a potential pathway due to no storm sewers being located near AOC-12.
- Manganese exceeded Michigan Part 201 generic NR-DWPC and GSIPC at AOC12-TP01 and AOC12-TP02 but are delineated to below Part 201 criteria by MW-22-20, MW-22-19 and MW-22-08. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls. The GSI is not a potential pathway due to no storm sewers being located near AOC-12.
- Mercury exceeded Michigan Part 201 generic GSIPC at AOC12-TP01, AOC12-TP03, and MW-22-21 and NR-VIAP at AOC12-TP01 but are delineated to below Part 201 criteria by MW-22-20 and MW-22-19 and is not migrating to groundwater. The GSI is not a potential pathway due to no storm sewers being located near AOC-12. The VIAP is incomplete at this time due to no buildings existing at the Site. Should buildings be built near or at AOC-12 in the future, institutional controls will require soil vapor assessment and or protective measures be completed prior to building or at the time of construction.

■ SVOCs:

- Benzo(a)pyrene exceeded Michigan Part 201 generic NR-DCC at AOC12-TP01. These DCC exceedances are located at 5 and 10 ft bgs and are delineated to below Part 201 cleanup criteria by AOC12-TP02, AOC12-TP03, MW-22-19 and MW-22-20 and not migrating to groundwater. There is not an immediate concern for direct contact due to the property being fenced to the public and workers not working in this area of the Site. However, this area will be either be beneath a building or beneath a pavement cap parking lot in the future to prevent exposure.
- Fluoranthene exceeded Michigan Part 201 generic GSIPC at AOC12-TP01 and MW-22-21 and are delineated to below Part 201 cleanup criteria by AOC12-TP02, AOC12-TP03, MW-22-19 and MW-22-20 and not migrating to groundwater. The GSI is not a potential pathway due to no storm sewers being located near AOC-12.

- Naphthalene exceeded Michigan Part 201 generic GSIPC at AOC12-TP01 and the NR-VIAP at AOC12-TP01 and are delineated to below Part 201 cleanup criteria by AOC12-TP02, AOC12-TP03, MW-22-19 and MW-22-20 and not migrating to groundwater. The GSI is not a potential pathway due to no storm sewers being located near AOC-12.
- Phenanthrene exceeded Michigan Part 201 generic GSIPC at AOC12-TP01, MW-22-20, and MW-22-21 and the NR-VIAP at AOC12-TP01. The GSI is not a potential pathway due to no storm sewers being located near AOC-12. The VIAP is incomplete at this time due to no buildings existing at the Site. Should buildings be built near or at AOC-12 in the future, institutional controls will require soil vapor assessment and or protective measures be completed prior to building or at the time of construction.
- PFAS:
 - PFOS exceeded Michigan Part 201 generic GSIPC at AOC12-TP01, AOC12-TP02, and MW-22-21 but are delineated to below Part 201 cleanup criteria by MW-22-20. The GSI is not a potential pathway due to no storm sewers being located near AOC-12.

Groundwater:

- Total Metals:
 - Aluminum exceeded Michigan Part 201 generic NR-DWC at MW-101 in March 2023. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls.
 - Manganese exceeded Michigan Part 201 generic NR-DWC at MW-103 in March 2023 and at MW-22-20 and MW-22-21 in both December 2022 and March 2023. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls.
- VOCs:
 - Hexachlorobutadiene exceeded Michigan Part 201 generic GSIPC at MW-103 in March 2023. The GSI is not a potential pathway due to no storm sewers being located near AOC-12. Off-site migration of VOCs to off-site storm sewers is being monitored by downgradient MW-104 and MW-105 which are non-detect for hexachlorobutadiene.
- PFAS:
 - PFOS exceeded Michigan Part 201 generic NR-DWC and GSIPC in December 2022 at MW-103 and GSIPC in March 2023 at MW-103. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls.
 - PFOA exceeded Michigan Part 201 generic NR-DWC in December 2022 and March 2023 at MW-103. The drinking water pathway is incomplete due to the area using municipal water and TRC would recommend future Site institutional controls.

4.7.1 Next Steps

- Replacement of MW-102 due to it being dry and potentially filled in with sediment. This well will be properly abandoned and replaced as part of the next work plan discussed in Section 5.0.

- Two hand auger borings are planned to be completed at AOC12-TP01 and AOC12-TP03 to collect soil samples for chromium VI to determine if the chromium is naturally occurring to be able to compare the total chromium data to the statewide background levels.
- Although buried hazardous substance waste or USTs were not encountered in AOC-12 during subsurface investigations, test pitting was not completed in the full area of the anomalies. It is recommended four additional test pits be completed in the area of the anomalies to confirm the anomaly is a buried foundation and debris as suspected.

4.8 Sitewide – MW-22-22D

Several constituents were identified in MW-22-22D. The nature of the contaminants encountered in this well are indicative of what is typically found in groundwater wells installed within the as evidenced in the need for Consumers Energy to have a similar well within one mile of the Site. These contaminants in MW-22-22D are not found on the Site property and are separated from the Site contaminants by a double cased monitoring well and 105 feet of competent clay. Based on the results of groundwater analytical data obtained during the December 2022 and March 2023 events, select groundwater constituents for MW-22-22D are present at concentrations exceeding one or more applicable Michigan Part 201 cleanup criteria, however these constituents are not considered related to Site activities and additional assessment of these deep impacts will not be completed. The impacts include the following:

Groundwater

- Total Metals:
 - Aluminum exceeded Michigan Part 201 generic NR-DWC at MW-22-22D in March 2023.
 - Barium exceeded Michigan Part 201 generic GSIC at MW-22-22D in December 2022 and March 2023.
 - Boron exceeded Michigan Part 201 generic NR-DWC at MW-22-22D in December 2022 and March 2023.
 - Iron exceeded Michigan Part 201 generic NR-DWC at MW-22-22D in December 2022.
 - Manganese exceeded Michigan Part 201 generic NR-DWC at MW-22-22D in December 2022 and March 2023.
 - Selenium exceeded Michigan Part 201 generic GSIC at MW-22-22D in December 2022 and March 2023.
 - Sodium exceeded Michigan Part 201 generic NR-DWC and GSIC at MW-22-22D in December 2022 and March 2023.
- VOCs
 - Benzene exceeded Michigan Part 201 generic NR-DWC at MW-22-22D in December 2022 and March 2023.

5.0 Proposed Future Activities

Based on the soil and groundwater data, TRC proposes the following future activities be conducted to address the Southern Area. All proposed work will follow standard operating procedures, analytical methodology references and QA/QC requirements specified in the February 2022 RFI Workplan by Atlas and updated in July 2022 by TRC for this Site. Refer to **Figure 8** for a map of the proposed locations:

- **AOC 3:** Installation of two hand auger borings in AOC3-TP02 and AOC3-TP04 to collect soil samples for chromium VI to determine if the chromium is naturally occurring to be able to compare the total chromium data to background criteria.
- **AOC 7:** Installation of two hand auger borings at MW-22-08 and MW-22-09 to collect soil samples for chromium VI to determine if the chromium is naturally occurring to be able to compare the total chromium data to background criteria. Installation of one shallow monitoring well within AOC-7 to replace MW-126 if the original MW-126 cannot be located.
- **AOC 8:** Installation of two hand auger borings at MW-22-18 and MW-22-19 to collect soil samples for chromium VI to determine if the chromium is naturally occurring to be able to compare the total chromium data to the statewide background levels.
- **AOC 9:** Installation of one hand auger boring at SB-02 to collect soil samples for chromium VI to determine if the chromium is naturally occurring to be able to compare the total chromium data to the statewide background levels. Completion of one test pit in the area of the anomaly to confirm the status of any potential buried USTs. Installation of two shallow monitoring wells east of AOC-9.
- **AOC 10:** Completion of two hand auger borings are planned to be completed at AOC10-TP01, AOC10-TP02 to collect soil samples for chromium VI to determine if the chromium is naturally occurring to be able to compare the total chromium data to the statewide background levels. Installation of one shallow monitoring well in AOC-10 to replace MW-127 if the original MW-127 cannot be located.
- **AOC 11:** Installation of two hand auger borings at AOC11-TP02 and MW-22-10 to collect soil samples for chromium VI to determine if the chromium is naturally occurring to be able to compare the total chromium data to the statewide background levels.
- **AOC-12:** Installation of two hand auger borings at AOC12-TP01 and AOC12-TP02 to collect soil samples for chromium VI to determine if the chromium is naturally occurring to be able to compare the total chromium data to the statewide background levels. Completion of four test pits in the area of the anomalies to confirm the status of the anomalies. Abandonment and replacement of MW-102 due to this well being potentially filled with sediment and dry.
- Attempt to locate lost monitoring wells MW-122, MW-124, MW-125, MW-126, MW-127, MW-130, MW-131, MW-132, MW-133. If the wells are found to be damaged, they will be properly abandoned. If the wells are found to be in good condition and not damaged, groundwater samples will be collected from each well one time using the analysis list discussed below.
- Conduct two rounds of low-flow groundwater sampling at the two proposed new shallow monitoring wells (replacement MW-126 and MW-127 if installed). Sampling rounds will be at least 30 days apart. The constituents to be sampled for are the following based current on-Site detections above Part 201 cleanup criteria:

-
- VOCs 1,2-Dichlorobenzene, 1,2-dichloroethane, chlorobenzene, chloroform, hexachlorobutadiene, naphthalene, tetrachloroethene, trichloroethene and vinyl chloride per USEPA Method 8260B;
 - SVOCs: 2-nitrophenol, benzo(a)-pyrene, carbazole, fluoranthene, naphthalene and phenanthrene per USEPA Method 8270D.
 - Total Metals: aluminum, boron, chromium, copper, iron, lead, manganese, selenium, sodium, vanadium, zinc.
 - PFAS constituents PFNA, PFOS and PFOA by ASTM Method D7979.
 - The following as previously proposed in the RFI will not be analyzed in groundwater due to no detections above Part 201 cleanup criteria.
 - PCBs by USEPA Method 608.3
 - Tetraethyl Lead USEPA Method 8270D
 - Thorium by USEPA Methods 6010B/6020A;
 - TICs by USEPA Methods 8260B and 8270D
 - 1,4 dioxane by USEPA Method 8260B
 - Methanol USEPA Method 8015B;
 - Replacement of MW-121 (as part of the eastern Boundary Assessment) due to tree roots being present in the well which hinder the ability to collect representative groundwater samples.
 - Collect two quarterly rounds of groundwater sampling at upgradient monitoring wells MW-116, MW-117 and MW-118 and analyze the samples for PFAS constituents PFNA, PFOS and PFOA by ASTM Method D7979.
 - Complete an investigation to determine potential migration and groundwater infiltration to the combined sewer. This will include a detailed camera survey of the on-site sewer to determine where any bulk heading and backfilling of the sewer has occurred, and a detailed depth analysis along the length of the sewer to determine at what location the sewer dips below the groundwater table in the interior of the Site. Samples will be collected from the storm sewer water upgradient and downgradient of the Site to determine if there is infiltration. An evaluation of the Pinecrest Drive combined sewer main flow, depth and direction and a review of potential upgradient sources will be completed as part of the Eastern Boundary work plan.
 - Once the data is received from this proposed assessment work and two rounds of groundwater sampling, a report will be submitted which will propose next steps if any.
 - Complete a public communication website to share the data being collected with the community.

6.0 Proposed Schedule

The proposed work plan discussed in Section 5.0 will be initiated within 60 days of EGLE approval of the work plan. A Report documenting the results and next steps will be completed within 60 days of receipt of all data and/or completion of all tasks.

Tables

Table 1
 Summary of Groundwater Elevation Data - September 2022 to March 2023
 Former Hayes Lemmerz Site
 2000 West 8 Mile Road
 Ferndale, MI

Well Location	Installation Date	Well Screen Interval (ft BGS)	TOC Elevation (ft)	December 2022		March 2023	
				Depth to Water (ft BTOC)	Groundwater Elevation (ft)	Depth to Water (ft BTOC)	Groundwater Elevation (ft)
Eastern Boundary⁽¹⁾							
MW-104	3/23/2020	15 - 20	663.93	10.76	653.17	9.55	654.38
MW-105	3/23/2020	9 - 14	663.74	11.80	651.94	10.67	653.07
MW-106	3/25/2020	7.5 - 12.5	662.92	9.64	653.28	7.86	655.06
MW-107	3/25/2020	7 - 12	663.02	9.40	653.62	8.74	654.28
MW-108	3/25/2020	5 - 10	662.51	8.70	653.81	6.82	655.69
MW-109	3/25/2020	5 - 10	662.05	7.98	654.07	6.22	655.83
MW-110	3/25/2020	5 - 10	661.87	8.00	653.87	6.30	655.57
MW-111	3/25/2020	4 - 9	661.50	7.46	654.04	5.78	655.72
MW-112	3/25/2020	4 - 9	660.27	6.70	653.57	5.00	655.27
MW-113	3/24/2020	8 - 13	663.98	10.95	653.03	8.69	655.29
MW-119	4/21/2020	5 - 10	661.78	9.09	652.69	6.93	654.85
MW-120	4/21/2020	3 - 8	659.69	6.51	653.18	4.49	655.20
MW-121	4/21/2020	8 - 13	663.11	DRY		9.68	653.43
MW-22-01	10/17/2022	12.5 - 17.5	662.65	13.08	649.57	12.33	650.32
MW-22-02	10/17/2022	10 - 15	661.61	10.70	650.91	9.28	652.33
MW-22-03	10/18/2022	9 - 14	660.55	7.58	652.97	5.84	654.71
MW-22-04	10/19/2022	7 - 12	658.84	6.00	652.84	4.88	653.96
MW-22-05	10/19/2022	6 - 11	657.04	5.18	651.86	3.98	653.06
MW-22-06	10/19/2022	7 - 12	658.72	6.70	652.02	5.07	653.65
Southern Area							
MW-101	3/23/2020	7.5 - 12.5	667.74	8.72	659.02	8.40	659.34
MW-102	3/23/2020	8 - 13	667.05	DRY		DRY	
MW-103	3/23/2020	8 - 13	666.06	11.02	655.04	9.75	656.31
MW-116	3/30/2020	8 - 13	669.47	9.72	659.75	--	--
MW-117	3/30/2020	7.5 - 12.5	670.24	10.48	659.76	--	--
MW-118	3/30/2020	11 - 16	672.81	DRY		--	--
MW-128	6/15/2020	8 - 13	668.18	11.70	656.48	9.97	658.21
MW-129	6/15/2020	8 - 13	668.11	11.52	656.59	9.73	658.38
MW-22-07	12/13/2022	14 - 19	670.62	12.70	657.92	11.04	659.58
MW-22-08	12/13/2022	15 - 20	670.96	13.20	657.76	11.70	659.26
MW-22-09	12/13/2022	17 - 22	668.93	10.30	658.63	8.80	660.13
MW-22-10	12/13/2022	15 - 20	671.77	13.45	658.32	11.79	659.98
MW-22-11	12/13/2022	12.5 - 17.5	664.68	9.92	654.76	8.02	656.66
MW-22-12	12/13/2022	15 - 20	670.02	13.81	656.21	11.78	658.24
MW-22-13	12/14/2022	13 - 18	664.35	10.65	653.70	9.11	655.24
MW-22-14	12/14/2022	13 - 18	668.33	13.46	654.87	11.72	656.61
MW-22-15	12/14/2022	14 - 19	670.86	14.70	656.16	12.80	658.06
MW-22-16	12/14/2022	15 - 20	671.16	14.70	656.46	12.73	658.43
MW-22-17	12/15/2022	14 - 19	670.69	13.26	657.43	11.19	659.50
MW-22-18	12/15/2022	16 - 21	671.05	14.65	656.40	12.83	658.22
MW-22-19	12/15/2022	17 - 22	671.30	14.90	656.40	12.28	659.02
MW-22-20	12/15/2022	17 - 22	670.98	14.86	656.12	13.28	657.70
MW-22-21	12/16/2022	17 - 22	671.79	14.10	657.69	12.53	659.26
MW-22-22D	12/21/2022	140 - 150	670.89	29.55	641.34	29.78	641.11

Notes:

Survey conducted by BMJ Engineers & Surveyors on October 27 and December 21, 2022.

Elevation in feet relative to North American Vertical Datum 1988 (NAVD 88).

TOC: Top of well casing.

ft BGS: Feet below ground surface.

ft BTOC: Feet below top of well casing.

--: Not measured

(1) Eastern boundary monitoring well static water levels were collected to construct a groundwater flow map for the March 2023 monitoring event.

Table 2
 Summary of Detected Metals in Groundwater
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium ⁽¹⁾	Cobalt
Non-Residential Drinking Water Criteria	50 ⁽⁴⁾	6.0	10	2,000	4.0	500	5.0	NC	100	100
Generic GSI Criteria	NA	130 ⁽²⁾	10	670 ⁽³⁾	13 ⁽³⁾	7,200 ⁽²⁾	3.0 ^(2,3)	5.0E+05	11	100
Groundwater Contact Criteria	6.4E+07	68,000	4,300	1.4E+07	2.9E+05	6.2E+07	1.9E+05	NC	4.6E+05	2.4E+06
Non-Residential Not In Contact VIAP Screening Level	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L

Sample Location	Residential Status	Sample Interval	Date Sampled	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium ⁽¹⁾	Cobalt
Investigation Area: Southern Area													
MW-12	Non-Residential	--	6/23/2020	< 50	< 2	< 5	185	< 1	< 300	< 1	89,500	< 10	< 20
MW-101	Non-Residential	7.5 - 12.5 ft	4/8/2020	--	--	< 5	< 100	--	--	< 1	--	< 10	--
			12/16/2022	< 10	< 1	< 2	22	< 1	90	< 0.5	57,400	< 5	< 5
			3/22/2023	55	< 1	< 2	27	< 1	70	< 0.5	73,900	< 5	< 5
DUP-01 (MW-101)	Non-Residential	7.5 - 12.5 ft	3/22/2023	50	< 1	< 2	27	< 1	70	< 0.5	74,700	< 5	< 5
MW-102	Non-Residential	8 - 13 ft	4/8/2020	--	--	< 5	< 100	--	--	< 1	--	< 10	--
MW-103	Non-Residential	8 - 13 ft	4/8/2020	--	--	< 5	< 100	--	--	< 1	--	< 10	--
			12/16/2022	47	< 1	< 2	20	< 1	130	< 0.5	16,900	< 5	< 5
			3/22/2023	40	< 1	< 2	34	< 1	130	< 0.5	42,800	< 5	< 5
MW-116	Non-Residential	8 - 13 ft	4/9/2020	--	--	< 5	< 100	--	--	< 1	--	< 10	--
MW-117	Non-Residential	7.5 - 12.5 ft	4/9/2020	--	--	< 5	< 100	--	--	< 1	--	< 10	--
MW-118	Non-Residential	11 - 16 ft	4/9/2020	--	--	< 5	< 100	--	--	< 1	--	< 10	--
MW-122	Non-Residential	5 - 10 ft	6/24/2020	1,130	< 2	< 5	< 100	< 1	< 300	< 1	106,000	< 10	< 20
MW-123	Non-Residential	5 - 10 ft	6/23/2020	9,930	< 2	< 5	283	< 1	< 300	< 1	119,000	25.5	< 20
MW-124	Non-Residential	7 - 12 ft	6/23/2020	784	< 2	< 5	< 100	< 1	< 300	< 1	103,000	< 10	< 20
MW-125	Non-Residential	8 - 13 ft	6/23/2020	516	< 2	< 5	< 100	< 1	< 300	< 1	107,000	< 10	< 20
MW-126	Non-Residential	8.5 - 13.5 ft	6/23/2020	376	< 2	< 5	< 100	< 1	590	< 1	181,000	< 10	< 20
MW-127	Non-Residential	8 - 13 ft	6/24/2020	1,530	< 2	< 5	< 100	< 1	< 300	< 1	163,000	< 10	< 20
MW-128	Non-Residential	8 - 13 ft	6/24/2020	204	< 2	< 5	128	< 1	928	< 1	209,000	< 10	< 20
			12/16/2022	< 10	< 1	< 2	135	< 1	770	< 0.5	189,000	< 5	< 5
			3/23/2023	25	1	< 2	125	< 1	720	< 0.5	154,000	< 5	< 5
MW-129	Non-Residential	8 - 13 ft	6/24/2020	461	< 2	6.5	< 100	< 1	583	< 1	112,000	< 10	< 20
			12/16/2022	12	< 1	9	50	< 1	530	< 0.5	114,000	< 5	< 5
			3/23/2023	23	< 1	7	84	< 1	550	< 0.5	156,000	< 5	< 5

Notes:
 Non-Residential (NR) Drinking Water Criteria (DWC), Groundwater Surface Water Interface (GSI), and Groundwater Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 18, 2012.
 Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).
 The depth to first encountered groundwater is 10 feet below ground surface or less; therefore, the shallow groundwater residential VIAP screening levels apply.
 The depth to first encountered groundwater is greater than 5 feet below ground surface; therefore, the groundwater not in contact nonresidential VIAP screening levels apply.
 Only analytes with one or more detection are reported.
 ug/L = microgram per liter
 NA = Not Applicable; NC = No Criterion; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed
Bold font denotes concentrations detected above laboratory reporting limits.
 Denotes concentrations above one or more criteria.

1) In the absence of valence-specific criteria, total chromium results are conservatively screened against the criteria for chromium (VI), unless otherwise noted.
 2) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).
 3) Criterion dependent on hardness (Footnote (G), Michigan Part 201 Criteria Tables); Criterion shown is based on an estimated hardness of 150 mg CaCO₃/L for the southern Lower Peninsula per the EGLE RRDGSI Pathway Compliance Options, April 2018.
 4) Criterion is the aesthetic drinking water value (Footnote (E), Michigan Part 201 Criteria Tables).
 5) The reporting limit was above one or more criterion, the method detection limit has been substituted

Table 2
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 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium ⁽¹⁾	Cobalt
Non-Residential Drinking Water Criteria	50 ⁽⁴⁾	6.0	10	2,000	4.0	500	5.0	NC	100	100
Generic GSI Criteria	NA	130 ⁽²⁾	10	670 ⁽³⁾	13 ⁽³⁾	7,200 ⁽²⁾	3.0 ^(2,3)	5.0E+05	11	100
Groundwater Contact Criteria	6.4E+07	68,000	4,300	1.4E+07	2.9E+05	6.2E+07	1.9E+05	NC	4.6E+05	2.4E+06
Non-Residential Not In Contact VIAP Screening Level	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L

Sample Location	Residential Status	Sample Interval	Date Sampled	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium ⁽¹⁾	Cobalt
Investigation Area: Southern Area (Continued)													
MW-130	Non-Residential	5 - 10 ft	6/23/2020	462	< 2	< 5	< 100	< 1	< 300	< 1	102,000	< 10	< 20
MW-131	Non-Residential	5 - 10 ft	6/24/2020	2,400	< 2	< 5	< 100	< 1	< 300	< 1	70,500	< 10	< 20
MW-132	Non-Residential	10 - 15 ft	8/13/2020	3,350	< 2	< 5	238	< 1	< 300	< 1	275,000	< 10	< 20
MW-133	Non-Residential	10 - 15 ft	8/13/2020	< 50	< 2	< 5	< 100	< 1	1,210	< 1	221,000	< 10	< 20
MW-22-07	Non-Residential	14 - 19 ft	12/14/2022	38	< 1	< 2	66	< 1	80	< 0.5	78,700	< 5	< 5
			3/22/2023	13	< 1	< 2	47	< 1	70	< 0.5	74,200	< 5	< 5
DUP-03W (MW-22-07)	Non-Residential	14 - 19 ft	12/14/2022	36	< 1	< 2	68	< 1	80	< 0.5	78,900	< 5	< 5
MW-22-08	Non-Residential	15 - 20 ft	12/13/2022	256	< 1	< 2	76	< 1	120	< 0.5	65,300	< 5	< 5
			3/22/2023	12	< 1	< 2	33	< 1	110	< 0.5	54,900	< 5	< 5
MW-22-09	Non-Residential	17 - 22 ft	12/13/2022	381	< 1	2	86	< 1	90	< 0.5	106,000	< 5	< 5
			3/22/2023	26	< 1	< 2	79	< 1	90	< 0.5	103,000	< 5	< 5
DUP-01W (MW-22-09)	Non-Residential	17 - 22 ft	12/13/2022	327	< 1	2	83	< 1	90	< 0.5	106,000	< 5	< 5
MW-22-10	Non-Residential	15 - 20 ft	12/14/2022	55	< 1	< 2	89	< 1	80	< 0.5	78,400	< 5	< 5
			3/22/2023	< 10	< 1	< 2	102	< 1	60	< 0.5	87,300	< 5	< 5
MW-22-11	Non-Residential	12.5 - 17.5 ft	12/15/2022	53	< 1	< 2	127	< 1	70	< 0.5	79,500	< 5	< 5
			3/22/2023	< 10	< 1	< 2	63	< 1	50	< 0.5	69,400	< 5	< 5
MW-22-12	Non-Residential	15 - 20 ft	12/16/2022	53	< 1	8	157	< 1	50	< 0.5	82,800	< 5	< 5
			3/22/2023	< 10	< 1	8	125	< 1	50	< 0.5	91,800	< 5	< 5
MW-22-13	Non-Residential	13 - 18 ft	12/15/2022	45	< 1	< 2	81	< 1	350	< 0.5	124,000	< 5	< 5
			3/22/2023	20	< 1	< 2	94	< 1	500	< 0.5	176,000	< 5	< 5
DUP-02W (MW-22-13)	Non-Residential	13 - 18 ft	12/15/2022	44	< 1	< 2	79	< 1	330	< 0.5	122,000	< 5	< 5
DUP-02 (MW-22-13)	Non-Residential	13 - 18 ft	3/22/2023	17	< 1	< 2	95	< 1	490	< 0.5	173,000	< 5	< 5

Notes:
 Non-Residential (NR) Drinking Water Criteria (DWC), Groundwater Surface Water Interface (GSI), and Groundwater Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 18, 2012.
 Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).
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 The depth to first encountered groundwater is greater than 5 feet below ground surface; therefore, the groundwater not in contact nonresidential VIAP screening levels apply.
 Only analytes with one or more detection are reported.
 ug/L = microgram per liter
 NA = Not Applicable; NC = No Criterion; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed
Bold font denotes concentrations detected above laboratory reporting limits.

1) In the absence of valence-spec Denotes concentrations above one or more criteria.
 2) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote {X}, Michigan Part 201 Criteria Tables).
 3) Criterion dependent on hardness (Footnote {G}, Michigan Part 201 Criteria Tables); Criterion shown is based on an estimated hardness of 150 mg CaCO₃/L for the southern Lower Peninsula per the EGLE RRDGSI Pathway Compliance Options, April 2018.
 4) Criterion is the aesthetic drinking water value (Footnote {E}, Michigan Part 201 Criteria Tables).
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Analyte	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium ⁽¹⁾	Cobalt
Non-Residential Drinking Water Criteria	50 ⁽⁴⁾	6.0	10	2,000	4.0	500	5.0	NC	100	100
Generic GSI Criteria	NA	130 ⁽²⁾	10	670 ⁽³⁾	13 ⁽³⁾	7,200 ⁽²⁾	3.0 ^(2,3)	5.0E+05	11	100
Groundwater Contact Criteria	6.4E+07	68,000	4,300	1.4E+07	2.9E+05	6.2E+07	1.9E+05	NC	4.6E+05	2.4E+06
Non-Residential Not In Contact VIAP Screening Level	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L

Sample Location	Residential Status	Sample Interval	Date Sampled	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium ⁽¹⁾	Cobalt
Investigation Area: Southern Area (Continued)													
MW-22-14	Non-Residential	13 - 18 ft	12/15/2022	20	< 1	< 2	79	< 1	330	< 0.5	135,000	< 5	< 5
			3/23/2023	< 10	< 1	< 2	67	< 1	260	< 0.5	121,000	< 5	< 5
MW-22-15	Non-Residential	14 - 19 ft	12/15/2022	25	< 1	< 2	98	< 1	210	< 0.5	137,000	< 5	< 5
			3/23/2023	< 10	< 1	< 2	69	< 1	240	< 0.5	115,000	< 5	< 5
MW-22-16	Non-Residential	15 - 20 ft	12/20/2022	32	< 1	2	64	< 1	70	< 0.5	72,400	< 5	< 5
			3/23/2023	< 10	< 1	< 2	62	< 1	70	< 0.5	85,500	< 5	< 5
DUP-03 (MW-22-16)	DUP 03 20230323	15 - 20 ft	3/23/2023	< 10	< 1	< 2	63	< 1	70	< 0.5	89,700	< 5	< 5
MW-22-17	Non-Residential	14 - 19 ft	12/20/2022	11	< 1	< 2	60	< 1	50	< 0.5	63,100	< 5	< 5
			3/23/2023	< 10	< 1	< 2	59	< 1	50	< 0.5	84,800	< 5	< 5
MW-22-18	Non-Residential	16 - 21 ft	12/20/2022	287	< 1	2	166	< 1	470	< 0.5	152,000	< 5	< 5
			3/23/2023	19	< 1	< 2	169	< 1	310	< 0.5	122,000	< 5	< 5
MW-22-19	Non-Residential	17 - 22 ft	12/20/2022	97	< 1	< 2	129	< 1	320	< 0.5	121,000	< 5	< 5
			3/23/2023	12	< 1	< 2	98	< 1	230	< 0.5	70,700	< 5	< 5
MW-22-20	Non-Residential	17 - 22 ft	12/20/2022	20	< 1	4	104	< 1	130	< 0.5	70,800	< 5	< 5
			3/23/2023	11	< 1	< 2	91	< 1	120	< 0.5	65,900	< 5	< 5
MW-22-21	Non-Residential	17 - 22 ft	12/20/2022	36	< 1	< 2	88	< 1	90	< 0.5	83,900	< 5	< 5
			3/22/2023	13	< 1	< 2	86	< 1	80	< 0.5	87,600	< 5	< 5
MW-22-22D	Non-Residential	140 - 150 ft	12/27/2022	67	1	5	735	< 1	1,550	< 0.5	177,000	< 5	< 5
			3/23/2023	29	< 5	5	784	< 1	1,630	< 1	150,000	< 5	< 5

Notes:
 Non-Residential (NR) Drinking Water Criteria (DWC), Groundwater Surface Water Interface (GSI), and Groundwater Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 18, 2012.
 Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).
 The depth to first encountered groundwater is 10 feet below ground surface or less; therefore, the shallow groundwater residential VIAP screening levels apply.
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 Only analytes with one or more detection are reported.
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 NA = Not Applicable; NC = No Criterion; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed
Bold font denotes concentrations detected above laboratory reporting limits.

- 1) In the absence of valence-spec Denotes concentrations above one or more criteria.
- 2) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote [X], Michigan Part 201 Criteria Tables).
- 3) Criterion dependent on hardness (Footnote [G], Michigan Part 201 Criteria Tables); Criterion shown is based on an estimated hardness of 150 mg CaCO₃/L for the southern Lower Peninsula per the EGLE RRDGSI Pathway Compliance Options, April 2018.
- 4) Criterion is the aesthetic drinking water value (Footnote [E], Michigan Part 201 Criteria Tables).
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Table 2
 Summary of Detected Metals in Groundwater
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Copper	Iron	Lead	Magnesium	Manganese	Molybdenum	Nickel	Potassium	Selenium
Non-Residential Drinking Water Criteria	4,000	300 ⁽⁴⁾	4.0	1.1E+06	50 ⁽⁴⁾	210	100	NC	50
Generic GSI Criteria	13	5.0E+05	34 ^(2,3)	5.0E+05	2,800 ^(2,3)	3,200 ⁽²⁾	73 ⁽³⁾	5.0E+05	5.0
Groundwater Contact Criteria	7.4E+06	5.8E+07	ID	1.0E+09	9.1E+06	9.7E+05	7.4E+07	NC	9.7E+05
Non-Residential Not In Contact VIAP Screening Level	NA	NA	NA	NA	NA	NA	NA	NC	NA
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L

Sample Location	Residential Status	Sample Interval	Date Sampled	Copper	Iron	Lead	Magnesium	Manganese	Molybdenum	Nickel	Potassium	Selenium
Investigation Area: Southern Area												
MW-12	Non-Residential	--	6/23/2020	< 4	< 200	< 3	17,900	945	< 50	< 20	3,880	< 5
MW-101	Non-Residential	7.5 - 12.5 ft	4/8/2020	--	--	< 3	--	--	--	--	--	< 5
			12/16/2022	< 5	< 20	< 3	8,500	< 5	< 5	< 5	3,130	< 5
			3/22/2023	< 5	40	< 3	11,700	< 5	< 5	< 5	3,180	< 5
DUP-01 (MW-101)	Non-Residential	7.5 - 12.5 ft	3/22/2023	< 5	40	< 3	11,500	< 5	< 5	< 5	3,120	< 5
MW-102	Non-Residential	8 - 13 ft	4/8/2020	--	--	< 3	--	--	--	--	--	< 5
MW-103	Non-Residential	8 - 13 ft	4/8/2020	--	--	< 3	--	--	--	--	--	< 5
			12/16/2022	9	20	< 3	2,630	36	28	< 5	54,800	< 5
			3/22/2023	< 5	50	< 3	7,470	53	27	< 5	54,100	< 5
MW-116	Non-Residential	8 - 13 ft	4/9/2020	--	--	< 3	--	--	--	--	< 5	
MW-117	Non-Residential	7.5 - 12.5 ft	4/9/2020	--	--	< 3	--	--	--	--	< 5	
MW-118	Non-Residential	11 - 16 ft	4/9/2020	--	--	< 3	--	--	--	--	< 5	
MW-122	Non-Residential	5 - 10 ft	6/24/2020	9.2	1,940	< 3	16,800	< 50	< 50	< 20	15,700	< 5
MW-123	Non-Residential	5 - 10 ft	6/23/2020	17.8	10,800	18.8	18,300	218	< 50	< 20	63,600	< 5
MW-124	Non-Residential	7 - 12 ft	6/23/2020	8.7	1,290	< 3	14,600	781	< 50	< 20	1,940	< 5
MW-125	Non-Residential	8 - 13 ft	6/23/2020	< 4	727	< 3	15,600	69.9	< 50	< 20	17,100	< 5
MW-126	Non-Residential	8.5 - 13.5 ft	6/23/2020	< 4	1,270	< 3	13,900	251	< 50	< 20	36,900	< 5
MW-127	Non-Residential	8 - 13 ft	6/24/2020	6.8	2,000	3.4	22,900	422	< 50	< 20	11,300	< 5
MW-128	Non-Residential	8 - 13 ft	6/24/2020	4.6	356	< 3	34,100	239	< 50	< 20	43,100	< 5
			12/16/2022	< 5	40	< 3	39,700	420	15	< 5	30,600	< 5
			3/23/2023	< 5	150	< 3	31,900	856	17	< 5	29,900	< 5
MW-129	Non-Residential	8 - 13 ft	6/24/2020	11.4	636	< 3	5,240	338	50.2	< 20	60,200	< 5
			12/16/2022	< 5	260	< 3	7,730	230	38	< 5	51,800	< 5
			3/23/2023	< 5	640	< 3	9,930	332	35	< 5	67,000	< 5

Notes:
 Non-Residential (NR) Drinking Water Criteria (DWC), Groundwater Surface Water Interface (GSI), and Groundwater Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 18, 2012.
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Bold font denotes concentrations detected above laboratory reporting limits.
 Denotes concentrations above one or more criteria.

- 1) In the absence of valence-specific criteria, total chromium results are conservatively screened against the criteria for chromium (VI), unless otherwise noted.
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- 3) Criterion dependent on hardness (Footnote (G), Michigan Part 201 Criteria Tables); Criterion shown is based on an estimated hardness of 150 mg CaCO₃/L for the southern Lower Peninsula per the EGLE RRDGSI Pathway Compliance Options, April 2018.
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Analyte	Copper	Iron	Lead	Magnesium	Manganese	Molybdenum	Nickel	Potassium	Selenium
Non-Residential Drinking Water Criteria	4,000	300 ⁽⁴⁾	4.0	1.1E+06	50 ⁽⁴⁾	210	100	NC	50
Generic GSI Criteria	13	5.0E+05	34 ^(2,3)	5.0E+05	2,800 ^(2,3)	3,200 ⁽²⁾	73 ⁽³⁾	5.0E+05	5.0
Groundwater Contact Criteria	7.4E+06	5.8E+07	ID	1.0E+09	9.1E+06	9.7E+05	7.4E+07	NC	9.7E+05
Non-Residential Not In Contact VIAP Screening Level	NA	NA	NA	NA	NA	NA	NA	NC	NA
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L

Sample Location	Residential Status	Sample Interval	Date Sampled	Copper	Iron	Lead	Magnesium	Manganese	Molybdenum	Nickel	Potassium	Selenium
Investigation Area: Southern Area (Continued)												
MW-130	Non-Residential	5 - 10 ft	6/23/2020	< 4	710	3.2	17,000	273	< 50	< 20	7,410	< 5
MW-131	Non-Residential	5 - 10 ft	6/24/2020	6.3	3,320	5.8	7,520	553	< 50	< 20	9,520	< 5
MW-132	Non-Residential	10 - 15 ft	8/13/2020	34.1	< 200	22.5	< 1,000	< 50	< 50	36	181,000	< 5
MW-133	Non-Residential	10 - 15 ft	8/13/2020	< 4	206	< 3	30,900	170	< 50	< 20	66,600	< 5
MW-22-07	Non-Residential	14 - 19 ft	12/14/2022	< 5	50	< 3	15,500	44	8	< 5	5,260	< 5
			3/22/2023	< 5	30	< 3	12,000	95	< 5	< 5	3,480	< 5
DUP-03W (MW-22-07)	Non-Residential	14 - 19 ft	12/14/2022	< 5	50	< 3	15,700	43	8	< 5	5,340	< 5
MW-22-08	Non-Residential	15 - 20 ft	12/13/2022	< 5	480	< 3	10,600	179	17	< 5	6,780	< 5
			3/22/2023	< 5	< 20	< 3	7,660	40	15	< 5	4,570	< 5
MW-22-09	Non-Residential	17 - 22 ft	12/13/2022	< 5	640	< 3	18,100	164	< 5	< 5	6,480	< 5
			3/22/2023	< 5	40	< 3	17,400	84	< 5	< 5	6,220	< 5
DUP-01W (MW-22-09)	Non-Residential	17 - 22 ft	12/13/2022	< 5	560	< 3	17,800	156	< 5	< 5	6,740	< 5
MW-22-10	Non-Residential	15 - 20 ft	12/14/2022	< 5	90	< 3	13,700	63	7	< 5	4,380	< 5
			3/22/2023	< 5	60	< 3	14,700	75	< 5	< 5	4,000	< 5
MW-22-11	Non-Residential	12.5 - 17.5 ft	12/15/2022	< 5	80	< 3	14,200	92	6	< 5	6,990	< 5
			3/22/2023	< 5	< 20	< 3	13,700	121	< 5	< 5	3,850	< 5
MW-22-12	Non-Residential	15 - 20 ft	12/16/2022	< 5	500	< 3	15,900	173	< 5	< 5	3,970	< 5
			3/22/2023	< 5	710	< 3	17,100	337	< 5	< 5	3,630	< 5
MW-22-13	Non-Residential	13 - 18 ft	12/15/2022	< 5	110	< 3	27,200	164	15	< 5	24,700	< 5
			3/22/2023	< 5	120	< 3	37,800	212	11	< 5	30,200	< 5
DUP-02W (MW-22-13)	Non-Residential	13 - 18 ft	12/15/2022	< 5	110	< 3	26,800	162	16	< 5	24,200	< 5
DUP-02 (MW-22-13)			3/22/2023	< 5	110	< 3	35,900	215	11	< 5	29,900	< 5

Notes:

Non-Residential (NR) Drinking Water Criteria (DWC), Groundwater Surface Water Interface (GSI), and Groundwater Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 18, 2012.

Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).

The depth to first encountered groundwater is 10 feet below ground surface or less; therefore, the shallow groundwater residential VIAP screening levels apply.

The depth to first encountered groundwater is greater than 5 feet below ground surface; therefore, the groundwater not in contact nonresidential VIAP screening levels apply.

Only analytes with one or more detection are reported.

ug/L = microgram per liter

NA = Not Applicable; NC = No Criterion; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed

Bold font denotes concentrations detected above laboratory reporting limits.

Green font denotes concentrations above one or more criteria.

1) In the absence of valence-spec Denotes concentrations above one or more criteria.

2) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).

3) Criterion dependent on hardness (Footnote (G), Michigan Part 201 Criteria Tables); Criterion shown is based on an estimated hardness of 150 mg CaCO₃/L for the southern Lower Peninsula per the EGLE RRD GSI Pathway Compliance Options, April 2018.

4) Criterion is the aesthetic drinking water value (Footnote (E), Michigan Part 201 Criteria Tables).

5) The reporting limit was above one or more criterion, the method detection limit has been substituted

Table 2
 Summary of Detected Metals in Groundwater
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Copper	Iron	Lead	Magnesium	Manganese	Molybdenum	Nickel	Potassium	Selenium
Non-Residential Drinking Water Criteria	4,000	300 ⁽⁴⁾	4.0	1.1E+06	50 ⁽⁴⁾	210	100	NC	50
Generic GSI Criteria	13	5.0E+05	34 ^(2,3)	5.0E+05	2,800 ^(2,3)	3,200 ⁽²⁾	73 ⁽³⁾	5.0E+05	5.0
Groundwater Contact Criteria	7.4E+06	5.8E+07	ID	1.0E+09	9.1E+06	9.7E+05	7.4E+07	NC	9.7E+05
Non-Residential Not In Contact VIAP Screening Level	NA	NA	NA	NA	NA	NA	NA	NC	NA
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L

Sample Location	Residential Status	Sample Interval	Date Sampled	Copper	Iron	Lead	Magnesium	Manganese	Molybdenum	Nickel	Potassium	Selenium
Investigation Area: Southern Area (Continued)												
MW-22-14	Non-Residential	13 - 18 ft	12/15/2022	< 5	30	< 3	28,100	91	6	< 5	16,700	< 5
			3/23/2023	15	30	< 3	25,700	145	< 5	< 5	13,000	< 5
MW-22-15	Non-Residential	14 - 19 ft	12/15/2022	< 5	120	< 3	23,500	76	12	< 5	10,900	< 5
			3/23/2023	< 5	150	< 3	19,000	94	8	< 5	10,000	< 5
MW-22-16	Non-Residential	15 - 20 ft	12/20/2022	< 5	60	< 3	11,300	64	< 5	< 5	4,720	< 5
			3/23/2023	< 5	320	< 3	13,800	75	< 5	< 5	3,790	< 5
DUP-03 (MW-22-16)	DUP 03 20230323	15 - 20 ft	3/23/2023	< 5	310	< 3	14,400	76	< 5	< 5	3,900	< 5
MW-22-17	Non-Residential	14 - 19 ft	12/20/2022	< 5	< 20	< 3	9,770	109	< 5	< 5	5,310	< 5
			3/23/2023	< 5	40	< 3	13,700	154	< 5	< 5	5,430	< 5
MW-22-18	Non-Residential	16 - 21 ft	12/20/2022	< 5	440	< 3	39,400	144	7	< 5	25,200	< 5
			3/23/2023	8	50	< 3	34,600	122	7	< 5	19,900	< 5
MW-22-19	Non-Residential	17 - 22 ft	12/20/2022	< 5	310	< 3	21,700	183	12	< 5	18,100	< 5
			3/23/2023	< 5	80	< 3	12,500	127	23	< 5	16,900	< 5
MW-22-20	Non-Residential	17 - 22 ft	12/20/2022	< 5	20	< 3	12,300	97	10	< 5	11,500	< 5
			3/23/2023	< 5	< 20	< 3	11,000	77	9	< 5	6,750	< 5
MW-22-21	Non-Residential	17 - 22 ft	12/20/2022	5	40	< 3	14,200	137	< 5	< 5	4,160	< 5
			3/22/2023	< 5	20	< 3	15,400	99	< 5	< 5	3,570	< 5
MW-22-22D	Non-Residential	140 - 150 ft	12/27/2022	< 5	370	< 3	72,300	135	53	< 5	12,100	7
			3/23/2023	< 10	80	< 5	63,300	136	61	< 5	10,900	26

Notes:
 Non-Residential (NR) Drinking Water Criteria (DWC), Groundwater Surface Water Interface (GSI), and Groundwater Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 18, 2012.
 Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).
 The depth to first encountered groundwater is 10 feet below ground surface or less; therefore, the shallow groundwater residential VIAP screening levels apply.
 The depth to first encountered groundwater is greater than 5 feet below ground surface; therefore, the groundwater not in contact nonresidential VIAP screening levels apply.
 Only analytes with one or more detection are reported.
 ug/L = microgram per liter
 NA = Not Applicable; NC = No Criterion; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed
Bold font denotes concentrations detected above laboratory reporting limits.

- 1) In the absence of valence-spec Denotes concentrations above one or more criteria.
- 2) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).
- 3) Criterion dependent on hardness (Footnote (G), Michigan Part 201 Criteria Tables); Criterion shown is based on an estimated hardness of 150 mg CaCO₃/L for the southern Lower Peninsula per the EGLE RRDGSI Pathway Compliance Options, April 2018.
- 4) Criterion is the aesthetic drinking water value (Footnote (E), Michigan Part 201 Criteria Tables).
- 5) The reporting limit was above one or more criterion, the method detection limit has been substituted

Table 2
 Summary of Detected Metals in Groundwater
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Sodium	Strontium	Thallium	Titanium	Vanadium	Zinc
Non-Residential Drinking Water Criteria	3.5E+05	13,000	2.0	NC	62	5,000 ⁽⁴⁾
Generic GSI Criteria	5.0E+05	21,000	3.7 ⁽²⁾	NC	27	170 ⁽³⁾
Groundwater Contact Criteria	1.0E+09	1.2E+08	13,000	NC	9.7E+05	1.1E+08
Non-Residential Not In Contact VIAP Screening Level	NC	NA	NA	NC	NA	NA
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L

Sample Location	Residential Status	Sample Interval	Date Sampled	Sodium	Strontium	Thallium	Titanium	Vanadium	Zinc
Investigation Area: Southern Area									
MW-12	Non-Residential	--	6/23/2020	276,000	< 1,000	< 2	172	< 4	< 50
MW-101	Non-Residential	7.5 - 12.5 ft	4/8/2020	--	--	--	--	--	--
			12/16/2022	97,100	133	< 2	< 5	< 2	< 5
			3/22/2023	100,000	161	< 2	< 5	< 2	< 5
DUP-01 (MW-101)	Non-Residential	7.5 - 12.5 ft	3/22/2023	97,100	160	< 2	< 5	< 2	< 5
MW-102	Non-Residential	8 - 13 ft	4/8/2020	--	--	--	--	--	--
MW-103	Non-Residential	8 - 13 ft	4/8/2020	--	--	--	--	--	--
			12/16/2022	69,300	51	< 2	< 5	< 2	< 5
			3/22/2023	52,700	139	< 2	< 5	< 2	< 5
MW-116	Non-Residential	8 - 13 ft	4/9/2020	--	--	--	--	--	
MW-117	Non-Residential	7.5 - 12.5 ft	4/9/2020	--	--	--	--	--	
MW-118	Non-Residential	11 - 16 ft	4/9/2020	--	--	--	--	--	
MW-122	Non-Residential	5 - 10 ft	6/24/2020	14,100	< 1,000	< 2	239	10.6	< 50
MW-123	Non-Residential	5 - 10 ft	6/23/2020	59,300	< 1,000	< 2	436	33.5	342
MW-124	Non-Residential	7 - 12 ft	6/23/2020	21,500	< 1,000	< 2	221	< 4	< 50
MW-125	Non-Residential	8 - 13 ft	6/23/2020	12,900	< 1,000	< 2	212	< 4	< 50
MW-126	Non-Residential	8.5 - 13.5 ft	6/23/2020	62,300	< 1,000	< 2	364	11.1	< 50
MW-127	Non-Residential	8 - 13 ft	6/24/2020	33,200	< 1,000	< 2	352	4.5	< 50
MW-128	Non-Residential	8 - 13 ft	6/24/2020	40,800	< 1,000	< 2	412	< 4	< 50
			12/16/2022	82,400	695	< 2	< 5	< 2	< 5
			3/23/2023	48,500	691	< 2	< 5	< 2	< 5
MW-129	Non-Residential	8 - 13 ft	6/24/2020	59,700	< 1,000	< 2	228	7.2	< 50
			12/16/2022	40,300	452	< 2	< 5	2	< 5
			3/23/2023	41,500	704	< 2	< 5	2	< 5

Notes:

Non-Residential (NR) Drinking Water Criteria (DWC), Groundwater Surface Water Interface (GSI), and Groundwater Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 18, 2012.

Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).

The depth to first encountered groundwater is 10 feet below ground surface or less; therefore, the shallow groundwater residential VIAP screening levels apply.

The depth to first encountered groundwater is greater than 5 feet below ground surface; therefore, the groundwater not in contact nonresidential VIAP screening levels apply.

Only analytes with one or more detection are reported.

ug/L = microgram per liter

NA = Not Applicable; NC = No Criterion; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed

Bold font denotes concentrations detected above laboratory reporting limits.

 Denotes concentrations above one or more criteria.

1) In the absence of valence-specific criteria, total chromium results are conservatively screened against the criteria for chromium (VI), unless otherwise noted.

2) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).

3) Criterion dependent on hardness (Footnote (G), Michigan Part 201 Criteria Tables); Criterion shown is based on an estimated hardness of 150 mg CaCO₃/L for the southern Lower Peninsula per the EGLE RRDGSI Pathway Compliance Options, April 2018.

4) Criterion is the aesthetic drinking water value (Footnote (E), Michigan Part 201 Criteria Tables).

5) The reporting limit was above one or more criterion, the method detection limit has been substituted

Table 2
 Summary of Detected Metals in Groundwater
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Sodium	Strontium	Thallium	Titanium	Vanadium	Zinc
Non-Residential Drinking Water Criteria	3.5E+05	13,000	2.0	NC	62	5,000 ⁽⁴⁾
Generic GSI Criteria	5.0E+05	21,000	3.7 ⁽²⁾	NC	27	170 ⁽³⁾
Groundwater Contact Criteria	1.0E+09	1.2E+08	13,000	NC	9.7E+05	1.1E+08
Non-Residential Not In Contact VIAP Screening Level	NC	NA	NA	NC	NA	NA
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L

Sample Location	Residential Status	Sample Interval	Date Sampled	Sodium	Strontium	Thallium	Titanium	Vanadium	Zinc
Investigation Area: Southern Area (Continued)									
MW-130	Non-Residential	5 - 10 ft	6/23/2020	36,000	< 1,000	< 2	208	< 4	< 50
MW-131	Non-Residential	5 - 10 ft	6/24/2020	16,000	< 1,000	< 2	189	6.7	< 50
MW-132	Non-Residential	10 - 15 ft	8/13/2020	90,600	2,700	< 2	650	< 4	< 50
MW-133	Non-Residential	10 - 15 ft	8/13/2020	42,500	1,180	< 2	519	5.8	< 50
MW-22-07	Non-Residential	14 - 19 ft	12/14/2022	127,000	224	< 2	< 5	3	< 5
			3/22/2023	108,000	184	< 2	< 5	3	< 5
DUP-03W (MW-22-07)	Non-Residential	14 - 19 ft	12/14/2022	125,000	221	< 2	< 5	3	< 5
MW-22-08	Non-Residential	15 - 20 ft	12/13/2022	152,000	208	< 2	8	2	< 5
			3/22/2023	176,000	160	< 2	< 5	< 2	< 5
MW-22-09	Non-Residential	17 - 22 ft	12/13/2022	158,000	311	< 2	14	2	< 5
			3/22/2023	195,000	327	< 2	< 5	< 2	< 5
DUP-01W (MW-22-09)	Non-Residential	17 - 22 ft	12/13/2022	161,000	310	< 2	11	2	< 5
MW-22-10	Non-Residential	15 - 20 ft	12/14/2022	75,600	300	< 2	< 5	< 2	< 5
			3/22/2023	154,000	378	< 2	< 5	< 2	< 5
MW-22-11	Non-Residential	12.5 - 17.5 ft	12/15/2022	70,200	267	< 2	< 5	< 2	< 5
			3/22/2023	73,600	218	< 2	< 5	< 2	< 5
MW-22-12	Non-Residential	15 - 20 ft	12/16/2022	78,500	344	< 2	< 5	< 2	< 5
			3/22/2023	115,000	362	< 2	< 5	< 2	< 5
MW-22-13	Non-Residential	13 - 18 ft	12/15/2022	94,100	488	< 2	< 5	< 2	< 5
			3/22/2023	92,400	722	< 2	< 5	< 2	< 5
DUP-02W (MW-22-13)	Non-Residential	13 - 18 ft	12/15/2022	93,900	481	< 2	< 5	< 2	< 5
DUP-02 (MW-22-13)			3/22/2023	90,200	740	< 2	< 5	< 2	< 5

Notes:

Non-Residential (NR) Drinking Water Criteria (DWC), Groundwater Surface Water Interface (GSI), and Groundwater Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 18, 2012.

Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).

The depth to first encountered groundwater is 10 feet below ground surface or less; therefore, the shallow groundwater residential VIAP screening levels apply.

The depth to first encountered groundwater is greater than 5 feet below ground surface; therefore, the groundwater not in contact nonresidential VIAP screening levels apply.

Only analytes with one or more detection are reported.

ug/L = microgram per liter

NA = Not Applicable; NC = No Criterion; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed

Bold font denotes concentrations detected above laboratory reporting limits.

Green background denotes concentrations above one or more criteria.

1) In the absence of valence-spec Denotes concentrations above one or more criteria.

2) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).

3) Criterion dependent on hardness (Footnote (G), Michigan Part 201 Criteria Tables); Criterion shown is based on an estimated hardness of 150 mg CaC₂/L for the southern Lower Peninsula per the EGLE RRDGSI Pathway Compliance Options, April 2018.

4) Criterion is the aesthetic drinking water value (Footnote (E), Michigan Part 201 Criteria Tables).

5) The reporting limit was above one or more criterion, the method detection limit has been substituted

Table 2
 Summary of Detected Metals in Groundwater
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Sodium	Strontium	Thallium	Titanium	Vanadium	Zinc
Non-Residential Drinking Water Criteria	3.5E+05	13,000	2.0	NC	62	5,000 ⁽⁴⁾
Generic GSI Criteria	5.0E+05	21,000	3.7 ⁽²⁾	NC	27	170 ⁽³⁾
Groundwater Contact Criteria	1.0E+09	1.2E+08	13,000	NC	9.7E+05	1.1E+08
Non-Residential Not In Contact VIAP Screening Level	NC	NA	NA	NC	NA	NA
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L

Sample Location	Residential Status	Sample Interval	Date Sampled	Sodium	Strontium	Thallium	Titanium	Vanadium	Zinc
Investigation Area: Southern Area (Continued)									
MW-22-14	Non-Residential	13 - 18 ft	12/15/2022	149,000	544	< 2	< 5	< 2	< 5
			3/23/2023	224,000	495	< 2	< 5	< 2	< 5
MW-22-15	Non-Residential	14 - 19 ft	12/15/2022	54,200	496	< 2	< 5	< 2	< 5
			3/23/2023	88,400	472	< 2	< 5	< 2	< 5
MW-22-16	Non-Residential	15 - 20 ft	12/20/2022	228,000	256	< 2	< 5	< 2	< 5
			3/23/2023	182,000	297	< 2	< 5	< 2	< 5
DUP-03 (MW-22-16)	DUP 03 20230323	15 - 20 ft	3/23/2023	193,000	307	< 2	< 5	< 2	< 5
MW-22-17	Non-Residential	14 - 19 ft	12/20/2022	128,000	228	< 2	< 5	< 2	< 5
			3/23/2023	124,000	333	< 2	< 5	< 2	< 5
MW-22-18	Non-Residential	16 - 21 ft	12/20/2022	81,300	553	< 2	11	2	< 5
			3/23/2023	89,700	457	< 2	< 5	< 2	6
MW-22-19	Non-Residential	17 - 22 ft	12/20/2022	157,000	443	< 2	9	< 2	< 5
			3/23/2023	159,000	292	< 2	< 5	< 2	< 5
MW-22-20	Non-Residential	17 - 22 ft	12/20/2022	174,000	241	< 2	< 5	2	< 5
			3/23/2023	146,000	243	< 2	< 5	< 2	< 5
MW-22-21	Non-Residential	17 - 22 ft	12/20/2022	139,000	290	< 2	< 5	< 2	< 5
			3/22/2023	121,000	313	< 2	< 5	< 2	< 5
MW-22-22D	Non-Residential	140 - 150 ft	12/27/2022	1,040,000	4,670	< 2	< 5	< 2	8
			3/23/2023	993,000	4,260	< 5	< 5	< 5	< 10

Notes:

Non-Residential (NR) Drinking Water Criteria (DWC), Groundwater Surface Water Interface (GSI), and Groundwater Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 18, 2012.

Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).

The depth to first encountered groundwater is 10 feet below ground surface or less; therefore, the shallow groundwater residential VIAP screening levels apply.

The depth to first encountered groundwater is greater than 5 feet below ground surface; therefore, the groundwater not in contact nonresidential VIAP screening levels apply.

Only analytes with one or more detection are reported.

ug/L = microgram per liter

NA = Not Applicable; NC = No Criterion; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed

Bold font denotes concentrations detected above laboratory reporting limits.

Green background denotes concentrations above one or more criteria.

1) In the absence of valence-spec Denotes concentrations above one or more criteria.

2) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote {X}, Michigan Part 201 Criteria Tables).

3) Criterion dependent on hardness (Footnote {G}, Michigan Part 201 Criteria Tables); Criterion shown is based on an estimated hardness of 150 mg CaC₂/L for the southern Lower Peninsula per the EGLE RRDGSI Pathway Compliance Options, April 2018.

4) Criterion is the aesthetic drinking water value (Footnote {E}, Michigan Part 201 Criteria Tables).

5) The reporting limit was above one or more criterion, the method detection limit has been substituted

Table 3
 Summary of Detected Volatile Organic Compounds and Alcohols in Groundwater
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1-Dichloroethane	1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene
Non-Residential Drinking Water Criteria	200	35	2,500	63 ⁽¹⁾	600	5.0	5.0	72 ⁽¹⁾
Generic GSI Criteria	89	78 ⁽²⁾	740	17	13	360 ⁽²⁾	230 ⁽²⁾	45
Groundwater Contact Criteria	1.3E+06	4,700	2.4E+06	56,000	1.6E+05	19,000	16,000	61,000
Non-Residential Not In Contact VIAP Screening Level	19,000	170	300	990	16,000	97	110	690
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L

Sample Location	Residential Status	Sample Interval	Date Sampled	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1-Dichloroethane	1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene
Investigation Area: Southern Area											
MW-101	Non-Residential	7.5 - 12.5 ft	4/8/2020	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
			12/16/2022	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
			3/22/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DUP-01 (MW-101)	Non-Residential	7.5 - 12.5 ft	3/22/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-102	Non-Residential	8 - 13 ft	4/8/2020	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
MW-103	Non-Residential	8 - 13 ft	4/8/2020	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
			12/16/2022	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
			3/22/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-116	Non-Residential	8 - 13 ft	4/9/2020	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
MW-117	Non-Residential	7.5 - 12.5 ft	4/9/2020	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
MW-118	Non-Residential	11 - 16 ft	4/9/2020	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
MW-12	Non-Residential	--	6/23/2020	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
MW-122	Non-Residential	5 - 10 ft	6/24/2020	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
MW-123	Non-Residential	5 - 10 ft	6/23/2020	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
MW-124	Non-Residential	7 - 12 ft	6/23/2020	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
MW-125	Non-Residential	8 - 13 ft	6/23/2020	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
MW-126	Non-Residential	8.5 - 13.5 ft	6/23/2020	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
MW-127	Non-Residential	8 - 13 ft	6/24/2020	< 1	< 1	< 1	2.9	1.6	< 1	< 1	1.1
MW-128	Non-Residential	8 - 13 ft	6/24/2020	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
			12/16/2022	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
			3/23/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-129	Non-Residential	8 - 13 ft	6/24/2020	< 1	< 1	1	< 1	< 1	< 1	< 1	< 1
			12/16/2022	< 1	< 1	9	< 1	< 1	< 1	< 1	< 1
			3/23/2023	< 1	< 1	5	< 1	< 1	< 1	< 1	< 1
MW-130	Non-Residential	5 - 10 ft	6/23/2020	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
MW-131	Non-Residential	5 - 10 ft	6/24/2020	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
MW-132	Non-Residential	10 - 15 ft	8/13/2020	< 1	< 1	< 1	2.2	< 1	< 1	1.1	
MW-133	Non-Residential	10 - 15 ft	8/13/2020	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
MW-22-07	Non-Residential	14 - 19 ft	12/14/2022	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
			3/22/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DUP-03W (MW-22-07)	Non-Residential	14 - 19 ft	12/14/2022	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
MW-22-08	Non-Residential	15 - 20 ft	12/13/2022	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
			3/22/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

Notes:
 Non-Residential (NR) Drinking Water Criteria (DWC), Groundwater Surface Water Interface (GSI), and Groundwater Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 18, 2012.
 Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).
 The depth to first encountered groundwater is 10 feet below ground surface or less; therefore, the shallow groundwater residential VIAP screening levels apply.
 The depth to first encountered groundwater is greater than 5 feet below ground surface; therefore, the groundwater not in contact nonresidential VIAP screening levels apply.
 Only analytes with one or more detection are reported.
 ug/L = microgram per liter
 NA = Not Applicable; No Criterion; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed
Bold font denotes concentrations detected above laboratory reporting limits.
 Denotes concentrations above one or more criteria.
 1) Criterion is the aesthetic drinking water value (Footnote (E), Michigan Part 201 Criteria Tables).
 2) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).
 3) The VIAP criterion was below Target Detection Limits (TDL), the TDL has been substituted (Footnote (M), VIAP Guidance Document)

Table 3
 Summary of Detected Volatile Organic Compounds and Alcohols in Groundwater
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1-Dichloroethane	1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene
Non-Residential Drinking Water Criteria	200	35	2,500	63 ⁽¹⁾	600	5.0	5.0	72 ⁽¹⁾
Generic GSI Criteria	89	78 ⁽²⁾	740	17	13	360 ⁽²⁾	230 ⁽²⁾	45
Groundwater Contact Criteria	1.3E+06	4,700	2.4E+06	56,000	1.6E+05	19,000	16,000	61,000
Non-Residential Not In Contact VIAP Screening Level	19,000	170	300	990	16,000	97	110	690
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L

Sample Location	Residential Status	Sample Interval	Date Sampled	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1-Dichloroethane	1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene
Investigation Area: Southern Area (continued)											
MW-22-09	Non-Residential	17 - 22 ft	12/13/2022	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
			3/22/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DUP-01W (MW-22-09)	Non-Residential	17 - 22 ft	12/13/2022	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
			12/14/2022	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-22-10	Non-Residential	15 - 20 ft	3/22/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
			12/15/2022	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-22-11	Non-Residential	12.5 - 17.5 ft	3/22/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
			12/16/2022	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-22-12	Non-Residential	15 - 20 ft	3/22/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
			12/15/2022	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-22-13	Non-Residential	13 - 18 ft	3/22/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
			12/15/2022	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DUP-02W (MW-22-13)	Non-Residential	13 - 18 ft	12/15/2022	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
			3/22/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-22-14	Non-Residential	13 - 18 ft	12/15/2022	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
			3/23/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-22-15	Non-Residential	14 - 19 ft	12/15/2022	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
			3/23/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-22-16	Non-Residential	15 - 20 ft	12/20/2022	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
			3/23/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
DUP-03 (MW-22-16)	Non-Residential	15 - 20 ft	3/23/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
			12/20/2022	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-22-17	Non-Residential	14 - 19 ft	3/23/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
			12/20/2022	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-22-18	Non-Residential	16 - 21 ft	3/23/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
			12/20/2022	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-22-19	Non-Residential	17 - 22 ft	12/20/2022	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
			3/23/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-22-20	Non-Residential	17 - 22 ft	12/20/2022	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
			3/23/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-22-21	Non-Residential	17 - 22 ft	12/20/2022	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
			3/22/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
MW-22-22D	Non-Residential	140 - 150 ft	12/27/2022	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
			3/23/2023	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

Notes:

Non-Residential (NR) Drinking Water Criteria (DWC), Groundwater Surface Water Interface (GSI), and Groundwater Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 18, 2012.

Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).

The depth to first encountered groundwater is 10 feet below ground surface or less; therefore, the shallow groundwater residential VIAP screening levels apply.

The depth to first encountered groundwater is greater than 5 feet below ground surface; therefore, the groundwater not in contact nonresidential VIAP screening levels apply.

Only analytes with one or more detection are reported.

ug/L = microgram per liter

NA = Not Applicable; No Criterion; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed

Bold font denotes concentrations detected above laboratory reporting limits.

Denotes concentrations above one or more criteria.

1) Criterion is the aesthetic drinking water value (Footnote (E), Michigan Part 201 Criteria Tables).

2) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).

3) The VIAP criterion was below Target Detection Limits (TDL), the TDL has been substituted (Footnote (M), VIAP Guidance Document)

Table 3
 Summary of Detected Volatile Organic Compounds and Alcohols in Groundwater
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	1,3-Dichloro-benzene	1,4-Dichloro-benzene	1,4-Dioxane	4-Isopropyl-toluene	Acetone	Benzene	Chlorobenzene	Chloroethane
Non-Residential Drinking Water Criteria	19	75	350	NC	2,100	5.0	100	1,700
Generic GSI Criteria	28	17	280	NC	1,700	200 ⁽²⁾	25	1,100
Groundwater Contact Criteria	2,000	6,400	1.7E+06	NC	3.1E+07	11,000	86,000	4.4E+05
Non-Residential Not In Contact VIAP Screening Level	110	400	1.3E+05	NC	4.0E+07	66	1,400	22,000
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L

Sample Location	Residential Status	Sample Interval	Date Sampled	1,3-Dichloro-benzene	1,4-Dichloro-benzene	1,4-Dioxane	4-Isopropyl-toluene	Acetone	Benzene	Chlorobenzene	Chloroethane
Investigation Area: Southern Area											
MW-101	Non-Residential	7.5 - 12.5 ft	4/8/2020	< 1	< 1	--	< 0.11	< 50	< 1	< 1	< 5
			12/16/2022	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
			3/22/2023	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
DUP-01 (MW-101)	Non-Residential	7.5 - 12.5 ft	3/22/2023	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
MW-102	Non-Residential	8 - 13 ft	4/8/2020	< 1	< 1	--	< 0.28	< 50	< 1	< 1	< 5
MW-103	Non-Residential	8 - 13 ft	4/8/2020	< 1	< 1	--	< 0.28	< 50	< 1	< 1	< 5
			12/16/2022	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
			3/22/2023	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
MW-116	Non-Residential	8 - 13 ft	4/9/2020	< 1	< 1	--	< 0.11	< 50	< 1	< 1	< 5
MW-117	Non-Residential	7.5 - 12.5 ft	4/9/2020	< 1	< 1	--	< 0.11	< 50	< 1	< 1	< 5
MW-118	Non-Residential	11 - 16 ft	4/9/2020	< 1	< 1	--	< 0.11	< 50	< 1	< 1	< 5
MW-12	Non-Residential	--	6/23/2020	< 1	< 1	--	< 0.11	< 50	< 1	< 1	< 5
MW-122	Non-Residential	5 - 10 ft	6/24/2020	< 1	< 1	< 0.09	< 0.11	< 50	< 1	< 1	< 5
MW-123	Non-Residential	5 - 10 ft	6/23/2020	< 1	< 1	--	< 0.11	< 50	< 1	< 1	< 5
MW-124	Non-Residential	7 - 12 ft	6/23/2020	< 1	< 1	--	< 0.11	< 50	< 1	< 1	< 5
MW-125	Non-Residential	8 - 13 ft	6/23/2020	< 1	< 1	--	< 0.11	< 50	< 1	< 1	< 5
MW-126	Non-Residential	8.5 - 13.5 ft	6/23/2020	< 1	< 1	< 0.09	< 0.11	< 50	< 1	< 1	< 5
MW-127	Non-Residential	8 - 13 ft	6/24/2020	< 1	< 1	< 0.09	0.12	< 50	< 1	2.7	< 5
MW-128	Non-Residential	8 - 13 ft	6/24/2020	< 1	< 1	< 0.09	< 0.11	< 50	< 1	< 1	< 5
			12/16/2022	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
			3/23/2023	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
MW-129	Non-Residential	8 - 13 ft	6/24/2020	< 1	< 1	< 0.09	< 0.11	< 50	< 1	< 1	< 5
			12/16/2022	< 1	< 1	< 1	< 5	< 50	< 1	< 1	7
			3/23/2023	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
MW-130	Non-Residential	5 - 10 ft	6/23/2020	< 1	< 1	--	< 0.11	< 50	< 1	< 1	< 5
MW-131	Non-Residential	5 - 10 ft	6/24/2020	< 1	< 1	0.46	< 0.11	< 50	< 1	< 1	< 5
MW-132	Non-Residential	10 - 15 ft	8/13/2020	< 1	< 1	0.23	< 0.11	162	< 1	< 1	< 5
MW-133	Non-Residential	10 - 15 ft	8/13/2020	< 1	< 1	< 0.09	< 0.11	< 50	< 1	< 1	< 5
MW-22-07	Non-Residential	14 - 19 ft	12/14/2022	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
			3/22/2023	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
DUP-03W (MW-22-07)	Non-Residential	14 - 19 ft	12/14/2022	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
MW-22-08	Non-Residential	15 - 20 ft	12/13/2022	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
			3/22/2023	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5

Notes:
 Non-Residential (NR) Drinking Water Criteria (DWC), Groundwater Surface Water Interface (GSI), and Groundwater Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 18, 2012.
 Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).
 The depth to first encountered groundwater is 10 feet below ground surface or less; therefore, the shallow groundwater residential VIAP screening levels apply.
 The depth to first encountered groundwater is greater than 5 feet below ground surface; therefore, the groundwater not in contact nonresidential VIAP screening levels apply.
 Only analytes with one or more detection are reported.
 ug/L = microgram per liter
 NA = Not Applicable; No Criterion; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed
Bold font denotes concentrations detected above laboratory reporting limits.
 Denotes concentrations above one or more criteria.
 1) Criterion is the aesthetic drinking water value (Footnote (E), Michigan Part 201 Criteria Tables).
 2) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).
 3) The VIAP criterion was below Target Detection Limits (TDL), the TDL has been substituted (Footnote (M), VIAP Guidance Document)

Table 3
 Summary of Detected Volatile Organic Compounds and Alcohols in Groundwater
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	1,3-Dichloro-benzene	1,4-Dichloro-benzene	1,4-Dioxane	4-Isopropyl-toluene	Acetone	Benzene	Chlorobenzene	Chloroethane
Non-Residential Drinking Water Criteria	19	75	350	NC	2,100	5.0	100	1,700
Generic GSI Criteria	28	17	280	NC	1,700	200 ⁽²⁾	25	1,100
Groundwater Contact Criteria	2,000	6,400	1.7E+06	NC	3.1E+07	11,000	86,000	4.4E+05
Non-Residential Not In Contact VIAP Screening Level	110	400	1.3E+05	NC	4.0E+07	66	1,400	22,000
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L

Sample Location	Residential Status	Sample Interval	Date Sampled	1,3-Dichloro-benzene	1,4-Dichloro-benzene	1,4-Dioxane	4-Isopropyl-toluene	Acetone	Benzene	Chlorobenzene	Chloroethane
Investigation Area: Southern Area (continued)											
MW-22-09	Non-Residential	17 - 22 ft	12/13/2022	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
			3/22/2023	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
DUP-01W (MW-22-09)	Non-Residential	17 - 22 ft	12/13/2022	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
			12/14/2022	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
MW-22-10	Non-Residential	15 - 20 ft	3/22/2023	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
			12/15/2022	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
MW-22-11	Non-Residential	12.5 - 17.5 ft	3/22/2023	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
			12/16/2022	< 1	< 1	1	< 5	< 50	< 1	< 1	< 5
MW-22-12	Non-Residential	15 - 20 ft	3/22/2023	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
			12/15/2022	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
MW-22-13	Non-Residential	13 - 18 ft	3/22/2023	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
			12/15/2022	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
DUP-02W (MW-22-13)	Non-Residential	13 - 18 ft	12/15/2022	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
			3/22/2023	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
DUP-02 (MW-22-13)	Non-Residential	13 - 18 ft	12/15/2022	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
			3/23/2023	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
MW-22-14	Non-Residential	13 - 18 ft	12/15/2022	1	1	< 1	< 5	< 50	< 1	1	< 5
			3/23/2023	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
MW-22-15	Non-Residential	14 - 19 ft	12/15/2022	< 1	1	< 1	< 5	< 50	< 1	< 1	< 5
			3/23/2023	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
MW-22-16	Non-Residential	15 - 20 ft	12/20/2022	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
			3/23/2023	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
DUP-03 (MW-22-16)	Non-Residential	15 - 20 ft	3/23/2023	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
			12/20/2022	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
MW-22-17	Non-Residential	14 - 19 ft	3/23/2023	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
			12/20/2022	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
MW-22-18	Non-Residential	16 - 21 ft	3/23/2023	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
			12/20/2022	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
MW-22-19	Non-Residential	17 - 22 ft	12/20/2022	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
			3/23/2023	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
MW-22-20	Non-Residential	17 - 22 ft	12/20/2022	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
			3/23/2023	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
MW-22-21	Non-Residential	17 - 22 ft	12/20/2022	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
			3/22/2023	< 1	< 1	< 1	< 5	< 50	< 1	< 1	< 5
MW-22-22D	Non-Residential	140 - 150 ft	12/27/2022	< 1	< 2	< 1	< 5	< 50	7	< 1	< 5
			3/23/2023	< 1	< 1	< 1	< 5	< 50	6	< 1	< 5

Notes:

Non-Residential (NR) Drinking Water Criteria (DWC), Groundwater Surface Water Interface (GSI), and Groundwater Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 18, 2012.

Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).

The depth to first encountered groundwater is 10 feet below ground surface or less; therefore, the shallow groundwater residential VIAP screening levels apply.

The depth to first encountered groundwater is greater than 5 feet below ground surface; therefore, the groundwater not in contact nonresidential VIAP screening levels apply.

Only analytes with one or more detection are reported.

ug/L = microgram per liter

NA = Not Applicable; No Criterion; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed

Bold font denotes concentrations detected above laboratory reporting limits.

Green background denotes concentrations above one or more criteria.

1) Criterion is the aesthetic drinking water value (Footnote (E), Michigan Part 201 Criteria Tables).

2) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).

3) The VIAP criterion was below Target Detection Limits (TDL), the TDL has been substituted (Footnote (M), VIAP Guidance Document)

Table 3
 Summary of Detected Volatile Organic Compounds and Alcohols in Groundwater
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Chloroform	Chloromethane	cis-1,2-Dichloroethene	Ethylbenzene	Hexachlorobutadiene	Methanol	Naphthalene	Tetrachloroethene
Non-Residential Drinking Water Criteria	80	1,100	70	74 ⁽¹⁾	42	10,000	1,500	5.0
Generic GSI Criteria	350	ID	620	18	0.053	5.9E+05	11	60 ⁽²⁾
Groundwater Contact Criteria	1.5E+05	4.9E+05	2.0E+05	1.7E+05	400	2.9E+07	31,000	12,000
Non-Residential Not In Contact VIAP Screening Level	32	560	140	170	19	2.3E+08	300	130
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L

Sample Location	Residential Status	Sample Interval	Date Sampled	Chloroform	Chloromethane	cis-1,2-Dichloroethene	Ethylbenzene	Hexachlorobutadiene	Methanol	Naphthalene	Tetrachloroethene
Investigation Area: Southern Area											
MW-101	Non-Residential	7.5 - 12.5 ft	4/8/2020	< 1	< 5	< 1	< 1	--	< 400	< 5	< 1
			12/16/2022	< 1	< 5	< 1	< 1	< 10	< 3,700	< 5	< 1
			3/22/2023	< 1	< 5	< 1	< 1	< 1	< 3,700	< 5	< 1
DUP-01 (MW-101)	Non-Residential	7.5 - 12.5 ft	3/22/2023	< 1	< 5	< 1	< 1	< 1	< 3,700	< 5	< 1
MW-102	Non-Residential	8 - 13 ft	4/8/2020	< 1	< 5	< 1	< 1	--	< 400	< 5	< 1
MW-103	Non-Residential	8 - 13 ft	4/8/2020	< 1	< 5	< 1	< 1	--	< 400	< 5	< 1
			12/16/2022	< 1	< 5	< 1	< 1	< 10	< 3,700	< 5	< 1
			3/22/2023	< 1	< 5	< 1	< 1	1	< 3,700	< 5	< 1
MW-116	Non-Residential	8 - 13 ft	4/9/2020	< 1	< 5	< 1	< 1	--	< 400	< 5	< 1
MW-117	Non-Residential	7.5 - 12.5 ft	4/9/2020	< 1	< 5	< 1	< 1	--	< 400	< 5	< 1
MW-118	Non-Residential	11 - 16 ft	4/9/2020	< 1	< 5	< 1	< 1	--	< 400	< 5	< 1
MW-12	Non-Residential	--	6/23/2020	< 1	< 5	< 1	< 1	--	--	< 5	< 1
MW-122	Non-Residential	5 - 10 ft	6/24/2020	< 1	< 5	< 1	< 1	--	--	< 5	< 1
MW-123	Non-Residential	5 - 10 ft	6/23/2020	< 1	< 5	< 1	< 1	--	--	< 5	< 1
MW-124	Non-Residential	7 - 12 ft	6/23/2020	< 1	< 5	< 1	< 1	--	--	< 5	< 1
MW-125	Non-Residential	8 - 13 ft	6/23/2020	< 1	< 5	< 1	< 1	--	< 400	< 5	< 1
MW-126	Non-Residential	8.5 - 13.5 ft	6/23/2020	< 1	< 5	< 1	< 1	--	--	< 5	6
MW-127	Non-Residential	8 - 13 ft	6/24/2020	< 1	< 5	< 1	< 1	--	< 400	8	< 1
MW-128	Non-Residential	8 - 13 ft	6/24/2020	< 1	< 5	< 1	< 1	--	< 400	< 5	7.8
			12/16/2022	< 1	< 5	< 1	< 1	< 10	< 3,700	< 5	26
			3/23/2023	< 1	< 5	< 1	< 1	< 1	< 3,700	< 5	11
MW-129	Non-Residential	8 - 13 ft	6/24/2020	< 1	< 5	< 1	< 1	--	--	< 5	< 1
			12/16/2022	< 1	< 5	2	< 1	< 10	< 3,700	< 5	< 1
			3/23/2023	< 1	< 5	1	< 1	< 1	< 3,700	< 5	< 1
MW-130	Non-Residential	5 - 10 ft	6/23/2020	< 1	< 5	< 1	< 1	--	< 400	< 5	< 1
MW-131	Non-Residential	5 - 10 ft	6/24/2020	< 1	< 5	< 1	< 1	--	--	< 5	< 1
MW-132	Non-Residential	10 - 15 ft	8/13/2020	< 1	5.2	< 1	3.7	--	8,740	29.2	< 1
MW-133	Non-Residential	10 - 15 ft	8/13/2020	< 1	9.2	< 1	< 1	--	--	8.9	< 1
MW-22-07	Non-Residential	14 - 19 ft	12/14/2022	< 1	< 5	< 1	< 1	< 10	< 3,700	< 5	< 1
			3/22/2023	< 1	< 5	< 1	< 1	< 1	< 3,700	< 5	< 1
DUP-03W (MW-22-07)	Non-Residential	14 - 19 ft	12/14/2022	< 1	< 5	< 1	< 1	< 10	< 3,700	< 5	< 1
MW-22-08	Non-Residential	15 - 20 ft	12/13/2022	< 1	< 5	< 1	< 1	< 10	< 3,700	< 5	2
			3/22/2023	< 1	< 5	< 1	< 1	< 1	< 3,700	< 5	3

Notes:
 Non-Residential (NR) Drinking Water Criteria (DWC), Groundwater Surface Water Interface (GSI), and Groundwater Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 18, 2012.
 Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).
 The depth to first encountered groundwater is 10 feet below ground surface or less; therefore, the shallow groundwater residential VIAP screening levels apply.
 The depth to first encountered groundwater is greater than 5 feet below ground surface; therefore, the groundwater not in contact nonresidential VIAP screening levels apply.
 Only analytes with one or more detection are reported.
 ug/L = microgram per liter
 NA = Not Applicable; No Criterion; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed
Bold font denotes concentrations detected above laboratory reporting limits.
 Denotes concentrations above one or more criteria.
 1) Criterion is the aesthetic drinking water value (Footnote (E), Michigan Part 201 Criteria Tables).
 2) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).
 3) The VIAP criterion was below Target Detection Limits (TDL), the TDL has been substituted (Footnote (M), VIAP Guidance Document)

Table 3
 Summary of Detected Volatile Organic Compounds and Alcohols in Groundwater
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Chloroform	Chloromethane	cis-1,2-Dichloroethene	Ethylbenzene	Hexachlorobutadiene	Methanol	Naphthalene	Tetrachloroethene
Non-Residential Drinking Water Criteria	80	1,100	70	74 ⁽¹⁾	42	10,000	1,500	5.0
Generic GSI Criteria	350	ID	620	18	0.053	5.9E+05	11	60 ⁽²⁾
Groundwater Contact Criteria	1.5E+05	4.9E+05	2.0E+05	1.7E+05	400	2.9E+07	31,000	12,000
Non-Residential Not In Contact VIAP Screening Level	32	560	140	170	19	2.3E+08	300	130
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L

Sample Location	Residential Status	Sample Interval	Date Sampled	Chloroform	Chloromethane	cis-1,2-Dichloroethene	Ethylbenzene	Hexachlorobutadiene	Methanol	Naphthalene	Tetrachloroethene
Investigation Area: Southern Area (continued)											
MW-22-09	Non-Residential	17 - 22 ft	12/13/2022	< 1	< 5	< 1	< 1	< 10	< 3,700	< 5	< 1
			3/22/2023	< 1	< 5	< 1	< 1	< 1	< 3,700	< 5	< 1
DUP-01W (MW-22-09)	Non-Residential	17 - 22 ft	12/13/2022	< 1	< 5	< 1	< 1	< 10	< 3,700	< 5	< 1
			12/14/2022	< 1	< 5	< 1	< 1	< 10	< 3,700	< 5	< 1
MW-22-10	Non-Residential	15 - 20 ft	3/22/2023	< 1	< 5	< 1	< 1	< 1	< 3,700	< 5	< 1
			12/15/2022	< 1	< 5	< 1	< 1	< 10	< 3,700	< 5	< 1
MW-22-11	Non-Residential	12.5 - 17.5 ft	3/22/2023	< 1	< 5	< 1	< 1	< 1	< 3,700	< 5	< 1
			12/16/2022	< 1	< 5	< 1	< 1	< 10	< 3,700	< 5	< 1
MW-22-12	Non-Residential	15 - 20 ft	3/22/2023	< 1	< 5	< 1	< 1	< 1	< 3,700	< 5	< 1
			12/15/2022	< 1	< 5	< 1	< 1	< 10	< 3,700	< 5	< 1
MW-22-13	Non-Residential	13 - 18 ft	3/22/2023	< 1	< 5	< 1	< 1	< 1	< 3,700	< 5	< 1
			12/15/2022	< 1	< 5	< 1	< 1	< 10	< 3,700	< 5	< 1
DUP-02W (MW-22-13)	Non-Residential	13 - 18 ft	3/22/2023	< 1	< 5	< 1	< 1	< 1	< 3,700	< 5	< 1
			12/15/2022	< 1	< 5	< 1	< 1	< 10	< 3,700	< 5	< 1
MW-22-14	Non-Residential	13 - 18 ft	3/23/2023	< 1	< 5	< 1	< 1	< 1	< 3,700	< 5	< 1
			12/15/2022	< 1	< 5	< 1	< 1	< 10	< 3,700	< 5	< 1
MW-22-15	Non-Residential	14 - 19 ft	3/23/2023	< 1	< 5	< 1	< 1	< 1	< 3,700	< 5	< 1
			12/20/2022	< 1	< 5	< 1	< 1	< 10	< 3,700	< 5	< 1
MW-22-16	Non-Residential	15 - 20 ft	3/23/2023	< 1	< 5	< 1	< 1	< 1	< 3,700	< 5	< 1
			12/20/2022	< 1	< 5	< 1	< 1	< 10	< 3,700	< 5	< 1
DUP-03 (MW-22-16)	Non-Residential	15 - 20 ft	3/23/2023	< 1	< 5	< 1	< 1	< 1	< 3,700	< 5	< 1
			12/20/2022	< 1	< 5	< 1	< 1	< 10	< 3,700	< 5	< 1
MW-22-17	Non-Residential	14 - 19 ft	3/23/2023	< 1	< 5	< 1	< 1	< 1	< 3,700	< 5	< 1
			12/20/2022	< 1	< 5	< 1	< 1	< 10	< 3,700	< 5	< 1
MW-22-18	Non-Residential	16 - 21 ft	3/23/2023	< 1	< 5	< 1	< 1	< 1	< 3,700	< 5	< 1
			12/20/2022	< 1	< 5	< 1	< 1	< 10	< 3,700	< 5	< 1
MW-22-19	Non-Residential	17 - 22 ft	3/23/2023	< 1	< 5	< 1	< 1	< 1	< 3,700	< 5	< 1
			12/20/2022	< 1	< 5	< 1	< 1	< 10	< 3,700	< 5	< 1
MW-22-20	Non-Residential	17 - 22 ft	3/23/2023	< 1	< 5	< 1	< 1	< 1	< 3,700	< 5	< 1
			12/20/2022	< 1	< 5	< 1	< 1	< 10	< 3,700	< 5	< 1
MW-22-21	Non-Residential	17 - 22 ft	3/23/2023	< 1	< 5	< 1	< 1	< 1	< 3,700	< 5	< 1
			12/20/2022	< 1	< 5	< 1	< 1	< 10	< 3,700	< 5	< 1
MW-22-22D	Non-Residential	140 - 150 ft	3/23/2023	< 1	< 5	< 1	< 1	< 1	< 3,700	< 5	< 1
			12/27/2022	< 1	< 5	< 1	< 1	< 10	< 3,700	< 5	< 1

Notes:
 Non-Residential (NR) Drinking Water Criteria (DWC), Groundwater Surface Water Interface (GSI), and Groundwater Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 18, 2012.
 Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).
 The depth to first encountered groundwater is 10 feet below ground surface or less; therefore, the shallow groundwater residential VIAP screening levels apply.
 The depth to first encountered groundwater is greater than 5 feet below ground surface; therefore, the groundwater not in contact nonresidential VIAP screening levels apply.
 Only analytes with one or more detection are reported.
 ug/L = microgram per liter
 NA = Not Applicable; No Criterion; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed

Bold font denotes concentrations detected above laboratory reporting limits.
 Denotes concentrations above one or more criteria.
 1) Criterion is the aesthetic drinking water value (Footnote (E), Michigan Part 201 Criteria Tables).
 2) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).
 3) The VIAP criterion was below Target Detection Limits (TDL), the TDL has been substituted (Footnote (M), VIAP Guidance Document)

Table 3
 Summary of Detected Volatile Organic Compounds and Alcohols in Groundwater
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Trichlorofluoromethane (Freon 11)	Vinyl chloride	Xylenes, total
Non-Residential Drinking Water Criteria	790 ⁽¹⁾	100	5.0	7,300	2.0	10,000
Generic GSI Criteria	270	1,500	200	NA	13 ⁽²⁾	41
Groundwater Contact Criteria	5.3E+05	2.2E+05	22,000	1.1E+06	1000	1.9E+05
Non-Residential Not In Contact VIAP Screening Level	59,000	580	10	560	18	3,000
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L

Sample Location	Residential Status	Sample Interval	Date Sampled	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Trichlorofluoromethane (Freon 11)	Vinyl chloride	Xylenes, total
Investigation Area: Southern Area									
MW-101	Non-Residential	7.5 - 12.5 ft	4/8/2020	< 1	< 1	< 1	< 1	< 1	< 0.4
			12/16/2022	< 1	< 1	< 1	< 1	< 1	< 3
			3/22/2023	< 1	< 1	< 1	< 1	< 1	< 3
DUP-01 (MW-101)	Non-Residential	7.5 - 12.5 ft	3/22/2023	< 1	< 1	< 1	< 1	< 1	< 3
MW-102	Non-Residential	8 - 13 ft	4/8/2020	< 1	< 1	< 1	< 1	< 1	< 0.55
MW-103	Non-Residential	8 - 13 ft	4/8/2020	< 1	< 1	< 1	1.9	< 1	< 0.55
			12/16/2022	< 1	< 1	< 1	< 1	< 1	< 3
			3/22/2023	< 1	< 1	< 1	< 1	< 1	< 3
MW-116	Non-Residential	8 - 13 ft	4/9/2020	< 1	< 1	< 1	< 1	< 0.4	
MW-117	Non-Residential	7.5 - 12.5 ft	4/9/2020	< 1	< 1	< 1	< 1	< 0.4	
MW-118	Non-Residential	11 - 16 ft	4/9/2020	< 1	< 1	< 1	< 1	< 0.4	
MW-12	Non-Residential	--	6/23/2020	< 1	< 1	< 1	< 1	< 1	< 0.4
MW-122	Non-Residential	5 - 10 ft	6/24/2020	< 1	< 1	< 1	< 1	< 1	< 0.4
MW-123	Non-Residential	5 - 10 ft	6/23/2020	< 1	< 1	< 1	< 1	< 1	< 0.4
MW-124	Non-Residential	7 - 12 ft	6/23/2020	< 1	< 1	< 1	< 1	< 1	< 0.4
MW-125	Non-Residential	8 - 13 ft	6/23/2020	< 1	< 1	< 1	< 1	< 1	< 0.4
MW-126	Non-Residential	8.5 - 13.5 ft	6/23/2020	< 1	< 1	1.1	< 1	< 1	< 0.4
MW-127	Non-Residential	8 - 13 ft	6/24/2020	< 1	< 1	< 1	1.6	< 1	2.37
MW-128	Non-Residential	8 - 13 ft	6/24/2020	< 1	< 1	< 1	< 1	< 1	< 0.4
			12/16/2022	< 1	< 1	< 1	< 1	< 1	< 3
			3/23/2023	< 1	< 1	< 1	< 1	< 1	< 3
MW-129	Non-Residential	8 - 13 ft	6/24/2020	< 1	< 1	1.5	< 1	< 1	< 0.4
			12/16/2022	< 1	< 1	2	< 1	2	< 3
			3/23/2023	< 1	< 1	2	< 1	< 1	< 3
MW-130	Non-Residential	5 - 10 ft	6/23/2020	< 1	< 1	< 1	< 1	< 0.4	
MW-131	Non-Residential	5 - 10 ft	6/24/2020	< 1	< 1	< 1	< 1	0.18	
MW-132	Non-Residential	10 - 15 ft	8/13/2020	1.5	< 1	< 1	< 1	20.9	
MW-133	Non-Residential	10 - 15 ft	8/13/2020	< 1	< 1	< 1	< 1	< 0.4	
MW-22-07	Non-Residential	14 - 19 ft	12/14/2022	< 1	< 1	< 1	< 1	< 1	< 3
			3/22/2023	< 1	< 1	< 1	< 1	< 1	< 3
DUP-03W (MW-22-07)	Non-Residential	14 - 19 ft	12/14/2022	< 1	< 1	< 1	< 1	< 1	< 3
MW-22-08	Non-Residential	15 - 20 ft	12/13/2022	< 1	< 1	< 1	< 1	< 1	< 3
			3/22/2023	< 1	< 1	< 1	< 1	< 1	< 3

Notes:
 Non-Residential (NR) Drinking Water Criteria (DWC), Groundwater Surface Water Interface (GSI), and Groundwater Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 18, 2012.
 Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).
 The depth to first encountered groundwater is 10 feet below ground surface or less; therefore, the shallow groundwater residential VIAP screening levels apply.
 The depth to first encountered groundwater is greater than 5 feet below ground surface; therefore, the groundwater not in contact nonresidential VIAP screening levels apply.
 Only analytes with one or more detection are reported.
 ug/L = microgram per liter
 NA = Not Applicable; No Criterion; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed
Bold font denotes concentrations detected above laboratory reporting limits.
 Denotes concentrations above one or more criteria.
 1) Criterion is the aesthetic drinking water value (Footnote [E], Michigan Part 201 Criteria Tables).
 2) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote [X], Michigan Part 201 Criteria Tables).
 3) The VIAP criterion was below Target Detection Limits (TDL), the TDL has been substituted (Footnote [M], VIAP Guidance Document)

Table 3
 Summary of Detected Volatile Organic Compounds and Alcohols in Groundwater
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Trichlorofluoromethane (Freon 11)	Vinyl chloride	Xylenes, total
Non-Residential Drinking Water Criteria	790 ⁽¹⁾	100	5.0	7,300	2.0	10,000
Generic GSI Criteria	270	1,500	200	NA	13 ⁽²⁾	41
Groundwater Contact Criteria	5.3E+05	2.2E+05	22,000	1.1E+06	1000	1.9E+05
Non-Residential Not In Contact VIAP Screening Level	59,000	580	10	560	18	3,000
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L

Sample Location	Residential Status	Sample Interval	Date Sampled	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Trichlorofluoromethane (Freon 11)	Vinyl chloride	Xylenes, total
Investigation Area: Southern Area (continued)									
MW-22-09	Non-Residential	17 - 22 ft	12/13/2022	< 1	< 1	< 1	< 1	< 1	< 3
			3/22/2023	< 1	< 1	< 1	< 1	< 1	< 3
DUP-01W (MW-22-09)	Non-Residential	17 - 22 ft	12/13/2022	< 1	< 1	< 1	< 1	< 1	< 3
			12/14/2022	< 1	< 1	< 1	< 1	< 1	< 3
MW-22-10	Non-Residential	15 - 20 ft	3/22/2023	< 1	< 1	< 1	< 1	< 1	< 3
			12/15/2022	< 1	< 1	< 1	< 1	< 1	< 3
MW-22-11	Non-Residential	12.5 - 17.5 ft	3/22/2023	< 1	< 1	< 1	< 1	< 1	< 3
			12/16/2022	< 1	< 1	< 1	< 1	< 1	< 3
MW-22-12	Non-Residential	15 - 20 ft	3/22/2023	< 1	< 1	< 1	< 1	< 1	< 3
			12/15/2022	< 1	< 1	< 1	< 1	< 1	< 3
MW-22-13	Non-Residential	13 - 18 ft	3/22/2023	< 1	< 1	< 1	< 1	< 1	< 3
			12/15/2022	< 1	< 1	< 1	< 1	< 1	< 3
DUP-02W (MW-22-13)	Non-Residential	13 - 18 ft	12/15/2022	< 1	< 1	< 1	< 1	< 1	< 3
			3/22/2023	< 1	< 1	< 1	< 1	< 1	< 3
MW-22-14	Non-Residential	13 - 18 ft	12/15/2022	< 1	< 1	< 1	< 1	< 1	< 3
			3/23/2023	< 1	< 1	< 1	< 1	< 1	< 3
MW-22-15	Non-Residential	14 - 19 ft	12/15/2022	< 1	< 1	< 1	< 1	< 1	< 3
			3/23/2023	< 1	< 1	< 1	< 1	< 1	< 3
MW-22-16	Non-Residential	15 - 20 ft	12/20/2022	< 1	< 1	< 1	< 1	< 1	< 3
			3/23/2023	< 1	< 1	< 1	< 1	< 1	< 3
DUP-03 (MW-22-16)	Non-Residential	15 - 20 ft	3/23/2023	< 1	< 1	< 1	< 1	< 1	< 3
			12/20/2022	< 1	< 1	< 1	< 1	< 1	< 3
MW-22-17	Non-Residential	14 - 19 ft	3/23/2023	< 1	< 1	< 1	< 1	< 1	< 3
			12/20/2022	< 1	< 1	< 1	< 1	< 1	< 3
MW-22-18	Non-Residential	16 - 21 ft	3/23/2023	< 1	< 1	< 1	< 1	< 1	< 3
			12/20/2022	< 1	< 1	< 1	< 1	< 1	< 3
MW-22-19	Non-Residential	17 - 22 ft	12/20/2022	< 1	< 1	< 1	< 1	< 1	< 3
			3/23/2023	< 1	< 1	< 1	< 1	< 1	< 3
MW-22-20	Non-Residential	17 - 22 ft	12/20/2022	< 1	< 1	< 1	< 1	< 1	< 3
			3/23/2023	< 1	< 1	< 1	< 1	< 1	< 3
MW-22-21	Non-Residential	17 - 22 ft	12/20/2022	< 1	< 1	< 1	< 1	< 1	< 3
			3/22/2023	< 1	< 1	< 1	< 1	< 1	< 3
MW-22-22D	Non-Residential	140 - 150 ft	12/27/2022	3	< 1	< 1	< 1	< 1	< 3
			3/23/2023	2	< 1	< 1	< 1	< 1	< 3

Notes:

Non-Residential (NR) Drinking Water Criteria (DWC), Groundwater Surface Water Interface (GSI), and Groundwater Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 18, 2012.

Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).

The depth to first encountered groundwater is 10 feet below ground surface or less; therefore, the shallow groundwater residential VIAP screening levels apply.

The depth to first encountered groundwater is greater than 5 feet below ground surface; therefore, the groundwater not in contact nonresidential VIAP screening levels apply.

Only analytes with one or more detection are reported.

ug/L = microgram per liter

NA = Not Applicable; No Criterion; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed

Bold font denotes concentrations detected above laboratory reporting limits.

Green background Denotes concentrations above one or more criteria.

1) Criterion is the aesthetic drinking water value (Footnote {E}, Michigan Part 201 Criteria Tables).

2) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote {X}, Michigan Part 201 Criteria Tables).

3) The VIAP criterion was below Target Detection Limits (TDL), the TDL has been substituted (Footnote {M}, VIAP Guidance Document)

Table 4
 Summary of Detected Semi-Volatile Organic Compounds in Groundwater
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	2-Methyl-naphthalene	2-Nitrophenol	4-Nitrophenol	Benzo(a)-anthracene ⁽¹⁾	Benzo(a)-pyrene	Benzo(b)-fluoranthene ⁽¹⁾	Carbazole
Residential Drinking Water Criteria	260	20	NC	2.1	5.0	1.5	85
Non-Residential Drinking Water Criteria	750	58	NC	8.5	5.0	1.5	350
Generic GSI Criteria	19	ID	NC	ID	ID	ID	10
Groundwater Contact Criteria	25,000	79,000	NC	9.4	1.0	1.5	7,400
Residential Shallow VIAP Screening Level	66	5 ⁽³⁾	NC	9.4	NA	NA	NA
Non-Residential Not In Contact VIAP Screening Level	2900	5 ⁽³⁾	NC	9.4	NA	NA	NA
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L

Sample Location	Residential Status	Sample Interval	Date Sampled	2-Methyl-naphthalene	2-Nitrophenol	4-Nitrophenol	Benzo(a)-anthracene ⁽¹⁾	Benzo(a)-pyrene	Benzo(b)-fluoranthene ⁽¹⁾	Carbazole
Investigation Area: Southern Area										
MW-101	Non-Residential	7.5 - 12.5 ft	4/8/2020	< 5	--	--	< 1	< 0.2	< 1	--
			12/16/2022	--	< 5	< 25	< 1	< 1	< 1	--
			3/22/2023	--	< 5	< 25	< 1	< 1	< 1	--
DUP-01 (MW-101)	Non-Residential	7.5 - 12.5 ft	3/22/2023	--	< 5	< 25	< 1	< 1	< 1	--
MW-102	Non-Residential	8 - 13 ft	4/8/2020	< 5	--	--	< 1	< 0.2	< 1	--
MW-103	Non-Residential	8 - 13 ft	4/8/2020	< 5	--	--	< 1	< 0.2	< 1	--
			12/16/2022	--	< 5	< 25	< 1	< 1	< 1	--
			3/22/2023	--	< 5	< 25	< 1	< 1	< 1	--
MW-116	Non-Residential	8 - 13 ft	4/9/2020	< 5	--	--	< 1	< 0.2	< 1	--
MW-117	Non-Residential	7.5 - 12.5 ft	4/9/2020	< 5	--	--	< 1	< 0.2	< 1	--
MW-118	Non-Residential	11 - 16 ft	4/9/2020	< 5	--	--	< 1	< 0.2	< 1	--
MW-122	Non-Residential	5 - 10 ft	6/24/2020	< 4.8	< 4.8	< 5.8	< 0.95	< 0.19	< 0.95	< 9.5
MW-123	Non-Residential	5 - 10 ft	6/23/2020	< 4.8	< 4.8	< 5.8	< 0.95	< 0.19	< 0.95	< 9.5
MW-124	Non-Residential	7 - 12 ft	6/23/2020	< 4.5	< 4.5	< 5.5	< 0.91	< 0.18	< 0.91	< 9.1
MW-125	Non-Residential	8 - 13 ft	6/23/2020	< 4.5	< 4.5	< 5.5	< 0.91	< 0.18	< 0.91	< 9.1
MW-126	Non-Residential	8.5 - 13.5 ft	6/23/2020	< 4.5	< 4.5	< 5.5	< 0.91	< 0.18	< 0.91	< 9.1
MW-127	Non-Residential	8 - 13 ft	6/24/2020	< 4.8	< 4.8	< 5.8	1.2	1.1	1.3	< 9.5
MW-128	Non-Residential	8 - 13 ft	6/24/2020	< 4.8	< 4.8	< 5.8	< 0.95	< 0.19	< 0.95	< 9.5
			12/16/2022	--	< 5	< 25	< 1	< 1	< 1	--
			3/23/2023	--	< 5	< 25	< 1	< 1	< 1	--
MW-129	Non-Residential	8 - 13 ft	6/24/2020	< 4.5	< 4.5	< 5.5	< 0.91	< 0.18	< 0.91	< 9.1
			12/16/2022	--	< 5	< 25	< 1	< 1	< 1	--
			3/23/2023	--	< 5	< 25	< 1	< 1	< 1	--
MW-130	Non-Residential	5 - 10 ft	6/23/2020	< 4.5	< 4.5	< 5.5	< 0.91	< 0.18	< 0.91	< 9.1
MW-131	Non-Residential	5 - 10 ft	6/24/2020	< 4.8	< 4.8	< 5.8	< 0.95	< 0.19	< 0.95	< 9.5
MW-132	Non-Residential	10 - 15 ft	8/13/2020	< 4.5	5.7	8.2	< 0.91	< 0.18	< 0.91	11.5
MW-133	Non-Residential	10 - 15 ft	8/13/2020	< 4.5	< 4.5	< 5.5	< 0.91	< 0.18	< 0.91	10.9
MW-22-07	Non-Residential	14 - 19 ft	12/14/2022	--	< 5	< 25	< 1	< 1	< 1	--
			3/22/2023	--	< 5	< 25	< 1	< 1	< 1	--
DUP-03W (MW-22-07)	Non-Residential	14 - 19 ft	12/14/2022	--	< 5	< 25	< 1	< 1	< 1	--

Notes:

Non-Residential (NR) Drinking Water Criteria (DWC), Groundwater Surface Water Interface (GSI), and Groundwater Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 18, 2012.

Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).

The depth to first encountered groundwater is 10 feet below ground surface or less; therefore, the shallow groundwater residential VIAP screening levels apply.

The depth to first encountered groundwater is greater than 5 feet below ground surface; therefore, the groundwater not in contact nonresidential VIAP screening levels apply.

Only analytes with one or more detection are reported.

ug/L = microgram per liter

NA = Not Applicable; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed

Bold font denotes concentrations detected above laboratory reporting limits.

Green background denotes concentrations above one or more criteria.

1) Criteria for carcinogenic polycyclic aromatic hydrocarbons were developed using relative potential potencies to benzo(a)pyrene (Footnote (Q), Michigan Part 201 Criteria Tables).

2) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).

3) The VIAP criterion was below Target Detection Limits (TDL), the TDL has been substituted (Footnote (M), VIAP Guidance Document)

Table 4
 Summary of Detected Semi-Volatile Organic Compounds in Groundwater
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	2-Methyl-naphthalene	2-Nitrophenol	4-Nitrophenol	Benzo(a)-anthracene ⁽¹⁾	Benzo(a)-pyrene	Benzo(b)-fluoranthene ⁽¹⁾	Carbazole
Residential Drinking Water Criteria	260	20	NC	2.1	5.0	1.5	85
Non-Residential Drinking Water Criteria	750	58	NC	8.5	5.0	1.5	350
Generic GSI Criteria	19	ID	NC	ID	ID	ID	10
Groundwater Contact Criteria	25,000	79,000	NC	9.4	1.0	1.5	7,400
Residential Shallow VIAP Screening Level	66	5 ⁽³⁾	NC	9.4	NA	NA	NA
Non-Residential Not In Contact VIAP Screening Level	2900	5 ⁽³⁾	NC	9.4	NA	NA	NA
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L

Sample Location	Residential Status	Sample Interval	Date Sampled	2-Methyl-naphthalene	2-Nitrophenol	4-Nitrophenol	Benzo(a)-anthracene ⁽¹⁾	Benzo(a)-pyrene	Benzo(b)-fluoranthene ⁽¹⁾	Carbazole
Investigation Area: Southern Area (Continued)										
MW-22-08	Non-Residential	15 - 20 ft	12/13/2022	--	< 5	< 25	< 1	< 1	< 1	--
			3/22/2023	--	< 5	< 25	< 1	< 1	< 1	--
MW-22-09	Non-Residential	17 - 22 ft	12/13/2022	--	< 5	< 25	< 1	< 1	< 1	--
			3/22/2023	--	< 5	< 25	< 1	< 1	< 1	--
DUP-01W (MW-22-09)	Non-Residential	17 - 22 ft	12/13/2022	--	< 5	< 25	< 1	< 1	< 1	--
MW-22-10	Non-Residential	15 - 20 ft	12/14/2022	--	< 5	< 25	< 1	< 1	< 1	--
			3/22/2023	--	< 5	< 25	< 1	< 1	< 1	--
MW-22-11	Non-Residential	12.5 - 17.5 ft	12/15/2022	--	< 5	< 25	< 1	< 1	< 1	--
			3/22/2023	--	< 5	< 25	< 1	< 1	< 1	--
MW-22-12	Non-Residential	15 - 20 ft	12/16/2022	--	< 5	< 25	< 1	< 1	< 1	--
			3/22/2023	--	< 5	< 25	< 1	< 1	< 1	--
MW-22-13	Non-Residential	13 - 18 ft	12/15/2022	--	< 5	< 25	< 1	< 1	< 1	--
			3/22/2023	--	< 5	< 25	< 1	< 1	< 1	--
DUP-02W (MW-22-13)	Non-Residential	13 - 18 ft	12/15/2022	--	< 5	< 25	< 1	< 1	< 1	--
DUP-02 (MW-22-13)	Non-Residential	13 - 18 ft	3/22/2023	--	< 5	< 25	< 1	< 1	< 1	--
MW-22-14	Non-Residential	13 - 18 ft	12/15/2022	--	< 5	< 25	< 1	< 1	< 1	--
			3/23/2023	--	< 5	< 25	< 1	< 1	< 1	--
MW-22-15	Non-Residential	14 - 19 ft	12/15/2022	--	< 5	< 25	< 1	< 1	< 1	--
			3/23/2023	--	< 5	< 25	< 1	< 1	< 1	--
MW-22-16	Non-Residential	15 - 20 ft	12/20/2022	--	< 5	< 25	< 1	< 1	< 1	--
			3/23/2023	--	< 5	< 25	< 1	< 1	< 1	--
DUP-03 (MW-22-16)	Non-Residential	15 - 20 ft	3/23/2023	--	< 5	< 25	< 1	< 1	< 1	--
MW-22-17	Non-Residential	14 - 19 ft	12/20/2022	--	< 5	< 25	< 1	< 1	< 1	--
			3/23/2023	--	< 5	< 25	< 1	< 1	< 1	--
MW-22-18	Non-Residential	16 - 21 ft	12/20/2022	--	< 5	< 25	< 1	< 1	< 1	--
			3/23/2023	--	< 5	< 25	< 1	< 1	< 1	--
MW-22-19	Non-Residential	17 - 22 ft	12/20/2022	--	< 5	< 25	< 1	< 1	< 1	--
			3/23/2023	--	< 5	< 25	< 1	< 1	< 1	--
MW-22-20	Non-Residential	17 - 22 ft	12/20/2022	--	< 5	< 25	< 1	< 1	< 1	--
			3/23/2023	--	< 5	< 25	< 1	< 1	< 1	--
MW-22-21	Non-Residential	17 - 22 ft	12/20/2022	--	< 5	< 25	< 1	< 1	< 1	--
			3/22/2023	--	< 5	< 25	< 1	< 1	< 1	--
MW-22-22D	Non-Residential	140 - 150 ft	12/27/2022	--	< 5	< 25	< 1	< 1	< 1	--
			3/23/2023	--	< 5	< 25	< 1	< 1	< 1	--

Notes:

Non-Residential (NR) Drinking Water Criteria (DWC), Groundwater Surface Water Interface (GSI), and Groundwater Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 18, 2012.

Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).

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NA = Not Applicable; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed

Bold font denotes concentrations detected above laboratory reporting limits.

Denotes concentrations above one or more criteria.

1) Criteria for carcinogenic polycyclic aromatic hydrocarbons were developed using relative potential potencies to benzo(a)pyrene (Footnote (Q), Michigan Part 201 Criteria Tables).

2) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).

3) The VIAP criterion was below Target Detection Limits (TDL), the TDL has been substituted (Footnote (M), VIAP Guidance Document)

Table 4
 Summary of Detected Semi-Volatile Organic Compounds in Groundwater
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Chrysene ⁽¹⁾	Fluoranthene	Naphthalene	Phenanthrene	Phenol	Pyrene
Residential Drinking Water Criteria	1.6	210	520	52	4,400	140
Non-Residential Drinking Water Criteria	1.6	210	1,500	150	13,000	140
Generic GSI Criteria	ID	1.6	11	2.0	450	ID
Groundwater Contact Criteria	1.6	210	31,000	1,000	2.9E+07	140
Residential Shallow VIAP Screening Level	NA	NA	5 ⁽³⁾	9.5	NA	140
Non-Residential Not In Contact VIAP Screening Level	NA	NA	300	420	NA	140
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L

Sample Location	Residential Status	Sample Interval	Date Sampled	Chrysene ⁽¹⁾	Fluoranthene	Naphthalene	Phenanthrene	Phenol	Pyrene
Investigation Area: Southern Area									
MW-101	Non-Residential	7.5 - 12.5 ft	4/8/2020	< 1	< 1	< 5	< 2	--	< 5
			12/16/2022	< 1	< 1	< 5	< 2	< 5	
			3/22/2023	< 1	< 1	< 5	< 2	< 5	
DUP-01 (MW-101)	Non-Residential	7.5 - 12.5 ft	3/22/2023	< 1	< 1	< 5	< 2	< 5	< 5
MW-102	Non-Residential	8 - 13 ft	4/8/2020	< 1	< 1	< 5	< 2	--	< 5
MW-103	Non-Residential	8 - 13 ft	4/8/2020	< 1	< 1	< 5	< 2	--	< 5
			12/16/2022	< 1	< 1	< 5	< 2	< 5	
			3/22/2023	< 1	< 1	< 5	< 2	< 5	
MW-116	Non-Residential	8 - 13 ft	4/9/2020	< 1	< 1	< 5	< 2	--	< 5
MW-117	Non-Residential	7.5 - 12.5 ft	4/9/2020	< 1	< 1	< 5	< 2	--	< 5
MW-118	Non-Residential	11 - 16 ft	4/9/2020	< 1	< 1	< 5	< 2	--	< 5
MW-122	Non-Residential	5 - 10 ft	6/24/2020	< 0.95	< 0.95	< 4.8	< 1.9	< 4.8	< 4.8
MW-123	Non-Residential	5 - 10 ft	6/23/2020	< 0.95	< 0.95	< 4.8	< 1.9	< 4.8	< 4.8
MW-124	Non-Residential	7 - 12 ft	6/23/2020	< 0.91	< 0.91	< 4.5	< 1.8	< 4.5	< 4.5
MW-125	Non-Residential	8 - 13 ft	6/23/2020	< 0.91	< 0.91	< 4.5	< 1.8	< 4.5	< 4.5
MW-126	Non-Residential	8.5 - 13.5 ft	6/23/2020	< 0.91	< 0.91	< 4.5	< 1.8	< 4.5	< 4.5
MW-127	Non-Residential	8 - 13 ft	6/24/2020	1.3	2	< 4.8	3.7	< 4.8	< 4.8
MW-128	Non-Residential	8 - 13 ft	6/24/2020	< 0.95	< 0.95	< 4.8	< 1.9	< 4.8	< 4.8
			12/16/2022	< 1	< 1	< 5	< 2	< 5	
			3/23/2023	< 1	< 1	< 5	< 2	< 5	
MW-129	Non-Residential	8 - 13 ft	6/24/2020	< 0.91	< 0.91	< 4.5	< 1.8	< 4.5	< 4.5
			12/16/2022	< 1	< 1	< 5	< 2	< 5	
			3/23/2023	< 1	< 1	< 5	< 2	< 5	
MW-130	Non-Residential	5 - 10 ft	6/23/2020	< 0.91	< 0.91	< 4.5	< 1.8	< 4.5	< 4.5
MW-131	Non-Residential	5 - 10 ft	6/24/2020	< 0.95	< 0.95	< 4.8	< 1.9	< 4.8	< 4.8
MW-132	Non-Residential	10 - 15 ft	8/13/2020	< 0.91	1.5	16.2	5.6	34.9	< 4.5
MW-133	Non-Residential	10 - 15 ft	8/13/2020	< 0.91	1.3	4.8	4.2	< 4.5	< 4.5
MW-22-07	Non-Residential	14 - 19 ft	12/14/2022	< 1	< 1	< 5	< 2	< 5	< 5
			3/22/2023	< 1	< 1	< 5	< 2	< 5	
DUP-03W (MW-22-07)	Non-Residential	14 - 19 ft	12/14/2022	< 1	< 1	< 5	< 2	< 5	< 5

Notes:

Non-Residential (NR) Drinking Water Criteria (DWC), Groundwater Surface Water Interface (GSI), and Groundwater Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 18, 2012.

Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).

The depth to first encountered groundwater is 10 feet below ground surface or less; therefore, the shallow groundwater residential VIAP screening levels apply.

The depth to first encountered groundwater is greater than 5 feet below ground surface; therefore, the groundwater not in contact nonresidential VIAP screening levels apply.

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ug/L = microgram per liter

NA = Not Applicable; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed

Bold font denotes concentrations detected above laboratory reporting limits.

Green background Denotes concentrations above one or more criteria.

1) Criteria for carcinogenic polycyclic aromatic hydrocarbons were developed using relative potential potencies to benzo(a)pyrene (Footnote (Q), Michigan Part 201 Criteria Tables).

2) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).

3) The VIAP criterion was below Target Detection Limits (TDL), the TDL has been substituted (Footnote (M), VIAP Guidance Document)

Table 4
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 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Chrysene ⁽¹⁾	Fluoranthene	Naphthalene	Phenanthrene	Phenol	Pyrene
Residential Drinking Water Criteria	1.6	210	520	52	4,400	140
Non-Residential Drinking Water Criteria	1.6	210	1,500	150	13,000	140
Generic GSI Criteria	ID	1.6	11	2.0	450	ID
Groundwater Contact Criteria	1.6	210	31,000	1,000	2.9E+07	140
Residential Shallow VIAP Screening Level	NA	NA	5 ⁽³⁾	9.5	NA	140
Non-Residential Not In Contact VIAP Screening Level	NA	NA	300	420	NA	140
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L

Sample Location	Residential Status	Sample Interval	Date Sampled	Chrysene ⁽¹⁾	Fluoranthene	Naphthalene	Phenanthrene	Phenol	Pyrene
Investigation Area: Southern Area (Continued)									
MW-22-08	Non-Residential	15 - 20 ft	12/13/2022	< 1	< 1	< 5	< 2	< 5	< 5
			3/22/2023	< 1	< 1	< 5	< 2	< 5	< 5
MW-22-09	Non-Residential	17 - 22 ft	12/13/2022	< 1	< 1	< 5	< 2	< 5	< 5
			3/22/2023	< 1	< 1	< 5	< 2	< 5	< 5
DUP-01W (MW-22-09)	Non-Residential	17 - 22 ft	12/13/2022	< 1	< 1	< 5	< 2	< 5	< 5
MW-22-10	Non-Residential	15 - 20 ft	12/14/2022	< 1	< 1	< 5	< 2	< 5	< 5
			3/22/2023	< 1	< 1	< 5	< 2	< 5	< 5
MW-22-11	Non-Residential	12.5 - 17.5 ft	12/15/2022	< 1	< 1	< 5	< 2	< 5	< 5
			3/22/2023	< 1	< 1	< 5	< 2	< 5	< 5
MW-22-12	Non-Residential	15 - 20 ft	12/16/2022	< 1	< 1	< 5	< 2	< 5	< 5
			3/22/2023	< 1	< 1	< 5	< 2	< 5	< 5
MW-22-13	Non-Residential	13 - 18 ft	12/15/2022	< 1	< 1	< 5	< 2	< 5	< 5
			3/22/2023	< 1	< 1	< 5	< 2	< 5	< 5
DUP-02W (MW-22-13)	Non-Residential	13 - 18 ft	12/15/2022	< 1	< 1	< 5	< 2	< 5	< 5
DUP-02 (MW-22-13)	Non-Residential	13 - 18 ft	3/22/2023	< 1	< 1	< 5	< 2	< 5	< 5
MW-22-14	Non-Residential	13 - 18 ft	12/15/2022	< 1	< 1	< 5	< 2	< 5	< 5
			3/23/2023	< 1	< 1	< 5	< 2	< 5	< 5
MW-22-15	Non-Residential	14 - 19 ft	12/15/2022	< 1	< 1	< 5	< 2	< 5	< 5
			3/23/2023	< 1	< 1	< 5	< 2	< 5	< 5
MW-22-16	Non-Residential	15 - 20 ft	12/20/2022	< 1	< 1	< 5	< 2	< 5	< 5
			3/23/2023	< 1	< 1	< 5	< 2	< 5	< 5
DUP-03 (MW-22-16)	Non-Residential	15 - 20 ft	3/23/2023	< 1	< 1	< 5	< 2	< 5	< 5
MW-22-17	Non-Residential	14 - 19 ft	12/20/2022	< 1	< 1	< 5	< 2	< 5	< 5
			3/23/2023	< 1	< 1	< 5	< 2	< 5	< 5
MW-22-18	Non-Residential	16 - 21 ft	12/20/2022	< 1	< 1	< 5	< 2	< 5	< 5
			3/23/2023	< 1	< 1	< 5	< 2	< 5	< 5
MW-22-19	Non-Residential	17 - 22 ft	12/20/2022	< 1	< 1	< 5	< 2	< 5	< 5
			3/23/2023	< 1	< 1	< 5	< 2	< 5	< 5
MW-22-20	Non-Residential	17 - 22 ft	12/20/2022	< 1	< 1	< 5	< 2	< 5	< 5
			3/23/2023	< 1	< 1	< 5	< 2	< 5	< 5
MW-22-21	Non-Residential	17 - 22 ft	12/20/2022	< 1	< 1	< 5	< 2	< 5	< 5
			3/22/2023	< 1	< 1	< 5	< 2	< 5	< 5
MW-22-22D	Non-Residential	140 - 150 ft	12/27/2022	< 1	< 1	< 5	< 2	< 5	< 5
			3/23/2023	< 1	< 1	< 5	< 2	< 5	< 5

Notes:

Non-Residential (NR) Drinking Water Criteria (DWC), Groundwater Surface Water Interface (GSI), and Groundwater Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 18, 2012.

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The depth to first encountered groundwater is 10 feet below ground surface or less; therefore, the shallow groundwater residential VIAP screening levels apply.

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1) Criteria for carcinogenic polycyclic aromatic hydrocarbons were developed using relative potential potencies to benzo(a)pyrene (Footnote (Q), Michigan Part 201 Criteria Tables).

2) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).

3) The VIAP criterion was below Target Detection Limits (TDL), the TDL has been substituted (Footnote (M), VIAP Guidance Document)

Table 5
 Summary of Detected Per- and Polyfluoroalkyl Substances in Groundwater
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	Perfluorobutane sulfonic acid (PFBS)	Perfluorobutanoic acid (PFBA)	Perfluorodecane sulfonic acid (PFDS)	Perfluorodecanoic acid (PFDA)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexane sulfonic acid (PFHxS)	PFHxS-BR
Non-Residential Drinking Water Criteria	NC	420	NC	NC	NC	NC	NC	51	NC
Generic GSI Criteria	NC	NA	NC	NC	NC	NC	NC	NA	NC
Groundwater Contact Criteria	NC	NC	NC	NC	NC	NC	NC	NC	NC
Non-Residential Not In Contact VIAP Screening Level	NC	NC	NC	NC	NC	NC	NC	NC	NC
Units	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L

Sample Location	Residential Status	Sample Interval	Date Sampled	6:2 FTS	PFBS	PFBA	PFDS	PFDA	PFHpS	PFHpA	PFHxS	PFHxS-BR
Investigation Area: Southern Area												
MW-101	Non-Residential	7.5 - 12.5 ft	4/14/2020	< 0.93	5.2	3.5	< 0.33	< 0.67	< 0.46	< 0.44	4.7	--
			12/16/2022	< 2	2.3	< 10	< 2	< 2	< 2	< 2	2.7	< 2
			3/22/2023	< 2.1	3.9	< 10	< 2.1	< 2.1	< 2.1	< 2.1	3.3	< 2.1
DUP-01 (MW-101)	Non-Residential	7.5 - 12.5 ft	3/22/2023	< 2.0	4.2	< 10	< 2.0	< 2.0	< 2.0	< 2.0	3.5	< 2.0
MW-102	Non-Residential	8 - 13 ft	4/14/2020	< 0.92	5.2	12	< 0.32	< 0.66	< 0.45	6.6	5.1	--
MW-103	Non-Residential	8 - 13 ft	4/14/2020	3.4	3.9	4.6	< 0.33	< 0.68	< 0.46	3.2	7	--
			12/16/2022	13	3.0	< 9.7	< 1.9	< 1.9	< 1.9	4.3	7.8	< 1.9
			3/22/2023	< 2.0	4.8	< 10.0	< 2.0	< 2.0	< 2.0	2.9	7.9	< 2.0
MW-116	Non-Residential	8 - 13 ft	6/24/2020	74	< 0.39	6.2	< 0.63	< 1.3	< 0.89	< 0.86	< 0.73	--
MW-117	Non-Residential	7.5 - 12.5 ft	6/24/2020	33	10	5	< 0.33	< 0.69	< 0.47	3.4	3.5	--
MW-118	Non-Residential	11 - 16 ft	6/24/2020	13	5.7	5.5	< 0.32	< 0.67	< 0.46	< 0.44	4.2	--
DUP-02 (MW-118)	Non-Residential	11 - 16 ft	6/24/2020	12	5.4	5.2	--	--	--	--	--	--
MW-122	Non-Residential	5 - 10 ft	6/24/2020	15	4.1	6.8	< 0.7	< 1.4	< 0.99	8.7	4.2	--
MW-127	Non-Residential	8 - 13 ft	6/24/2020	6.6	< 0.45	6.2	< 0.72	< 1.5	< 1	6.5	8.4	--
MW-128	Non-Residential	8 - 13 ft	6/24/2020	< 9.1	4	13	< 0.32	< 0.66	2	19	8.7	--
			12/16/2022	< 1.9	4.3	12	< 1.9	2.2	< 1.9	9.9	5.8	< 1.9
			3/23/2023	< 2.1	4.1	12	< 2.1	< 2.1	< 2.1	7.6	5.7	< 2.1

Notes:
 Non-Residential (NR) Drinking Water Criteria (DWC), Groundwater Surface Water Interface (GSI), and Groundwater Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 18, 2012.
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 ng/L = nanogram per liter
 NC = No Criterion; -- = Parameter Not Analyzed
Bold font denotes concentrations detected above laboratory reporting limits.
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 1) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).

Table 5
 Summary of Detected Per- and Polyfluoroalkyl Substances in Groundwater
 Former Hayes Lemmerz Site - Southern Area
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 Ferndale, MI

Analyte	6:2 Fluorotelomer sulfonic acid (6:2 FTS)	Perfluorobutane sulfonic acid (PFBS)	Perfluorobutanoic acid (PFBA)	Perfluorodecane sulfonic acid (PFDS)	Perfluorodecanoic acid (PFDA)	Perfluoroheptane sulfonic acid (PFHpS)	Perfluoroheptanoic acid (PFHpA)	Perfluorohexane sulfonic acid (PFHxS)	PFHxS-BR
Non-Residential Drinking Water Criteria	NC	420	NC	NC	NC	NC	NC	51	NC
Generic GSI Criteria	NC	NA	NC	NC	NC	NC	NC	NA	NC
Groundwater Contact Criteria	NC	NC	NC	NC	NC	NC	NC	NC	NC
Non-Residential Not In Contact VIAP Screening Level	NC	NC	NC	NC	NC	NC	NC	NC	NC
Units	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L

Sample Location	Residential Status	Sample Interval	Date Sampled	6:2 FTS	PFBS	PFBA	PFDS	PFDA	PFHpS	PFHpA	PFHxS	PFHxS-BR
Investigation Area: Southern Area (continued)												
MW-129	Non-Residential	8 - 13 ft	6/24/2020	< 20	< 0.44	15	< 0.71	< 1.5	< 0.99	20	9	--
			12/16/2022	< 1.9	3.4	27	< 1.9	5.1	< 1.9	31	6.8	< 1.9
			3/23/2023	< 1.9	4.0	15	< 1.9	5.7	< 1.9	18	7.1	< 1.9
MW-131	Non-Residential	5 - 10 ft	6/24/2020	11	4.4	10	8.7	< 1.4	< 0.98	10	6.3	--
MW-132	Non-Residential	10 - 15 ft	8/14/2020	< 22	12	10	< 0.76	< 1.6	< 1.1	7.9	8.6	--
MW-133	Non-Residential	10 - 15 ft	8/14/2020	< 2.2	< 0.48	10	< 0.77	< 1.6	< 1.1	15	8.6	--
MW-22-07	Non-Residential	14 - 19 ft	12/14/2022	< 2	4.5	14	< 2	< 2	< 2	< 2	4.1	< 2
			3/22/2023	< 2.0	4.9	13	< 2.0	< 2.0	< 2.0	< 2.0	3.4	< 2.0
DUP-03W (MW-22-07)	Non-Residential	14 - 19 ft	12/14/2022	< 2	5.2	14	< 2	< 2	< 2	< 2	4	< 2
MW-22-08	Non-Residential	15 - 20 ft	12/13/2022	< 2	6.4	11	< 2	< 2	< 2	2.7	9.2	< 2
			3/22/2023	< 2.0	5.7	< 9.8	< 2.0	< 2.0	< 2.0	2.7	7.5	< 2.0
MW-22-09	Non-Residential	17 - 22 ft	12/13/2022	< 2	6.1	11	< 2	< 2	< 2	2.8	11	2.8
			3/22/2023	< 1.9	5.7	< 9.5	< 1.9	< 1.9	< 1.9	< 1.9	8.3	2.4
DUP-01W (MW-22-09)	Non-Residential	17 - 22 ft	12/13/2022	< 2	5.9	12	< 2	< 2	< 2	< 2	11	2.3
MW-22-10	Non-Residential	15 - 20 ft	12/14/2022	< 1.9	4.6	13	< 1.9	< 1.9	< 1.9	3.1	3	< 1.9
			3/22/2023	< 2.0	4.0	< 10.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
MW-22-11	Non-Residential	12.5 - 17.5 ft	12/15/2022	< 2	2.4	< 9.9	< 2	< 2	< 2	< 2	5.7	< 2
			3/22/2023	< 2.1	3.2	< 10	< 2.1	< 2.1	< 2.1	< 2.1	6.3	< 2.1
MW-22-12	Non-Residential	15 - 20 ft	12/16/2022	< 2	2.8	< 9.9	< 2	< 2	< 2	< 2	4.4	< 2
			3/22/2023	< 1.9	4.1	< 9.6	< 1.9	< 1.9	< 1.9	< 1.9	4.4	< 1.9
MW-22-13	Non-Residential	13 - 18 ft	12/15/2022	< 2	2.6	< 10	< 2	< 2	< 2	4.7	5.1	< 2
			3/22/2023	< 2.0	4.2	10	< 2.0	2.7	< 2.0	11	7.8	< 2.0
DUP-02W (MW-22-13)	Non-Residential	13 - 18 ft	12/15/2022	< 2	2.7	< 9.8	< 2	< 2	< 2	4.6	5	< 2
			3/22/2023	< 2.0	3.8	< 9.8	< 2.0	2.3	< 2.0	8.8	8.6	< 2.0
MW-22-14	Non-Residential	13 - 18 ft	12/15/2022	< 2.1	2.8	< 10	< 2.1	< 2.1	< 2.1	5.3	2.9	< 2.1
			3/23/2023	< 2.0	3.8	< 9.9	< 2.0	< 2.0	< 2.0	4.7	2.9	< 2.0
MW-22-15	Non-Residential	14 - 19 ft	12/15/2022	< 2	2.6	< 9.8	< 2	< 2	< 2	5.8	4.2	< 2
			3/23/2023	< 2.0	3.5	< 10.0	< 2.0	< 2.0	< 2.0	5.6	5.1	< 2.0

Notes:
 Non-Residential (NR) Drinking Water Criteria (DWC), Groundwater Surface Water Interface (GSI), and Groundwater Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 18, 2012.
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Non-Residential Drinking Water Criteria	NC	420	NC	NC	NC	NC	NC	51	NC
Generic GSI Criteria	NC	NA	NC	NC	NC	NC	NC	NA	NC
Groundwater Contact Criteria	NC	NC	NC	NC	NC	NC	NC	NC	NC
Non-Residential Not In Contact VIAP Screening Level	NC	NC	NC	NC	NC	NC	NC	NC	NC
Units	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L

Sample Location	Residential Status	Sample Interval	Date Sampled	6:2 FTS	PFBS	PFBA	PFDS	PFDA	PFHpS	PFHpA	PFHxS	PFHxS-BR
Investigation Area: Southern Area (continued)												
MW-22-16	Non-Residential	15 - 20 ft	12/20/2022	< 2	3.0	< 9.9	< 2	< 2	< 2	< 2	2.9	< 2
			3/23/2023	< 1.9	2.8	< 9.5	< 1.9	< 1.9	< 1.9	2.2	2.5	< 1.9
DUP-03 (MW-22-16)	Non-Residential	15 - 20 ft	3/23/2023	< 2.0	2.6	< 10	< 2.0	< 2.0	< 2.0	2.3	2.7	< 2.0
MW-22-17	Non-Residential	14 - 19 ft	12/20/2022	< 1.9	3.1	< 9.4	< 1.9	< 1.9	< 1.9	< 1.9	3.3	2.6
			3/23/2023	< 2.0	3.2	< 10	< 2.0	< 2.0	< 2.0	5.6	2.4	< 2.0
MW-22-18	Non-Residential	16 - 21 ft	12/20/2022	< 2	4.8	10	< 2	< 2	< 2	8.1	6.2	< 2
			3/23/2023	< 2.0	4.3	12	< 2.0	< 2.0	< 2.0	5.0	4.2	< 2.0
MW-22-19	Non-Residential	17 - 22 ft	12/20/2022	< 1.9	6.2	12	< 1.9	< 1.9	< 1.9	7.1	9.3	2
			3/23/2023	< 1.9	6.1	12	< 1.9	< 1.9	< 1.9	4.2	9.3	< 1.9
MW-22-20	Non-Residential	17 - 22 ft	12/20/2022	< 2	6.1	12	< 2	< 2	< 2	2.9	13	2.8
			3/23/2023	< 2.0	4.7	< 9.9	< 2.0	< 2.0	< 2.0	3.1	15	2.7
MW-22-21	Non-Residential	17 - 22 ft	12/20/2022	< 1.9	4.7	< 9.6	< 1.9	< 1.9	< 1.9	< 1.9	24	5.8
			3/22/2023	< 2.1	4.3	< 10	< 2.1	< 2.1	< 2.1	< 2.1	23	5.2
MW-22-22D	Non-Residential	140 - 150 ft	12/27/2022	< 2.1	< 2.1	< 10	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1
			3/23/2023	< 2.2	< 2.2	< 11	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2

Notes:
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Analyte	PFHxS-LN	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctane sulfonic acid (PFOS)	PFOS-BR	PFOS-LN	Perfluorooctanoic acid (PFOA)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Potassium perfluoro(perfluoroethyl)cyclohexanesulfonate (PFecHS-K)
Non-Residential Drinking Water Criteria	NC	4.0E+05	6.0	16	NC	NC	8.0	NC	NC	NC
Generic GSI Criteria	NC	NA	NA	12 ⁽¹⁾	NC	NC	170 ⁽¹⁾	NC	NC	NC
Groundwater Contact Criteria	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Non-Residential Not In Contact VIAP Screening Level	NC	NC	NC	NA	NC	NC	NC	NC	NC	NC
Units	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L

Sample Location	Residential Status	Sample Interval	Date Sampled	PFHxS-LN	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctane sulfonic acid (PFOS)	PFOS-BR	PFOS-LN	Perfluorooctanoic acid (PFOA)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Potassium perfluoro(perfluoroethyl)cyclohexanesulfonate (PFecHS-K)
Investigation Area: Southern Area													
MW-101	Non-Residential	7.5 - 12.5 ft	4/14/2020	--	< 0.37	< 0.58	< 0.39	--	--	< 0.43	< 0.37	< 0.26	--
			12/16/2022	2.3	< 2	< 2	< 2	< 2	< 2	3.9	< 2	< 4	< 2
			3/22/2023	2.8	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	2.1	< 2.1	< 4.1	< 2.1
DUP-01 (MW-101)	Non-Residential	7.5 - 12.5 ft	3/22/2023	3.0	< 2.0	< 2.0	3.6	< 2.0	2.0	2.5	< 2.0	< 4.1	< 2.0
MW-102	Non-Residential	8 - 13 ft	4/14/2020	--	24	< 0.57	2.6	--	--	7.8	2.1	26	--
MW-103	Non-Residential	8 - 13 ft	4/14/2020	--	5.6	< 0.59	13	--	--	7.8	< 0.37	4.7	--
			12/16/2022	6.6	5.6	< 1.9	18	7.5	10	13	< 1.9	4.7	< 1.9
			3/22/2023	6.5	3.1	< 2.0	13	6.7	5.5	9.9	2.1	< 4.0	< 2.0
MW-116	Non-Residential	8 - 13 ft	6/24/2020	--	4.1	< 1.1	< 0.76	--	--	5.6	< 0.71	< 0.51	--
MW-117	Non-Residential	7.5 - 12.5 ft	6/24/2020	--	4.4	< 0.59	< 0.4	--	--	6.1	< 0.37	4.3	--
MW-118	Non-Residential	11 - 16 ft	6/24/2020	--	2.4	< 0.58	< 0.39	--	--	5.8	< 0.36	2.3	--
DUP-02 (MW-118)	Non-Residential	11 - 16 ft	6/24/2020	--	--	--	--	--	--	6.7	--	--	--
MW-122	Non-Residential	5 - 10 ft	6/24/2020	--	11	< 1.3	< 0.85	--	--	22	< 0.79	9.9	--
MW-127	Non-Residential	8 - 13 ft	6/24/2020	--	7.8	< 1.3	18	--	--	27	< 0.81	< 0.58	--
MW-128	Non-Residential	8 - 13 ft	6/24/2020	--	24	6.6	58	--	--	40	< 0.36	19	--
			12/16/2022	4.8	13	2.1	31	13	18	35	< 1.9	11	< 1.9
			3/23/2023	4.5	8.4	2.6	35	16	19	27	< 2.1	8.7	< 2.1

Notes:
 Non-Residential (NR) Drinking Water Criteria (DWC), Groundwater Surface Water Interface (GSI), and Groundwater Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 18, 2012.
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Non-Residential Drinking Water Criteria	NC	4.0E+05	6.0	16	NC	NC	8.0	NC	NC	NC
Generic GSI Criteria	NC	NA	NA	12 ⁽¹⁾	NC	NC	170 ⁽¹⁾	NC	NC	NC
Groundwater Contact Criteria	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Non-Residential Not In Contact VIAP Screening Level	NC	NC	NC	NA	NC	NC	NC	NC	NC	NC
Units	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L

Sample Location	Residential Status	Sample Interval	Date Sampled	PFHxS-LN	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctane sulfonic acid (PFOS)	PFOS-BR	PFOS-LN	Perfluorooctanoic acid (PFOA)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Potassium perfluoro(perfluoroethyl)cyclohexanesulfonate (PFecHS-K)
Investigation Area: Southern Area (continued)													
MW-129	Non-Residential	8 - 13 ft	6/24/2020	--	33	9.8	96	--	--	80	< 0.79	26	--
			12/16/2022	5.8	56	2.4	53	19	33	61	< 1.9	82	< 1.9
			3/23/2023	5.9	25	3.6	54	18	36	57	< 1.9	29	< 1.9
MW-131	Non-Residential	5 - 10 ft	6/24/2020	--	14	5.4	68	--	--	33	< 0.78	11	--
MW-132	Non-Residential	10 - 15 ft	8/14/2020	--	16	< 1.4	27	--	--	44	< 0.86	16	--
MW-133	Non-Residential	10 - 15 ft	8/14/2020	--	21	< 1.4	74	--	--	43	< 0.87	19	--
MW-22-07	Non-Residential	14 - 19 ft	12/14/2022	3.1	2.7	< 2	4.5	2	2.4	6.7	< 2	< 3.9	< 2
			3/22/2023	2.5	2.7	< 2.0	< 2.0	< 2.0	< 2.0	5.5	< 2.0	< 4.0	< 2.0
DUP-03W (MW-22-07)	Non-Residential	14 - 19 ft	12/14/2022	3	2.6	< 2	4.6	< 2	2.9	5.8	< 2	< 4	< 2
MW-22-08	Non-Residential	15 - 20 ft	12/13/2022	7.6	4.8	< 2	9.3	3.3	5.8	7	< 2	4.3	< 2
			3/22/2023	6.1	3.4	< 2.0	5.6	3.0	2.9	4.8	< 2.0	4.1	< 2.0
MW-22-09	Non-Residential	17 - 22 ft	12/13/2022	7.9	2.1	< 2	< 2	< 2	< 2	7.6	< 2	< 4	< 2
			3/22/2023	6.4	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	4.2	< 1.9	< 3.8	< 1.9
DUP-01W (MW-22-09)	Non-Residential	17 - 22 ft	12/13/2022	8.7	2.3	< 2	2.2	< 2	< 2	5.2	< 2	< 4	< 2
MW-22-10	Non-Residential	15 - 20 ft	12/14/2022	2.4	5.9	< 1.9	4.1	2.5	< 1.9	9.8	< 1.9	6.1	< 1.9
			3/22/2023	< 2.0	3.5	< 2.0	< 2.0	< 2.0	< 2.0	4.5	< 2.0	< 4.0	< 2.0
MW-22-11	Non-Residential	12.5 - 17.5 ft	12/15/2022	5	< 2	< 2	< 2	< 2	< 2	6.8	< 2	< 4	< 2
			3/22/2023	5.0	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	7.0	< 2.1	< 4.1	< 2.1
MW-22-12	Non-Residential	15 - 20 ft	12/16/2022	3.7	< 2	< 2	< 2	< 2	< 2	4.9	< 2	< 3.9	< 2
			3/22/2023	3.4	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	3.8	< 1.9	< 3.8	< 1.9
MW-22-13	Non-Residential	13 - 18 ft	12/15/2022	4.3	7.1	< 2	18	7.2	10	19	< 2	7.6	< 2
			3/22/2023	6.3	14	3.1	23	11	12	30	< 2.0	15	< 2.0
DUP-02W (MW-22-13)	Non-Residential	13 - 18 ft	12/15/2022	3.9	7.6	< 2	16	6.2	9.1	21	< 2	7.6	< 2
			3/22/2023	6.9	14	2.7	22	10	12	28	< 2.0	14	< 2.0
MW-22-14	Non-Residential	13 - 18 ft	12/15/2022	2.4	7.3	< 2.1	3	< 2.1	< 2.1	10	< 2.1	7.2	< 2.1
			3/23/2023	2.3	5.3	< 2.0	3.2	< 2.0	< 2.0	11	< 2.0	4.5	< 2.0
MW-22-15	Non-Residential	14 - 19 ft	12/15/2022	3.5	7.5	< 2	4.7	2	2.5	18	< 2	7.3	< 2
			3/23/2023	4.3	6.0	< 2.0	6.0	3.4	2.3	22	< 2.0	5.8	< 2.0

Notes:
 Non-Residential (NR) Drinking Water Criteria (DWC), Groundwater Surface Water Interface (GSI), and Groundwater Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 18, 2012.
 Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).
 The depth to first encountered groundwater is 10 feet below ground surface or less; therefore, the shallow groundwater residential VIAP screening levels apply.
 The depth to first encountered groundwater is greater than 5 feet below ground surface; therefore, the groundwater not in contact nonresidential VIAP screening levels apply.
 Only analytes with one or more detection are reported.
 ng/L = nanogram per liter
 NC = No Criterion; -- = Parameter Not Analyzed
Bold font denotes concentrations detected above laboratory reporting limits.
 Denotes concentrations above one or more criteria.

1) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).

Table 5
 Summary of Detected Per- and Polyfluoroalkyl Substances in Groundwater
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	PFHxS-LN	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctane sulfonic acid (PFOS)	PFOS-BR	PFOS-LN	Perfluorooctanoic acid (PFOA)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Potassium perfluoro(perfluoroethyl)cyclohexanesulfonate (PFecHS-K)
Non-Residential Drinking Water Criteria	NC	4.0E+05	6.0	16	NC	NC	8.0	NC	NC	NC
Generic GSI Criteria	NC	NA	NA	12 ⁽¹⁾	NC	NC	170 ⁽¹⁾	NC	NC	NC
Groundwater Contact Criteria	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
Non-Residential Not In Contact VIAP Screening Level	NC	NC	NC	NA	NC	NC	NC	NC	NC	NC
Units	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L	ng/L

Sample Location	Residential Status	Sample Interval	Date Sampled	PFHxS-LN	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctane sulfonic acid (PFOS)	PFOS-BR	PFOS-LN	Perfluorooctanoic acid (PFOA)	Perfluoropentane sulfonic acid (PFPeS)	Perfluoropentanoic acid (PFPeA)	Potassium perfluoro(perfluoroethyl)cyclohexanesulfonate (PFecHS-K)
Investigation Area: Southern Area (continued)													
MW-22-16	Non-Residential	15 - 20 ft	12/20/2022	2.3	2.1	< 2	< 2	< 2	< 2	6.8	< 2	< 3.9	< 2
			3/23/2023	2.2	4.2	< 1.9	< 1.9	< 1.9	< 1.9	8.2	< 1.9	6.0	< 1.9
DUP-01 (MW-22-16)	Non-Residential	15 - 20 ft	3/23/2023	< 2.0	4.3	< 2.0	< 2.0	< 2.0	< 2.0	7.3	< 2.0	6.2	< 2.0
			12/20/2022	1.9	5.8	< 1.9	< 1.9	< 1.9	< 1.9	8.6	< 1.9	6.5	< 1.9
MW-22-17	Non-Residential	14 - 19 ft	3/23/2023	< 2.0	7.4	< 2.0	< 2.0	< 2.0	< 2.0	7.5	< 2.0	5.3	< 2.0
			12/20/2022	4.8	9.2	< 2	11	6.4	4.7	19	< 2	7.9	< 2
MW-22-18	Non-Residential	16 - 21 ft	3/23/2023	3.4	5.8	< 2.0	10	5.7	4.7	14	< 2.0	6.3	< 2.0
			12/20/2022	7.3	8.1	2.2	19	8.5	9.9	19	< 1.9	6.5	< 1.9
MW-22-19	Non-Residential	17 - 22 ft	3/23/2023	7.5	6.2	2.8	25	12	13	19	< 1.9	6.4	< 1.9
			12/20/2022	10	4	< 2	4.5	2.8	< 2	6	< 2	4	< 2
MW-22-20	Non-Residential	17 - 22 ft	3/23/2023	12	3.5	< 2.0	3.2	< 2.0	< 2.0	6.6	< 2.0	4.3	< 2.0
			12/20/2022	18	< 1.9	< 1.9	< 1.9	< 1.9	< 1.9	4	< 1.9	< 3.8	< 1.9
MW-22-21	Non-Residential	17 - 22 ft	3/22/2023	18	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	3.8	< 2.1	< 4.1	< 2.1
			12/27/2022	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	< 2.1	< 4.2	< 2.1
MW-22-22D	Non-Residential	140 - 150 ft	3/23/2023	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 2.2	< 4.4	< 2.2

Notes:
 Non-Residential (NR) Drinking Water Criteria (DWC), Groundwater Surface Water Interface (GSI), and Groundwater Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 18, 2012.
 Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).
 The depth to first encountered groundwater is 10 feet below ground surface or less; therefore, the shallow groundwater residential VIAP screening levels apply.
 The depth to first encountered groundwater is greater than 5 feet below ground surface; therefore, the groundwater not in contact nonresidential VIAP screening levels apply.
 Only analytes with one or more detection are reported.
 ng/L = nanogram per liter
 NC = No Criterion; -- = Parameter Not Analyzed
Bold font denotes concentrations detected above laboratory reporting limits.

Denotes concentrations above one or more criteria.

1) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).

Table 6
 Summary of Detected Metals in Soil
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt
Non-Residential DWP Criteria	6.9E+06 ⁽⁴⁾	4,300	5,800 ⁽⁴⁾	1.3E+06	51,000	10,000	6,000	NC	30,000 ⁽¹⁾	6,800 ⁽⁴⁾
Generic GSI Protection Criteria	NA	94,000	5,800 ⁽⁴⁾	4.4E+05 ⁽²⁾	1.6E+05 ⁽²⁾	1.4E+05 ⁽³⁾	3,600 ^(2,3)	NC	3,300 ⁽¹⁾	6,800 ⁽⁴⁾
Non-Residential Groundwater Contact Protection Criteria	1.0E+09	4.9E+07	2.0E+06	1.0E+09	1.0E+09	1.0E+09	2.3E+08	NC	1.4E+08	4.8E+07
Non-Residential VIAP Screening Level	NA	NA	NA	NA	NA	NA	NA	NC	NA	NA
Non-Residential Direct Contact Criteria	3.7E+08	6.7E+05	37,000	1.3E+08	1.6E+06	3.5E+08	2.1E+06	NC	9.2E+06 ⁽¹⁾	9.0E+06
Statewide Default Background Levels	6.9E+06 ⁽⁴⁾		5,800 ⁽⁴⁾	75,000	NC	NC	1,200	NC	18,000 ⁽⁵⁾	6,800 ⁽⁴⁾
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt
Investigation Area: Southern Area													
MW-101	Non-Residential	2 - 3 ft	3/23/2020	--	--	< 2,110	13,300	--	--	< 210	--	--	--
MW-102	Non-Residential	2 - 3 ft	3/23/2020	--	--	2,190	16,800	--	--	< 210	--	--	--
MW-103	Non-Residential	2 - 3 ft	3/23/2020	--	--	< 2,470	20,800	--	--	< 267	--	--	--
MW-116	Non-Residential	2 - 3 ft	3/30/2020	--	--	< 2,120	13,500	--	--	< 208	--	--	--
		7 - 8 ft	3/30/2020	--	--	< 2,170	7,980	--	--	< 217	--	--	--
MW-117	Non-Residential	2 - 3 ft	3/30/2020	--	--	< 2,130	8,430	--	--	< 220	--	--	--
		6 - 7 ft	3/30/2020	--	--	< 2,190	6,150	--	--	< 212	--	--	--
MW-118	Non-Residential	2 - 3 ft	3/30/2020	--	--	17,000	7,340	--	--	< 200	--	--	--
		10 - 11 ft	3/30/2020	--	--	< 1,980	6,390	--	--	< 197	--	--	--
MW-122	Non-Residential	4 - 5 ft	6/15/2020	4,330,000	< 1,010	2,510	48,100	< 506	< 8,090	< 218	8,920,000	--	1,400
MW-123	Non-Residential	4 - 5 ft	6/15/2020	2,870,000	< 929	2,530	12,700	< 464	< 7,430	< 203	703,000	--	1,720
MW-124	Non-Residential	4 - 5 ft	6/15/2020	3,620,000	< 957	< 1,910	8,540	< 478	< 7,650	< 203	628,000	--	1,350
MW-125	Non-Residential	4 - 5 ft	6/16/2020	5,130,000	< 1,030	2,940	33,400	< 517	< 8,260	290	28,700,000	--	2,270
MW-126	Non-Residential	4 - 5 ft	6/15/2020	4,740,000	< 910	3,710	12,300	< 455	< 7,280	< 208	3,580,000	--	1,290
		7.5 - 8.5 ft	6/15/2020	2,850,000	< 1,020	< 2,040	8,970	< 511	< 8,180	< 211	1,790,000	--	1,710
MW-127	Non-Residential	6 - 7 ft	6/15/2020	2,480,000	< 1,040	< 2,080	7,000	< 519	< 8,310	< 224	842,000	--	1,190
		10 - 11 ft	6/15/2020	1,630,000	< 1,060	< 2,120	4,410	< 529	< 8,470	< 212	28,100,000	--	1,150
MW-128	Non-Residential	4 - 5 ft	6/15/2020	4,160,000	< 1,080	2,770	21,400	< 539	< 8,620	< 220	62,400,000	--	1,520
		8 - 9 ft	6/15/2020	2,900,000	< 961	< 1,920	7,670	< 480	< 7,690	< 216	663,000	--	1,640
MW-129	Non-Residential	3 - 4 ft	6/15/2020	4,190,000	< 926	2,450	23,100	< 463	< 7,410	316	24,200,000	--	1,610
MW-130	Non-Residential	4 - 5 ft	6/15/2020	4,020,000	< 985	< 1,970	9,000	< 492	< 7,880	< 210	927,000	--	1,260
MW-131	Non-Residential	2 - 3 ft	6/15/2020	5,290,000	< 1,140	< 2,290	14,300	< 572	< 9,160	< 250	2,600,000	--	2,120
MW-132	Non-Residential	5.5 - 6.5 ft	8/12/2020	5,780,000	< 1,000	5,010	75,400	< 502	11,500	412	61,200,000	--	< 2,780
MW-133	Non-Residential	3 - 4 ft	8/12/2020	6,450,000	< 985	4,800	104,000	< 574	12,100	467	56,200,000	--	< 2,710
		10 - 11 ft	8/12/2020	3,720,000	< 1,100	2,410	38,400	< 551	< 8,820	372	29,700,000	--	1,490

Notes:

Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, NR Soil Direct Contact Criteria, NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.

Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).

Only analytes with one or more detection are reported.

ug/kg = microgram per kilogram

NA = Not Applicable; NC = No Criterion; NLV = Not Likely to Volatilize; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed

Bold font denotes concentrations detected above laboratory reporting limits.

Green background Denotes concentrations above one or more criteria.

1) Criterion for chromium (VI).

2) Criterion dependent on hardness (Footnote (G), Michigan Part 201 Criteria Tables); Criterion shown is based on an estimated hardness of 150 mg CaCO₃/L for the southern Lower Peninsula per the EGLE RRD GSI Pathway Compliance Options, April 2018.

3) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).

4) Background as defined in R299.5701(b) may be substituted if higher than the calculated clean up criterion (Footnote (B), Michigan Part 201 Criteria Tables).

5) Value for total chromium.

Table 6
 Summary of Detected Metals in Soil
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt
Non-Residential DWP Criteria	6.9E+06 ⁽⁴⁾	4,300	5,800 ⁽⁴⁾	1.3E+06	51,000	10,000	6,000	NC	30,000 ⁽¹⁾	6,800 ⁽⁴⁾
Generic GSI Protection Criteria	NA	94,000	5,800 ⁽⁴⁾	4.4E+05 ⁽²⁾	1.6E+05 ⁽²⁾	1.4E+05 ⁽³⁾	3,600 ^(2,3)	NC	3,300 ⁽¹⁾	6,800 ⁽⁴⁾
Non-Residential Groundwater Contact Protection Criteria	1.0E+09	4.9E+07	2.0E+06	1.0E+09	1.0E+09	1.0E+09	2.3E+08	NC	1.4E+08	4.8E+07
Non-Residential VIAP Screening Level	NA	NA	NA	NA	NA	NA	NA	NC	NA	NA
Non-Residential Direct Contact Criteria	3.7E+08	6.7E+05	37,000	1.3E+08	1.6E+06	3.5E+08	2.1E+06	NC	9.2E+06 ⁽¹⁾	9.0E+06
Statewide Default Background Levels	6.9E+06 ⁽⁴⁾		5,800 ⁽⁴⁾	75,000	NC	NC	1,200	NC	18,000 ⁽⁵⁾	6,800 ⁽⁴⁾
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt
Investigation Area: Southern Area (continued)													
AOC10-TP01-B	Non-Residential	10 ft	12/12/2022	970,000	< 500	560	7,220	< 200	< 2,000	< 200	1,590,000	1,790	790
AOC10-TP01-E	Non-Residential	5 ft	12/12/2022	1,520,000	< 500	590	8,640	< 200	< 2,000	< 200	982,000	2,260	710
AOC10-TP01-N	Non-Residential	5 ft	12/12/2022	1,900,000	< 500	1,170	9,550	< 200	< 2,000	< 200	5,180,000	8,730	1,020
AOC10-TP01-S	Non-Residential	5 ft	12/12/2022	1,930,000	< 500	880	17,500	< 200	< 2,000	210	7,420,000	5,030	890
AOC10-TP01-W	Non-Residential	5 ft	12/12/2022	1,410,000	< 500	650	6,560	< 200	< 2,000	< 200	863,000	2,580	660
AOC10-TP02-B	Non-Residential	10 ft	12/12/2022	1,330,000	< 500	390	20,900	< 200	< 2,000	< 200	733,000	11,100	730
AOC10-TP02-E	Non-Residential	5 ft	12/12/2022	964,000	< 500	580	8,620	< 200	< 2,000	< 200	16,900,000	1,960	630
AOC10-TP02-N	Non-Residential	5 ft	12/12/2022	1,050,000	< 500	420	8,280	< 200	< 2,000	< 200	8,890,000	1,880	600
AOC10-TP02-S	Non-Residential	5 ft	12/12/2022	1,110,000	< 500	710	11,600	< 200	< 2,000	< 200	15,100,000	2,180	760
AOC10-TP02-W	Non-Residential	5 ft	12/12/2022	1,700,000	< 500	460	9,870	< 200	< 2,000	< 200	2,950,000	2,540	720
AOC11-TP01-B	Non-Residential	10 ft	12/13/2022	2,290,000	< 500	970	20,100	< 200	< 2,000	< 200	8,010,000	3,910	1,210
AOC11-TP01-E	Non-Residential	5 ft	12/13/2022	2,180,000	< 500	820	14,900	< 200	< 2,000	< 200	9,390,000	2,670	740
AOC11-TP01-N	Non-Residential	5 ft	12/13/2022	2,310,000	< 500	1,290	17,400	< 200	< 2,000	300	7,900,000	2,950	640
AOC11-TP01-S	Non-Residential	5 ft	12/13/2022	2,520,000	< 500	610	14,700	< 200	< 2,000	< 200	3,490,000	2,280	720
DUP-03S (AOC11-TP01-S)	Non-Residential	5 ft	12/13/2022	2,050,000	< 500	680	14,400	< 200	< 2,000	< 200	6,170,000	1,900	500
AOC11-TP01-W	Non-Residential	5 ft	12/13/2022	1,840,000	< 500	670	10,900	< 200	< 2,000	< 200	11,400,000	2,250	730

Notes:
 Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, NR Soil Direct Contact Criteria, NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.
 Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).
 Only analytes with one or more detection are reported.
 ug/kg = microgram per kilogram
 NA = Not Applicable; NC = No Criterion; NLV = Not Likely to Volatilize; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed
Bold font denotes concentrations detected above laboratory reporting limits.
 Denotes concentrations above one or more criteria.
 1) Criterion for chromium (VI).
 2) Criterion dependent on hardness (Footnote {G}, Michigan Part 201 Criteria Tables); Criterion shown is based on an estimated hardness of 150 mg CaCO₃/L for the southern Lower Peninsula per the EGLE RRD *GSI Pathway Compliance Options*, April 2018.
 3) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote {X}, Michigan Part 201 Criteria Tables).
 4) Background as defined in R299.5701(b) may be substituted if higher than the calculated clean up criterion (Footnote {B}, Michigan Part 201 Criteria Tables).
 5) Value for total chromium.

Table 6
 Summary of Detected Metals in Soil
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt
Non-Residential DWP Criteria	6.9E+06 ⁽⁴⁾	4,300	5,800 ⁽⁴⁾	1.3E+06	51,000	10,000	6,000	NC	30,000 ⁽¹⁾	6,800 ⁽⁴⁾
Generic GSI Protection Criteria	NA	94,000	5,800 ⁽⁴⁾	4.4E+05 ⁽²⁾	1.6E+05 ⁽²⁾	1.4E+05 ⁽³⁾	3,600 ^(2,3)	NC	3,300 ⁽¹⁾	6,800 ⁽⁴⁾
Non-Residential Groundwater Contact Protection Criteria	1.0E+09	4.9E+07	2.0E+06	1.0E+09	1.0E+09	1.0E+09	2.3E+08	NC	1.4E+08	4.8E+07
Non-Residential VIAP Screening Level	NA	NA	NA	NA	NA	NA	NA	NC	NA	NA
Non-Residential Direct Contact Criteria	3.7E+08	6.7E+05	37,000	1.3E+08	1.6E+06	3.5E+08	2.1E+06	NC	9.2E+06 ⁽¹⁾	9.0E+06
Statewide Default Background Levels	6.9E+06 ⁽⁴⁾		5,800 ⁽⁴⁾	75,000	NC	NC	1,200	NC	18,000 ⁽⁵⁾	6,800 ⁽⁴⁾
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt
Investigation Area: Southern Area (continued)													
AOC11-TP02-B	Non-Residential	10 ft	12/13/2022	992,000	< 500	510	8,930	< 200	< 2,000	< 200	12,400,000	1,470	580
AOC11-TP02-E	Non-Residential	5 ft	12/13/2022	1,100,000	< 500	560	13,100	< 200	< 2,000	< 200	13,300,000	2,170	540
AOC11-TP02-N	Non-Residential	5 ft	12/13/2022	1,050,000	< 500	530	9,950	< 200	< 2,000	< 200	9,870,000	1,510	540
DUP-04S (AOC11-TP02-N)	Non-Residential	5 ft	12/13/2022	1,180,000	< 500	660	11,300	< 200	< 2,000	< 200	18,000,000	2,100	760
AOC11-TP02-S	Non-Residential	5 ft	12/13/2022	1,120,000	< 500	550	10,400	< 200	< 2,000	< 200	8,810,000	1,540	< 500
AOC11-TP02-W	Non-Residential	5 ft	12/13/2022	1,930,000	< 500	710	16,300	< 200	< 2,000	< 200	12,200,000	3,720	700
AOC11-TP03-B	Non-Residential	10 ft	12/13/2022	1,490,000	< 500	730	11,400	< 200	< 2,000	< 200	9,990,000	2,340	590
AOC11-TP03-E	Non-Residential	5 ft	12/13/2022	1,540,000	< 500	570	12,100	< 200	< 2,000	< 200	10,500,000	2,330	800
AOC11-TP03-N	Non-Residential	5 ft	12/13/2022	1,290,000	< 500	590	11,100	< 200	< 2,000	< 200	12,900,000	2,330	660
DUP-05S (AOC11-TP03-N)	Non-Residential	5 ft	12/13/2022	2,100,000	< 500	420	12,500	< 200	< 2,000	< 200	1,180,000	1,960	580
AOC11-TP03-S	Non-Residential	5 ft	12/13/2022	807,000	< 500	710	8,230	< 200	< 2,000	< 200	33,700,000	1,440	800
AOC11-TP03-W	Non-Residential	5 ft	12/13/2022	829,000	< 500	510	8,440	< 200	< 2,000	< 200	14,700,000	1,560	580
AOC11-TP04-B	Non-Residential	10 ft	12/13/2022	1,220,000	< 500	530	9,000	< 200	< 2,000	< 200	6,240,000	1,550	570
AOC11-TP04-E	Non-Residential	5 ft	12/13/2022	1,540,000	< 500	700	15,900	< 200	< 2,000	< 200	8,930,000	2,190	690
AOC11-TP04-N	Non-Residential	5 ft	12/13/2022	1,540,000	< 500	760	12,600	< 200	< 2,000	< 200	8,950,000	2,190	590
DUP-06S (AOC11-TP04-N)	Non-Residential	5 ft	12/13/2022	1,680,000	< 500	810	14,400	< 200	< 2,000	< 200	14,600,000	2,800	720
AOC11-TP04-S	Non-Residential	5 ft	12/13/2022	1,420,000	< 500	690	10,800	< 200	< 2,000	< 200	11,300,000	2,040	630
AOC11-TP04-W	Non-Residential	5 ft	12/13/2022	1,970,000	< 500	770	16,000	< 200	< 2,000	< 200	15,100,000	2,520	720

Notes:
 Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, NR Soil Direct Contact Criteria, NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.
 Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).
 Only analytes with one or more detection are reported.
 ug/kg = microgram per kilogram
 NA = Not Applicable; NC = No Criterion; NLV = Not Likely to Volatilize; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed
Bold font denotes concentrations detected above laboratory reporting limits.
 Denotes concentrations above one or more criteria.

1) Criterion for chromium (VI).
 2) Criterion dependent on hardness (Footnote {G}, Michigan Part 201 Criteria Tables); Criterion shown is based on an estimated hardness of 150 mg CaCO₃/L for the southern Lower Peninsula per the EGLE RRD *GSI Pathway Compliance Options*, April 2018.
 3) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote {X}, Michigan Part 201 Criteria Tables).
 4) Background as defined in R299.5701(b) may be substituted if higher than the calculated clean up criterion (Footnote {B}, Michigan Part 201 Criteria Tables).
 5) Value for total chromium.

Table 6
 Summary of Detected Metals in Soil
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt
Non-Residential DWP Criteria	6.9E+06 ⁽⁴⁾	4,300	5,800 ⁽⁴⁾	1.3E+06	51,000	10,000	6,000	NC	30,000 ⁽¹⁾	6,800 ⁽⁴⁾
Generic GSI Protection Criteria	NA	94,000	5,800 ⁽⁴⁾	4.4E+05 ⁽²⁾	1.6E+05 ⁽²⁾	1.4E+05 ⁽³⁾	3,600 ^(2,3)	NC	3,300 ⁽¹⁾	6,800 ⁽⁴⁾
Non-Residential Groundwater Contact Protection Criteria	1.0E+09	4.9E+07	2.0E+06	1.0E+09	1.0E+09	1.0E+09	2.3E+08	NC	1.4E+08	4.8E+07
Non-Residential VIAP Screening Level	NA	NA	NA	NA	NA	NA	NA	NC	NA	NA
Non-Residential Direct Contact Criteria	3.7E+08	6.7E+05	37,000	1.3E+08	1.6E+06	3.5E+08	2.1E+06	NC	9.2E+06 ⁽¹⁾	9.0E+06
Statewide Default Background Levels	6.9E+06 ⁽⁴⁾		5,800 ⁽⁴⁾	75,000	NC	NC	1,200	NC	18,000 ⁽⁵⁾	6,800 ⁽⁴⁾
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt
Investigation Area: Southern Area (continued)													
AOC12-TP01-B	Non-Residential	10 ft	12/15/2022	4,880,000	< 500	3,580	102,000	240	15,600	640	76,300,000	10,300	2,020
AOC12-TP01-E	Non-Residential	5 ft	12/15/2022	6,150,000	< 500	3,770	117,000	250	5,860	550	70,500,000	9,030	4,200
DUP-11S (AOC12-TP01-E)	Non-Residential	5 ft	12/15/2022	2,680,000	< 500	3,380	45,200	< 200	3,020	380	37,500,000	5,630	2,120
AOC12-TP01-N	Non-Residential	5 ft	12/15/2022	10,500,000	< 500	5,010	152,000	350	11,600	910	72,900,000	15,000	2,370
AOC12-TP01-S	Non-Residential	5 ft	12/15/2022	4,010,000	< 500	2,600	68,100	< 200	4,780	510	65,700,000	6,620	1,690
AOC12-TP01-W	Non-Residential	5 ft	12/15/2022	7,990,000	< 500	3,110	115,000	290	8,200	500	51,200,000	9,680	1,950
AOC12-TP02-B	Non-Residential	10 ft	12/15/2022	1,310,000	< 500	590	5,430	< 200	< 2,000	< 200	642,000	3,230	960
AOC12-TP02-E	Non-Residential	5 ft	12/15/2022	1,650,000	< 500	660	8,110	< 200	< 2,000	< 200	543,000	3,980	2,000
DUP-12S (AOC12-TP02-E)	Non-Residential	5 ft	12/15/2022	1,470,000	< 500	970	8,220	< 200	< 2,000	< 200	442,000	3,780	2,020
AOC12-TP02-N	Non-Residential	5 ft	12/15/2022	3,310,000	< 500	1,080	40,200	< 200	< 2,000	< 200	873,000	6,610	6,060
AOC12-TP02-S	Non-Residential	5 ft	12/15/2022	1,980,000	< 500	1,120	9,760	< 200	< 2,000	< 200	634,000	4,580	1,450
AOC12-TP02-W	Non-Residential	5 ft	12/15/2022	2,620,000	< 500	510	12,400	< 200	< 2,000	< 200	656,000	5,720	1,220
AOC12-TP03-B	Non-Residential	10 ft	12/15/2022	2,510,000	< 500	1,140	16,200	< 200	< 2,000	< 200	5,110,000	6,140	1,090
AOC12-TP03-E	Non-Residential	5 ft	12/15/2022	1,240,000	< 500	900	5,930	< 200	< 2,000	< 200	19,200,000	2,610	990
AOC12-TP03-N	Non-Residential	5 ft	12/15/2022	1,250,000	< 500	820	5,820	< 200	< 2,000	< 200	23,300,000	3,080	1,080
AOC12-TP03-S	Non-Residential	5 ft	12/15/2022	1,570,000	< 500	990	7,410	< 200	< 2,000	< 200	20,400,000	3,250	1,230
AOC12-TP03-W	Non-Residential	5 ft	12/15/2022	1,940,000	< 500	1,000	9,890	< 200	< 2,000	< 200	15,300,000	3,670	1,300

Notes:

Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, NR Soil Direct Contact Criteria, NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.

Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).

Only analytes with one or more detection are reported.

ug/kg = microgram per kilogram

NA = Not Applicable; NC = No Criterion; NLV = Not Likely to Volatilize; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed

Bold font denotes concentrations detected above laboratory reporting limits.

Green background denotes concentrations above one or more criteria.

1) Criterion for chromium (VI).

2) Criterion dependent on hardness (Footnote {G}, Michigan Part 201 Criteria Tables); Criterion shown is based on an estimated hardness of 150 mg CaCO₃/L for the southern Lower Peninsula per the EGLE RRD *GSI Pathway Compliance Options*, April 2018.

3) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote {X}, Michigan Part 201 Criteria Tables).

4) Background as defined in R299.5701(b) may be substituted if higher than the calculated clean up criterion (Footnote {B}, Michigan Part 201 Criteria Tables).

5) Value for total chromium.

Table 6
 Summary of Detected Metals in Soil
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt
Non-Residential DWP Criteria	6.9E+06 ⁽⁴⁾	4,300	5,800 ⁽⁴⁾	1.3E+06	51,000	10,000	6,000	NC	30,000 ⁽¹⁾	6,800 ⁽⁴⁾
Generic GSI Protection Criteria	NA	94,000	5,800 ⁽⁴⁾	4.4E+05 ⁽²⁾	1.6E+05 ⁽²⁾	1.4E+05 ⁽³⁾	3,600 ^(2,3)	NC	3,300 ⁽¹⁾	6,800 ⁽⁴⁾
Non-Residential Groundwater Contact Protection Criteria	1.0E+09	4.9E+07	2.0E+06	1.0E+09	1.0E+09	1.0E+09	2.3E+08	NC	1.4E+08	4.8E+07
Non-Residential VIAP Screening Level	NA	NA	NA	NA	NA	NA	NA	NC	NA	NA
Non-Residential Direct Contact Criteria	3.7E+08	6.7E+05	37,000	1.3E+08	1.6E+06	3.5E+08	2.1E+06	NC	9.2E+06 ⁽¹⁾	9.0E+06
Statewide Default Background Levels	6.9E+06 ⁽⁴⁾		5,800 ⁽⁴⁾	75,000	NC	NC	1,200	NC	18,000 ⁽⁵⁾	6,800 ⁽⁴⁾
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt
Investigation Area: Southern Area (continued)													
AOC3-TP01-B	Non-Residential	10 ft	12/14/2022	801,000	< 500	240	5,650	< 200	< 2,000	< 200	474,000	6,440	720
AOC3-TP01-E	Non-Residential	5 ft	12/14/2022	1,150,000	< 500	750	10,400	< 200	< 2,000	< 200	256,000	1,910	720
AOC3-TP01-N	Non-Residential	5 ft	12/14/2022	1,280,000	< 500	410	8,470	< 200	< 2,000	< 200	259,000	2,070	500
AOC3-TP01-S	Non-Residential	5 ft	12/14/2022	958,000	< 500	390	7,270	< 200	< 2,000	< 200	225,000	1,480	< 500
AOC3-TP01-W	Non-Residential	5 ft	12/14/2022	962,000	< 500	420	6,450	< 200	< 2,000	< 200	210,000	1,290	680
DUP-07S (AOC3-TP01-W)	Non-Residential	5 ft	12/14/2022	1,030,000	< 500	270	5,760	< 200	< 2,000	< 200	267,000	1,480	640
AOC3-TP02-B	Non-Residential	10 ft	12/14/2022	1,070,000	< 500	240	4,030	< 200	< 2,000	< 200	11,000,000	2,070	1,060
AOC3-TP02-E	Non-Residential	5 ft	12/14/2022	982,000	< 500	690	7,260	< 200	< 2,000	< 200	366,000	3,060	2,060
AOC3-TP02-N	Non-Residential	5 ft	12/14/2022	1,370,000	< 500	660	11,700	< 200	< 2,000	< 200	301,000	2,810	1,180
DUP-08S (AOC3-TP02-N)	Non-Residential	5 ft	12/14/2022	2,350,000	< 500	960	13,300	< 200	< 2,000	< 200	338,000	5,810	2,110
AOC3-TP02-S	Non-Residential	5 ft	12/14/2022	1,400,000	< 500	900	15,100	< 200	< 2,000	< 200	248,000	3,250	2,790
AOC3-TP02-W	Non-Residential	5 ft	12/14/2022	1,100,000	< 500	640	8,760	< 200	< 2,000	< 200	404,000	3,110	2,850
AOC3-TP03-B	Non-Residential	10 ft	12/14/2022	1,340,000	< 500	450	4,880	< 200	< 2,000	< 200	2,020,000	3,500	1,470
AOC3-TP03-E	Non-Residential	5 ft	12/14/2022	1,790,000	< 500	270	15,200	< 200	< 2,000	< 200	359,000	4,030	980
AOC3-TP03-N	Non-Residential	5 ft	12/14/2022	1,610,000	< 500	530	10,700	< 200	< 2,000	< 200	259,000	4,730	750
DUP-09S (AOC3-TP03-N)	Non-Residential	5 ft	12/14/2022	2,240,000	< 500	1,160	11,400	< 200	< 2,000	< 200	308,000	8,080	1,260
AOC3-TP03-S	Non-Residential	5 ft	12/14/2022	2,000,000	< 500	240	17,600	< 200	< 2,000	< 200	301,000	3,870	800
AOC3-TP03-W	Non-Residential	5 ft	12/14/2022	1,640,000	< 500	270	15,700	< 200	< 2,000	< 200	279,000	3,340	710
AOC3-TP04-B	Non-Residential	10 ft	12/14/2022	787,000	< 500	390	3,870	< 200	< 2,000	< 200	20,700,000	1,920	840
AOC3-TP04-E	Non-Residential	5 ft	12/14/2022	1,370,000	< 500	1,310	10,400	< 200	< 2,000	< 200	296,000	4,010	860
AOC3-TP04-N	Non-Residential	5 ft	12/14/2022	1,820,000	< 500	660	10,900	< 200	< 2,000	< 200	379,000	4,610	1,190
AOC3-TP04-S	Non-Residential	5 ft	12/14/2022	3,270,000	< 500	1,540	11,400	< 200	< 2,000	< 200	272,000	5,400	5,750
AOC3-TP04-W	Non-Residential	5 ft	12/14/2022	3,230,000	< 500	970	12,700	< 200	< 2,000	< 200	313,000	5,310	1,500
DUP-10S (AOC3-TP04-W)	Non-Residential	5 ft	12/14/2022	4,380,000	< 500	910	11,000	< 200	< 2,000	200	422,000	4,750	2,860

Notes:

Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, NR Soil Direct Contact Criteria, NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.

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Bold font denotes concentrations detected above laboratory reporting limits.

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1) Criterion for chromium (VI).

2) Criterion dependent on hardness (Footnote {G}, Michigan Part 201 Criteria Tables); Criterion shown is based on an estimated hardness of 150 mg CaCO₃/L for the southern Lower Peninsula per the EGLE RRD *GSI Pathway Compliance Options*, April 2018.

3) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote {X}, Michigan Part 201 Criteria Tables).

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5) Value for total chromium.

Table 6
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 Ferndale, MI

Analyte	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt
Non-Residential DWP Criteria	6.9E+06 ⁽⁴⁾	4,300	5,800 ⁽⁴⁾	1.3E+06	51,000	10,000	6,000	NC	30,000 ⁽¹⁾	6,800 ⁽⁴⁾
Generic GSI Protection Criteria	NA	94,000	5,800 ⁽⁴⁾	4.4E+05 ⁽²⁾	1.6E+05 ⁽²⁾	1.4E+05 ⁽³⁾	3,600 ^(2,3)	NC	3,300 ⁽¹⁾	6,800 ⁽⁴⁾
Non-Residential Groundwater Contact Protection Criteria	1.0E+09	4.9E+07	2.0E+06	1.0E+09	1.0E+09	1.0E+09	2.3E+08	NC	1.4E+08	4.8E+07
Non-Residential VIAP Screening Level	NA	NA	NA	NA	NA	NA	NA	NC	NA	NA
Non-Residential Direct Contact Criteria	3.7E+08	6.7E+05	37,000	1.3E+08	1.6E+06	3.5E+08	2.1E+06	NC	9.2E+06 ⁽¹⁾	9.0E+06
Statewide Default Background Levels	6.9E+06 ⁽⁴⁾		5,800 ⁽⁴⁾	75,000	NC	NC	1,200	NC	18,000 ⁽⁵⁾	6,800 ⁽⁴⁾
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	Aluminum	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Calcium	Chromium	Cobalt
Investigation Area: Southern Area (continued)													
MW-22-07	Non-Residential	2 - 4 ft	12/13/2022	2,480,000	< 500	1,490	24,800	< 200	2,400	400	32,900,000	5,450	1,030
		8 - 10 ft	12/13/2022	1,270,000	< 500	470	7,750	< 200	< 2,000	< 200	10,300,000	1,180	< 500
MW-22-08	Non-Residential	2 - 3 ft	12/12/2022	1,880,000	< 500	1,080	26,900	< 200	< 2,000	350	20,900,000	3,740	900
		8 - 10 ft	12/13/2022	418,000	< 500	240	5,370	< 200	< 2,000	< 200	3,970,000	650	< 500
MW-22-09	Non-Residential	2 - 4 ft	12/12/2022	1,020,000	< 500	510	7,220	< 200	< 2,000	< 200	23,600,000	1,950	720
		8 - 10 ft	12/12/2022	7,050,000	< 500	5,190	183,000	590	21,800	2,140	67,300,000	15,300	2,490
MW-22-10	Non-Residential	2 - 4 ft	12/13/2022	2,770,000	< 500	1,550	42,700	< 200	2,390	360	33,200,000	8,120	1,750
		8 - 10 ft	12/13/2022	693,000	< 500	970	11,200	< 200	< 2,000	< 200	38,200,000	3,120	770
MW-22-11	Non-Residential	2 - 4 ft	12/13/2022	832,000	< 500	< 200	9,120	< 200	< 2,000	< 200	212,000	1,070	< 500
		8 - 10 ft	12/13/2022	412,000	< 500	< 200	4,860	< 200	< 2,000	< 200	274,000	980	< 500
MW-22-12	Non-Residential	2 - 4 ft	12/13/2022	1,950,000	< 500	340	4,790	< 200	< 2,000	< 200	90,600	2,520	890
		8 - 10 ft	12/13/2022	200,000	< 500	< 200	2,670	< 200	< 2,000	< 200	16,900,000	< 500	< 500
MW-22-13	Non-Residential	2 - 4 ft	12/14/2022	921,000	< 500	460	4,250	< 200	< 2,000	< 200	250,000	2,130	< 500
		8 - 10 ft	12/14/2022	277,000	< 500	200	7,380	< 200	< 2,000	< 200	30,400,000	600	< 500
MW-22-14	Non-Residential	2 - 4 ft	12/14/2022	774,000	< 500	< 200	4,840	< 200	< 2,000	< 200	352,000	790	< 500
		8 - 10 ft	12/14/2022	837,000	< 500	770	8,930	< 200	< 2,000	< 200	430,000	1,740	970
MW-22-15	Non-Residential	2 - 4 ft	12/14/2022	2,560,000	< 500	240	10,400	< 200	< 2,000	< 200	530,000	1,690	< 500
		8 - 10 ft	12/14/2022	857,000	< 500	< 200	6,690	< 200	< 2,000	< 200	457,000	2,750	550
MW-22-16	Non-Residential	2 - 4 ft	12/14/2022	2,840,000	< 500	530	16,700	< 200	< 2,000	< 200	2,630,000	3,330	590
		8 - 10 ft	12/14/2022	546,000	< 500	240	2,690	< 200	< 2,000	< 200	30,500,000	1,380	620
MW-22-17	Non-Residential	2 - 4 ft	12/15/2022	3,010,000	< 500	800	8,220	< 200	< 2,000	< 200	708,000	4,560	1,320
		8 - 10 ft	12/15/2022	2,500,000	< 500	750	9,080	< 200	< 2,000	< 200	1,980,000	4,470	1,160
MW-22-18	Non-Residential	2 - 4 ft	12/15/2022	5,240,000	< 500	2,120	58,200	480	3,410	< 200	8,580,000	14,800	1,310
		8 - 10 ft	12/15/2022	1,360,000	< 500	530	8,150	< 200	< 2,000	< 200	407,000	2,850	1,370
MW-22-19	Non-Residential	2 - 4 ft	12/15/2022	1,930,000	< 500	900	8,350	< 200	< 2,000	< 200	9,480,000	3,730	1,190
		8 - 10 ft	12/15/2022	1,870,000	< 500	940	7,520	< 200	< 2,000	< 200	12,900,000	3,940	1,540
MW-22-20	Non-Residential	2 - 4 ft	12/15/2022	1,690,000	< 500	1,060	8,420	< 200	< 2,000	< 200	21,400,000	5,740	1,240
		10 - 12 ft	12/15/2022	1,440,000	< 500	750	10,300	< 200	< 2,000	< 200	29,900,000	4,410	1,200
MW-22-21	Non-Residential	2 - 4 ft	12/16/2022	1,830,000	< 500	710	10,400	< 200	< 2,000	< 200	3,170,000	3,420	1,020
		8 - 10 ft	12/16/2022	5,520,000	< 500	4,090	62,900	230	16,400	1,030	95,700,000	11,300	2,560
SB-01	Non-Residential	2 - 4 ft	12/14/2022	1,100,000	< 500	380	5,170	< 200	< 2,000	< 200	254,000	1,530	540
		8 - 10 ft	12/14/2022	532,000	< 500	< 200	2,930	< 200	< 2,000	< 200	386,000	1,040	< 500
SB-02	Non-Residential	2 - 4 ft	12/14/2022	2,340,000	< 500	660	12,900	< 200	< 2,000	< 200	2,780,000	4,080	580
		8 - 10 ft	12/14/2022	717,000	< 500	380	7,910	< 200	< 2,000	< 200	451,000	2,050	540

Notes:
 Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, NR Soil Direct Contact Criteria, NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.
 Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).
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Bold font denotes concentrations detected above laboratory reporting limits.
 Denotes concentrations above one or more criteria.
 1) Criterion for chromium (VI).
 2) Criterion dependent on hardness (Footnote {G}, Michigan Part 201 Criteria Tables); Criterion shown is based on an estimated hardness of 150 mg CaCO₃/L for the southern Lower Peninsula per the EGLE RRD *GSI Pathway Compliance Options*, April 2018.
 3) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote {X}, Michigan Part 201 Criteria Tables).
 4) Background as defined in R299.5701(b) may be substituted if higher than the calculated clean up criterion (Footnote {B}, Michigan Part 201 Criteria Tables).
 5) Value for total chromium.

Table 6
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 Former Hayes Lemmerz Site - Southern Area
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Analyte	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Molybdenum	Nickel
Non-Residential DWP Criteria	5.8E+06	1.2E+07 ⁽⁴⁾	7.0E+05	2.2E+07	4.4E+5 ⁽⁴⁾	1,700	4,200	1.0E+05
Generic GSI Protection Criteria	75,000 ⁽²⁾	NA	6.0E+06 ^(2,3)	NA	4.4E+5 ⁽⁴⁾	130 ⁽⁴⁾	64,000	76,000 ⁽²⁾
Non-Residential Groundwater Contact Protection Criteria	1.0E+09	1.0E+09	ID	1.0E+09	1.8E+08	47,000	1.9E+07	1.0E+09
Non-Residential VIAP Screening Level	NA	NA	NA	NA	NA	390	NA	NA
Non-Residential Direct Contact Criteria	7.3E+07	5.8E+08	9.0E+05	1.0E+09	9.0E+07	5.8E+05	9.6E+06	1.5E+08
Statewide Default Background Levels	32,000	1.2E+07 ⁽⁴⁾	21,000	NC	4.4E+5 ⁽⁴⁾	130 ⁽⁴⁾	NC	20,000
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Molybdenum	Nickel
Investigation Area: Southern Area											
MW-101	Non-Residential	2 - 3 ft	3/23/2020	--	--	< 10,500	--	--	< 59.9	--	--
MW-102	Non-Residential	2 - 3 ft	3/23/2020	--	--	< 10,300	--	--	70.6	--	--
MW-103	Non-Residential	2 - 3 ft	3/23/2020	--	--	< 12,400	--	--	< 76.9	--	--
MW-116	Non-Residential	2 - 3 ft	3/30/2020	--	--	< 10,600	--	--	< 64.9	--	--
		7 - 8 ft	3/30/2020	--	--	< 10,800	--	--	< 62.5	--	--
MW-117	Non-Residential	2 - 3 ft	3/30/2020	--	--	< 10,600	--	--	< 65.4	--	--
		6 - 7 ft	3/30/2020	--	--	< 10,900	--	--	< 64.3	--	--
MW-118	Non-Residential	2 - 3 ft	3/30/2020	--	--	< 9,870	--	--	< 64	--	--
		10 - 11 ft	3/30/2020	--	--	< 9,920	--	--	< 58.3	--	--
MW-122	Non-Residential	4 - 5 ft	6/15/2020	6,720	5,840,000	50,700	2,440,000	89,200	1,110	< 1,010	4,940
MW-123	Non-Residential	4 - 5 ft	6/15/2020	2,000	6,680,000	< 9,290	834,000	126,000	< 85.3	< 929	3,880
MW-124	Non-Residential	4 - 5 ft	6/15/2020	1,580	3,940,000	< 9,570	739,000	27,300	< 86.7	< 957	3,880
MW-125	Non-Residential	4 - 5 ft	6/16/2020	9,020	5,840,000	33,800	4,260,000	122,000	940	< 1,030	6,660
MW-126	Non-Residential	4 - 5 ft	6/15/2020	23,000	58,100,000	< 9,100	980,000	440,000	< 78.6	3,830	17,700
		7.5 - 8.5 ft	6/15/2020	3,020	4,180,000	< 10,200	988,000	79,400	< 87.7	< 1,020	3,960
MW-127	Non-Residential	6 - 7 ft	6/15/2020	2,060	2,510,000	< 10,400	785,000	29,500	< 85.9	< 1,040	3,670
		10 - 11 ft	6/15/2020	2,810	2,440,000	< 10,600	4,010,000	61,300	< 84.5	< 1,060	4,460
MW-128	Non-Residential	4 - 5 ft	6/15/2020	8,240	5,040,000	< 10,800	5,520,000	110,000	< 95.6	1,870	5,840
		8 - 9 ft	6/15/2020	2,900	3,950,000	< 9,610	1,110,000	148,000	< 93.4	< 961	5,440
MW-129	Non-Residential	3 - 4 ft	6/15/2020	20,800	6,060,000	47,200	3,800,000	92,200	666	< 926	5,930
MW-130	Non-Residential	4 - 5 ft	6/15/2020	1,440	3,160,000	< 9,850	730,000	25,900	< 83	< 985	4,170
MW-131	Non-Residential	2 - 3 ft	6/15/2020	6,650	5,240,000	16,800	1,130,000	66,400	< 101	< 1,140	4,460
MW-132	Non-Residential	5.5 - 6.5 ft	8/12/2020	25,000	10,100,000	29,800	8,760,000	179,000	1,090	2,220	10,400
MW-133	Non-Residential	3 - 4 ft	8/12/2020	16,000	7,850,000	48,100	10,400,000	218,000	798	1,040	10,200
		10 - 11 ft	8/12/2020	14,500	4,830,000	35,800	5,650,000	126,000	249	< 1,100	4,850

Notes:

Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, NR Soil Direct Contact Criteria, NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.

Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).

Only analytes with one or more detection are reported.

ug/kg = microgram per kilogram

NA = Not Applicable; NC = No Criterion; NLV = Not Likely to Volatilize; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed

Bold font denotes concentrations detected above laboratory reporting limits.

Green background Denotes concentrations above one or more criteria.

1) Criterion for chromium (VI).

2) Criterion dependent on hardness (Footnote (G), Michigan Part 201 Criteria Tables); Criterion shown is based on an estimated hardness of 150 mg CaCO₃/L for the southern Lower Peninsula per the EGLE RRD *GSI Pathway Compliance Options*, April 2018.

3) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).

4) Background as defined in R299.5701(b) may be substituted if higher than the calculated clean up criterion (Footnote (B), Michigan Part 201 Criteria Tables).

5) Value for total chromium.

Table 6
 Summary of Detected Metals in Soil
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Molybdenum	Nickel
Non-Residential DWP Criteria	5.8E+06	1.2E+07 ⁽⁴⁾	7.0E+05	2.2E+07	4.4E+5 ⁽⁴⁾	1,700	4,200	1.0E+05
Generic GSI Protection Criteria	75,000 ⁽²⁾	NA	6.0E+06 ^(2,3)	NA	4.4E+5 ⁽⁴⁾	130 ⁽⁴⁾	64,000	76,000 ⁽²⁾
Non-Residential Groundwater Contact Protection Criteria	1.0E+09	1.0E+09	ID	1.0E+09	1.8E+08	47,000	1.9E+07	1.0E+09
Non-Residential VIAP Screening Level	NA	NA	NA	NA	NA	390	NA	NA
Non-Residential Direct Contact Criteria	7.3E+07	5.8E+08	9.0E+05	1.0E+09	9.0E+07	5.8E+05	9.6E+06	1.5E+08
Statewide Default Background Levels	32,000	1.2E+07 ⁽⁴⁾	21,000	NC	4.4E+5 ⁽⁴⁾	130 ⁽⁴⁾	NC	20,000
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Molybdenum	Nickel
Investigation Area: Southern Area (continued)											
AOC10-TP01-B	Non-Residential	10 ft	12/12/2022	1,320	1,300,000	1,380	278,000	47,800	< 50	< 500	1,410
AOC10-TP01-E	Non-Residential	5 ft	12/12/2022	2,120	1,380,000	3,120	265,000	74,200	< 50	< 500	1,270
AOC10-TP01-N	Non-Residential	5 ft	12/12/2022	7,650	2,530,000	11,500	662,000	133,000	165	< 500	1,630
AOC10-TP01-S	Non-Residential	5 ft	12/12/2022	5,090	1,790,000	19,500	1,290,000	63,900	340	< 500	2,580
AOC10-TP01-W	Non-Residential	5 ft	12/12/2022	2,020	2,220,000	3,330	223,000	67,400	< 50	< 500	1,110
AOC10-TP02-B	Non-Residential	10 ft	12/12/2022	21,200	1,600,000	18,200	352,000	22,100	7,118	< 500	2,190
AOC10-TP02-E	Non-Residential	5 ft	12/12/2022	2,130	1,250,000	3,640	3,970,000	54,200	< 50	< 500	1,650
AOC10-TP02-N	Non-Residential	5 ft	12/12/2022	2,130	1,120,000	3,100	2,020,000	37,500	88	< 500	1,580
AOC10-TP02-S	Non-Residential	5 ft	12/12/2022	3,310	1,430,000	4,230	3,770,000	54,200	101	< 500	2,810
AOC10-TP02-W	Non-Residential	5 ft	12/12/2022	2,120	1,350,000	5,680	603,000	39,900	767	< 500	1,670
AOC11-TP01-B	Non-Residential	10 ft	12/13/2022	47,400	6,530,000	46,600	1,310,000	76,000	62	< 500	3,920
AOC11-TP01-E	Non-Residential	5 ft	12/13/2022	2,900	1,500,000	23,700	2,720,000	39,600	298	< 500	1,790
AOC11-TP01-N	Non-Residential	5 ft	12/13/2022	5,760	2,160,000	40,300	1,470,000	88,100	341	< 500	1,800
AOC11-TP01-S	Non-Residential	5 ft	12/13/2022	2,600	2,080,000	20,600	694,000	56,200	55	< 500	1,740
DUP-03S (AOC11-TP01-S)	Non-Residential	5 ft	12/13/2022	3,460	1,260,000	8,350	1,020,000	39,000	< 50	< 500	890
AOC11-TP01-W	Non-Residential	5 ft	12/13/2022	2,690	1,720,000	29,200	2,190,000	53,900	< 50	< 500	1,880

Notes:

Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, NR Soil Direct Contact Criteria, NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.

Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).

Only analytes with one or more detection are reported.

ug/kg = microgram per kilogram

NA = Not Applicable; NC = No Criterion; NLV = Not Likely to Volatilize; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed

Bold font denotes concentrations detected above laboratory reporting limits.

Denotes concentrations above one or more criteria.

1) Criterion for chromium (VI).

2) Criterion dependent on hardness (Footnote (G), Michigan Part 201 Criteria Tables); Criterion shown is based on an estimated hardness of 150 mg CaCO₃/L for the southern Lower Peninsula per the EGLE RRD *GSI Pathway Compliance Options*, April 2018.

3) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).

4) Background as defined in R299.5701(b) may be substituted if higher than the calculated clean up criterion (Footnote (B), Michigan Part 201 Criteria Tables).

5) Value for total chromium.

Table 6
 Summary of Detected Metals in Soil
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Molybdenum	Nickel
Non-Residential DWP Criteria	5.8E+06	1.2E+07 ⁽⁴⁾	7.0E+05	2.2E+07	4.4E+5 ⁽⁴⁾	1,700	4,200	1.0E+05
Generic GSI Protection Criteria	75,000 ⁽²⁾	NA	6.0E+06 ^(2,3)	NA	4.4E+5 ⁽⁴⁾	130 ⁽⁴⁾	64,000	76,000 ⁽²⁾
Non-Residential Groundwater Contact Protection Criteria	1.0E+09	1.0E+09	ID	1.0E+09	1.8E+08	47,000	1.9E+07	1.0E+09
Non-Residential VIAP Screening Level	NA	NA	NA	NA	NA	390	NA	NA
Non-Residential Direct Contact Criteria	7.3E+07	5.8E+08	9.0E+05	1.0E+09	9.0E+07	5.8E+05	9.6E+06	1.5E+08
Statewide Default Background Levels	32,000	1.2E+07 ⁽⁴⁾	21,000	NC	4.4E+5 ⁽⁴⁾	130 ⁽⁴⁾	NC	20,000
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Molybdenum	Nickel
Investigation Area: Southern Area (continued)											
AOC11-TP02-B	Non-Residential	10 ft	12/13/2022	2,610	862,000	10,200	2,380,000	38,100	110	< 500	1,220
AOC11-TP02-E	Non-Residential	5 ft	12/13/2022	2,760	985,000	48,100	2,190,000	50,600	102	< 500	1,140
AOC11-TP02-N	Non-Residential	5 ft	12/13/2022	2,450	902,000	13,700	1,920,000	40,100	76	< 500	1,090
DUP-04S (AOC11-TP02-N)	Non-Residential	5 ft	12/13/2022	3,010	1,490,000	11,200	3,530,000	64,800	< 50	< 500	1,740
AOC11-TP02-S	Non-Residential	5 ft	12/13/2022	2,840	871,000	15,900	1,730,000	40,800	956	< 500	980
AOC11-TP02-W	Non-Residential	5 ft	12/13/2022	4,410	1,390,000	43,900	1,400,000	64,400	120	< 500	2,230
AOC11-TP03-B	Non-Residential	10 ft	12/13/2022	2,540	1,150,000	9,050	2,080,000	41,100	< 50	< 500	1,220
AOC11-TP03-E	Non-Residential	5 ft	12/13/2022	2,520	1,420,000	14,200	2,010,000	55,200	102	< 500	1,320
AOC11-TP03-N	Non-Residential	5 ft	12/13/2022	2,120	1,270,000	7,400	1,690,000	69,400	< 50	< 500	1,380
DUP-05S (AOC11-TP03-N)	Non-Residential	5 ft	12/13/2022	1,190	1,150,000	6,980	275,000	19,000	< 50	< 500	1,020
AOC11-TP03-S	Non-Residential	5 ft	12/13/2022	1,770	1,150,000	4,110	5,910,000	92,800	< 50	< 500	1,580
AOC11-TP03-W	Non-Residential	5 ft	12/13/2022	1,790	915,000	6,370	2,120,000	46,200	2,369	< 500	1,190
AOC11-TP04-B	Non-Residential	10 ft	12/13/2022	1,940	1,010,000	6,590	918,000	36,800	< 50	< 500	1,140
AOC11-TP04-E	Non-Residential	5 ft	12/13/2022	5,890	1,380,000	19,800	1,490,000	50,900	83	< 500	1,520
AOC11-TP04-N	Non-Residential	5 ft	12/13/2022	2,780	1,310,000	12,300	1,340,000	48,900	224	< 500	1,340
DUP-06S (AOC11-TP04-N)	Non-Residential	5 ft	12/13/2022	3,360	1,560,000	13,800	2,350,000	55,200	251	< 500	2,180
AOC11-TP04-S	Non-Residential	5 ft	12/13/2022	3,250	1,150,000	10,900	1,320,000	52,000	372	< 500	1,430
AOC11-TP04-W	Non-Residential	5 ft	12/13/2022	5,430	1,720,000	29,400	1,650,000	58,100	182	< 500	1,750

Notes:

Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, NR Soil Direct Contact Criteria, NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.

Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).

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Bold font denotes concentrations detected above laboratory reporting limits.

Green background Denotes concentrations above one or more criteria.

1) Criterion for chromium (VI).

2) Criterion dependent on hardness (Footnote (G), Michigan Part 201 Criteria Tables); Criterion shown is based on an estimated hardness of 150 mg CaCO₃/L for the southern Lower Peninsula per the EGLE RRD *GSI Pathway Compliance Options*, April 2018.

3) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).

4) Background as defined in R299.5701(b) may be substituted if higher than the calculated clean up criterion (Footnote (B), Michigan Part 201 Criteria Tables).

5) Value for total chromium.

Table 6
 Summary of Detected Metals in Soil
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Molybdenum	Nickel
Non-Residential DWP Criteria	5.8E+06	1.2E+07 ⁽⁴⁾	7.0E+05	2.2E+07	4.4E+5 ⁽⁴⁾	1,700	4,200	1.0E+05
Generic GSI Protection Criteria	75,000 ⁽²⁾	NA	6.0E+06 ^(2,3)	NA	4.4E+5 ⁽⁴⁾	130 ⁽⁴⁾	64,000	76,000 ⁽²⁾
Non-Residential Groundwater Contact Protection Criteria	1.0E+09	1.0E+09	ID	1.0E+09	1.8E+08	47,000	1.9E+07	1.0E+09
Non-Residential VIAP Screening Level	NA	NA	NA	NA	NA	390	NA	NA
Non-Residential Direct Contact Criteria	7.3E+07	5.8E+08	9.0E+05	1.0E+09	9.0E+07	5.8E+05	9.6E+06	1.5E+08
Statewide Default Background Levels	32,000	1.2E+07 ⁽⁴⁾	21,000	NC	4.4E+5 ⁽⁴⁾	130 ⁽⁴⁾	NC	20,000
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Molybdenum	Nickel
Investigation Area: Southern Area (continued)											
AOC12-TP01-B	Non-Residential	10 ft	12/15/2022	12,200	4,980,000	43,800	9,870,000	173,000	476	740	5,540
AOC12-TP01-E	Non-Residential	5 ft	12/15/2022	9,180	4,830,000	25,800	15,000,000	698,000	98	750	5,340
DUP-11S (AOC12-TP01-E)	Non-Residential	5 ft	12/15/2022	12,300	11,700,000	13,200	6,160,000	183,000	60	1,640	6,400
AOC12-TP01-N	Non-Residential	5 ft	12/15/2022	13,400	6,240,000	39,400	7,030,000	224,000	571	750	6,480
AOC12-TP01-S	Non-Residential	5 ft	12/15/2022	7,940	4,290,000	19,800	11,500,000	144,000	437	< 500	5,090
AOC12-TP01-W	Non-Residential	5 ft	12/15/2022	8,920	4,990,000	26,000	6,070,000	165,000	668	670	5,210
AOC12-TP02-B	Non-Residential	10 ft	12/15/2022	1,680	2,750,000	1,400	468,000	18,000	< 50	< 500	2,920
AOC12-TP02-E	Non-Residential	5 ft	12/15/2022	1,540	2,820,000	1,200	683,000	92,400	< 50	< 500	3,370
DUP-12S (AOC12-TP02-E)	Non-Residential	5 ft	12/15/2022	1,640	2,930,000	1,340	526,000	109,000	< 50	< 500	3,210
AOC12-TP02-N	Non-Residential	5 ft	12/15/2022	4,650	4,290,000	2,230	803,000	743,000	< 50	< 500	7,660
AOC12-TP02-S	Non-Residential	5 ft	12/15/2022	2,700	3,440,000	1,890	558,000	54,300	< 50	< 500	4,370
AOC12-TP02-W	Non-Residential	5 ft	12/15/2022	4,170	2,900,000	1,850	639,000	21,100	< 50	< 500	4,320
AOC12-TP03-B	Non-Residential	10 ft	12/15/2022	4,740	3,280,000	9,920	1,200,000	59,300	< 50	< 500	3,090
AOC12-TP03-E	Non-Residential	5 ft	12/15/2022	2,180	2,570,000	1,860	4,040,000	73,700	< 50	< 500	2,790
AOC12-TP03-N	Non-Residential	5 ft	12/15/2022	2,140	2,640,000	1,810	4,520,000	95,800	< 50	< 500	2,950
AOC12-TP03-S	Non-Residential	5 ft	12/15/2022	2,440	3,120,000	2,480	4,910,000	78,500	257	< 500	3,310
AOC12-TP03-W	Non-Residential	5 ft	12/15/2022	2,770	3,100,000	4,210	3,490,000	82,800	194	< 500	3,290

Notes:

Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, NR Soil Direct Contact Criteria, NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.

Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).

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Bold font denotes concentrations detected above laboratory reporting limits.

Green background denotes concentrations above one or more criteria.

1) Criterion for chromium (VI).

2) Criterion dependent on hardness (Footnote (G), Michigan Part 201 Criteria Tables); Criterion shown is based on an estimated hardness of 150 mg CaCO₃/L for the southern Lower Peninsula per the EGLE RRD *GSI Pathway Compliance Options*, April 2018.

3) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).

4) Background as defined in R299.5701(b) may be substituted if higher than the calculated clean up criterion (Footnote (B), Michigan Part 201 Criteria Tables).

5) Value for total chromium.

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 Former Hayes Lemmerz Site - Southern Area
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 Ferndale, MI

Analyte	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Molybdenum	Nickel
Non-Residential DWP Criteria	5.8E+06	1.2E+07 ⁽⁴⁾	7.0E+05	2.2E+07	4.4E+5 ⁽⁴⁾	1,700	4,200	1.0E+05
Generic GSI Protection Criteria	75,000 ⁽²⁾	NA	6.0E+06 ^(2,3)	NA	4.4E+5 ⁽⁴⁾	130 ⁽⁴⁾	64,000	76,000 ⁽²⁾
Non-Residential Groundwater Contact Protection Criteria	1.0E+09	1.0E+09	ID	1.0E+09	1.8E+08	47,000	1.9E+07	1.0E+09
Non-Residential VIAP Screening Level	NA	NA	NA	NA	NA	390	NA	NA
Non-Residential Direct Contact Criteria	7.3E+07	5.8E+08	9.0E+05	1.0E+09	9.0E+07	5.8E+05	9.6E+06	1.5E+08
Statewide Default Background Levels	32,000	1.2E+07 ⁽⁴⁾	21,000	NC	4.4E+5 ⁽⁴⁾	130 ⁽⁴⁾	NC	20,000
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Molybdenum	Nickel
Investigation Area: Southern Area (continued)											
AOC3-TP01-B	Non-Residential	10 ft	12/14/2022	7,440	773,000	1,320	265,000	12,700	< 50	< 500	2,070
AOC3-TP01-E	Non-Residential	5 ft	12/14/2022	720	2,290,000	1,480	202,000	187,000	< 50	< 500	870
AOC3-TP01-N	Non-Residential	5 ft	12/14/2022	540	1,420,000	1,110	248,000	66,700	< 50	< 500	960
AOC3-TP01-S	Non-Residential	5 ft	12/14/2022	510	1,220,000	810	177,000	76,600	< 50	< 500	730
AOC3-TP01-W	Non-Residential	5 ft	12/14/2022	500	1,320,000	710	192,000	116,000	< 50	< 500	800
DUP-07S (AOC3-TP01-W)	Non-Residential	5 ft	12/14/2022	660	1,160,000	530	222,000	71,300	< 50	< 500	1,100
AOC3-TP02-B	Non-Residential	10 ft	12/14/2022	3,280	2,110,000	990	2,210,000	43,500	< 50	< 500	2,930
AOC3-TP02-E	Non-Residential	5 ft	12/14/2022	2,270	3,780,000	950	281,000	61,500	< 50	< 500	1,830
AOC3-TP02-N	Non-Residential	5 ft	12/14/2022	4,450	3,020,000	1,430	370,000	374,000	< 50	< 500	1,960
DUP-08S (AOC3-TP02-N)	Non-Residential	5 ft	12/14/2022	5,320	5,920,000	2,070	625,000	407,000	< 50	< 500	4,000
AOC3-TP02-S	Non-Residential	5 ft	12/14/2022	2,610	3,640,000	1,840	324,000	347,000	< 50	< 500	2,200
AOC3-TP02-W	Non-Residential	5 ft	12/14/2022	2,580	3,140,000	820	300,000	75,100	< 50	< 500	2,170
AOC3-TP03-B	Non-Residential	10 ft	12/14/2022	5,610	2,030,000	1,620	784,000	22,700	< 50	< 500	4,030
AOC3-TP03-E	Non-Residential	5 ft	12/14/2022	1,740	2,230,000	860	413,000	169,000	< 50	< 500	2,520
AOC3-TP03-N	Non-Residential	5 ft	12/14/2022	1,460	2,670,000	1,040	366,000	21,900	< 50	< 500	2,310
DUP-09S (AOC3-TP03-N)	Non-Residential	5 ft	12/14/2022	2,140	4,420,000	1,700	631,000	48,700	< 50	< 500	4,000
AOC3-TP03-S	Non-Residential	5 ft	12/14/2022	2,630	2,020,000	710	400,000	40,600	< 50	< 500	2,630
AOC3-TP03-W	Non-Residential	5 ft	12/14/2022	1,510	1,790,000	570	328,000	69,800	< 50	< 500	2,450
AOC3-TP04-B	Non-Residential	10 ft	12/14/2022	2,010	2,320,000	1,160	3,530,000	57,800	< 50	< 500	2,380
AOC3-TP04-E	Non-Residential	5 ft	12/14/2022	6,480	3,020,000	9,340	398,000	61,200	< 50	< 500	3,190
AOC3-TP04-N	Non-Residential	5 ft	12/14/2022	3,340	3,110,000	1,960	527,000	205,000	< 50	< 500	6,510
AOC3-TP04-S	Non-Residential	5 ft	12/14/2022	21,200	4,850,000	44,900	489,000	69,200	< 50	< 500	8,150
AOC3-TP04-W	Non-Residential	5 ft	12/14/2022	2,750	3,880,000	2,540	448,000	131,000	< 50	< 500	4,710
DUP-10S (AOC3-TP04-W)	Non-Residential	5 ft	12/14/2022	8,330	6,340,000	2,610	1,340,000	123,000	< 50	< 500	11,100

Notes:

Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, NR Soil Direct Contact Criteria, NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.

Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).

Only analytes with one or more detection are reported.

ug/kg = microgram per kilogram

NA = Not Applicable; NC = No Criterion; NLV = Not Likely to Volatilize; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed

Bold font denotes concentrations detected above laboratory reporting limits.

Green background Denotes concentrations above one or more criteria.

1) Criterion for chromium (VI).

2) Criterion dependent on hardness (Footnote (G), Michigan Part 201 Criteria Tables); Criterion shown is based on an estimated hardness of 150 mg CaCO₃/L for the southern Lower Peninsula per the EGLE RRD GSI Pathway Compliance Options, April 2018.

3) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).

4) Background as defined in R299.5701(b) may be substituted if higher than the calculated clean up criterion (Footnote (B), Michigan Part 201 Criteria Tables).

5) Value for total chromium.

Table 6
 Summary of Detected Metals in Soil
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Molybdenum	Nickel
Non-Residential DWP Criteria	5.8E+06	1.2E+07 ⁽⁴⁾	7.0E+05	2.2E+07	4.4E+5 ⁽⁴⁾	1,700	4,200	1.0E+05
Generic GSI Protection Criteria	75,000 ⁽²⁾	NA	6.0E+06 ^(2,3)	NA	4.4E+5 ⁽⁴⁾	130 ⁽⁴⁾	64,000	76,000 ⁽²⁾
Non-Residential Groundwater Contact Protection Criteria	1.0E+09	1.0E+09	ID	1.0E+09	1.8E+08	47,000	1.9E+07	1.0E+09
Non-Residential VIAP Screening Level	NA	NA	NA	NA	NA	390	NA	NA
Non-Residential Direct Contact Criteria	7.3E+07	5.8E+08	9.0E+05	1.0E+09	9.0E+07	5.8E+05	9.6E+06	1.5E+08
Statewide Default Background Levels	32,000	1.2E+07 ⁽⁴⁾	21,000	NC	4.4E+5 ⁽⁴⁾	130 ⁽⁴⁾	NC	20,000
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Molybdenum	Nickel
Investigation Area: Southern Area (continued)											
MW-22-07	Non-Residential	2 - 4 ft	12/13/2022	5,320	2,920,000	37,500	4,500,000	108,000	1,023	510	2,960
		8 - 10 ft	12/13/2022	1,230	820,000	3,160	1,750,000	23,300	120	< 500	690
MW-22-08	Non-Residential	2 - 3 ft	12/12/2022	4,900	1,890,000	51,700	3,010,000	74,700	1,230	< 500	2,430
		8 - 10 ft	12/13/2022	1,390	519,000	1,210	763,000	39,900	< 50	< 500	1,160
MW-22-09	Non-Residential	2 - 4 ft	12/12/2022	1,810	1,360,000	2,600	5,700,000	81,400	< 50	< 500	1,840
		8 - 10 ft	12/12/2022	16,100	4,750,000	73,700	7,740,000	247,000	2,968	1,810	6,790
MW-22-10	Non-Residential	2 - 4 ft	12/13/2022	7,040	2,460,000	34,600	2,980,000	129,000	1,422	650	3,660
		8 - 10 ft	12/13/2022	2,620	1,070,000	6,510	6,670,000	99,500	< 50	< 500	1,510
MW-22-11	Non-Residential	2 - 4 ft	12/13/2022	830	213,000	410	107,000	12,200	< 50	< 500	< 500
		8 - 10 ft	12/13/2022	6,320	197,000	1,060	94,000	5,430	< 50	< 500	700
MW-22-12	Non-Residential	2 - 4 ft	12/13/2022	500	3,140,000	1,100	58,200	4,420	< 50	< 500	820
		8 - 10 ft	12/13/2022	< 500	356,000	520	1,580,000	38,100	< 50	< 500	570
MW-22-13	Non-Residential	2 - 4 ft	12/14/2022	1,050	681,000	1,650	66,400	5,860	< 50	< 500	< 500
		8 - 10 ft	12/14/2022	860	614,000	760	5,600,000	199,000	< 50	< 500	970
MW-22-14	Non-Residential	2 - 4 ft	12/14/2022	< 500	257,000	470	115,000	1,660	< 50	< 500	650
		8 - 10 ft	12/14/2022	4,430	701,000	1,260	238,000	3,820	< 50	< 500	1,560
MW-22-15	Non-Residential	2 - 4 ft	12/14/2022	< 500	1,050,000	1,080	125,000	4,200	< 50	< 500	1,010
		8 - 10 ft	12/14/2022	1,800	875,000	1,200	163,000	7,370	< 50	< 500	1,890
MW-22-16	Non-Residential	2 - 4 ft	12/14/2022	3,290	1,530,000	3,770	505,000	43,300	< 50	< 500	1,840
		8 - 10 ft	12/14/2022	2,110	1,140,000	1,140	6,370,000	61,100	< 50	< 500	1,870
MW-22-17	Non-Residential	2 - 4 ft	12/15/2022	1,920	3,430,000	1,830	479,000	50,700	< 50	< 500	3,330
		8 - 10 ft	12/15/2022	1,310	3,440,000	1,390	714,000	60,200	< 50	< 500	3,040
MW-22-18	Non-Residential	2 - 4 ft	12/15/2022	7,000	6,650,000	11,100	1,500,000	370,000	60	< 500	3,480
		8 - 10 ft	12/15/2022	2,310	3,790,000	1,100	336,000	32,800	< 50	< 500	3,210
MW-22-19	Non-Residential	2 - 4 ft	12/15/2022	2,540	2,980,000	3,750	2,500,000	68,300	57	< 500	3,080
		8 - 10 ft	12/15/2022	2,680	3,520,000	2,360	2,950,000	92,500	< 50	< 500	3,410
MW-22-20	Non-Residential	2 - 4 ft	12/15/2022	2,960	3,040,000	3,960	5,370,000	81,200	< 50	< 500	3,350
		10 - 12 ft	12/15/2022	4,030	3,250,000	18,400	6,740,000	91,700	< 50	< 500	3,320
MW-22-21	Non-Residential	2 - 4 ft	12/16/2022	2,280	2,530,000	2,950	781,000	64,800	< 50	< 500	3,180
		8 - 10 ft	12/16/2022	11,300	7,440,000	20,900	10,000,000	179,000	214	2,090	8,120
SB-01	Non-Residential	2 - 4 ft	12/14/2022	910	1,130,000	990	278,000	24,800	< 50	< 500	1,230
		8 - 10 ft	12/14/2022	880	593,000	1,070	216,000	6,110	< 50	< 500	1,020
SB-02	Non-Residential	2 - 4 ft	12/14/2022	2,680	1,490,000	6,980	579,000	56,900	1,476	< 500	1,660
		8 - 10 ft	12/14/2022	2,440	720,000	1,230	242,000	5,560	< 50	< 500	1,660

Notes:
 Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, NR Soil Direct Contact Criteria, NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.
 Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).
 Only analytes with one or more detection are reported.
 ug/kg = microgram per kilogram
 NA = Not Applicable; NC = No Criterion; NLV = Not Likely to Volatilize; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed
Bold font denotes concentrations detected above laboratory reporting limits.
 Denotes concentrations above one or more criteria.
 1) Criterion for chromium (VI).
 2) Criterion dependent on hardness (Footnote (G), Michigan Part 201 Criteria Tables); Criterion shown is based on an estimated hardness of 150 mg CaCO₃/L for the southern Lower Peninsula per the EGLE RRD *GSI Pathway Compliance Options*, April 2018.
 3) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).
 4) Background as defined in R299.5701(b) may be substituted if higher than the calculated clean up criterion (Footnote (B), Michigan Part 201 Criteria Tables).
 5) Value for total chromium.

Table 6
 Summary of Detected Metals in Soil
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Potassium	Selenium	Silver	Sodium	Strontium	Thallium	Thorium	Titanium	Vanadium	Zinc
Non-Residential DWP Criteria	NC	4,000	13,000	2.5E+06	2.6E+05	2,300	NC	NC	9.9E+05	5.0E+06
Generic GSI Protection Criteria	NC	410 ⁽⁴⁾	1,000 ⁽⁴⁾	NA	4.2E+05	4,200	NC	NC	4.3E+05	1.7E+05 ⁽²⁾
Non-Residential Groundwater Contact Protection Criteria	NC	7.8E+07	2.0E+08	1.0E+09	1.0E+09	1.5E+07	NC	NC	1.0E+09	1.0E+09
Non-Residential VIAP Screening Level	NC	NA	NA	NA	NA	NA	NC	NC	NA	NA
Non-Residential Direct Contact Criteria	NC	9.6E+06	9.0E+06	1.0E+09	1.0E+09	1.3E+05	NC	NC	5.5E+06	6.3E+08
Statewide Default Background Levels	NC	410 ⁽⁴⁾	1,000 ⁽⁴⁾	NC	NC	NC	NC	NC	NC	47,000
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	Potassium	Selenium	Silver	Sodium	Strontium	Thallium	Thorium	Titanium	Vanadium	Zinc
Investigation Area: Southern Area													
MW-101	Non-Residential	2 - 3 ft	3/23/2020	--	< 1,050	< 105	--	--	--	--	--	--	--
MW-102	Non-Residential	2 - 3 ft	3/23/2020	--	< 1,050	< 105	--	--	--	--	--	--	--
MW-103	Non-Residential	2 - 3 ft	3/23/2020	--	< 1,340	< 134	--	--	--	--	--	--	--
MW-116	Non-Residential	2 - 3 ft	3/30/2020	--	312	< 104	--	--	--	--	--	--	--
		7 - 8 ft	3/30/2020	--	< 217	< 109	--	--	--	--	--	--	--
MW-117	Non-Residential	2 - 3 ft	3/30/2020	--	369	< 110	--	--	--	--	--	--	--
		6 - 7 ft	3/30/2020	--	< 1,060	< 106	--	--	--	--	--	--	--
MW-118	Non-Residential	2 - 3 ft	3/30/2020	--	< 200	< 99.8	--	--	--	--	--	--	--
		10 - 11 ft	3/30/2020	--	< 197	< 98.4	--	--	--	--	--	--	--
MW-122	Non-Residential	4 - 5 ft	6/15/2020	238,000	262	157	31,000	12,200	< 544	--	237,000	14,200	48,800
MW-123	Non-Residential	4 - 5 ft	6/15/2020	144,000	228	< 101	28,100	< 4,640	< 506	--	228,000	13,300	7,510
MW-124	Non-Residential	4 - 5 ft	6/15/2020	148,000	< 203	< 102	23,200	< 4,780	< 509	--	220,000	8,010	8,190
MW-125	Non-Residential	4 - 5 ft	6/16/2020	337,000	< 1,020	1,840	65,200	29,300	< 512	--	284,000	13,200	50,800
MW-126	Non-Residential	4 - 5 ft	6/15/2020	143,000	245	< 104	24,500	6,300	< 521	--	187,000	8,930	16,600
		7.5 - 8.5 ft	6/15/2020	175,000	< 1,060	< 106	23,900	< 5,110	< 528	--	159,000	8,380	11,600
MW-127	Non-Residential	6 - 7 ft	6/15/2020	184,000	< 224	< 112	28,900	< 5,190	< 561	--	204,000	5,740	7,580
		10 - 11 ft	6/15/2020	195,000	< 212	< 106	56,800	24,900	< 530	--	175,000	10,200	6,750
MW-128	Non-Residential	4 - 5 ft	6/15/2020	390,000	223	< 110	90,100	45,900	< 550	--	275,000	12,000	17,800
		8 - 9 ft	6/15/2020	232,000	< 1,080	< 108	26,100	< 4,800	< 540	--	179,000	6,710	9,870
MW-129	Non-Residential	3 - 4 ft	6/15/2020	336,000	< 999	< 99.9	72,400	30,000	< 500	--	247,000	10,200	43,600
MW-130	Non-Residential	4 - 5 ft	6/15/2020	143,000	< 210	< 105	21,700	< 4,920	< 526	--	229,000	7,980	9,160
MW-131	Non-Residential	2 - 3 ft	6/15/2020	191,000	319	203	27,700	< 5,720	< 624	--	218,000	10,800	33,700
MW-132	Non-Residential	5.5 - 6.5 ft	8/12/2020	786,000	< 1,110	< 111	376,000	75,600	< 555	--	394,000	14,900	116,000
MW-133	Non-Residential	3 - 4 ft	8/12/2020	980,000	< 1,090	789	980,000	482,000	< 543	--	359,000	21,300	79,600
		10 - 11 ft	8/12/2020	489,000	< 1,130	< 113	106,000	35,000	< 567	--	274,000	10,600	71,400

Notes:
 Residential (R)/Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, R/NR Groundwater Contact Protection Criteria, R/NR Soil Direct Contact Criteria, R/NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and R/NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.
 Residential (R) and Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).
 Only analytes with one or more detection are reported.
 ug/kg = microgram per kilogram
 NA = Not Applicable; NC = No Criterion; NLV = Not Likely to Volatilize; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed
Bold font denotes concentrations detected above laboratory reporting limits.
 Denotes concentrations above one or more criteria.
 1) Criterion for chromium (VI).
 2) Criterion dependent on hardness (Footnote (G), Michigan Part 201 Criteria Tables); Criterion shown is based on an estimated hardness of 150 mg CaCO₃/L for the southern Lower Peninsula per the EGLE RRD GSI Pathway Compliance Options, April 2018.
 3) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).
 4) Background as defined in R299.5701(b) may be substituted if higher than the calculated clean up criterion (Footnote (B), Michigan Part 201 Criteria Tables).
 5) Value for total chromium.

Table 6
 Summary of Detected Metals in Soil
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Potassium	Selenium	Silver	Sodium	Strontium	Thallium	Thorium	Titanium	Vanadium	Zinc
Non-Residential DWP Criteria	NC	4,000	13,000	2.5E+06	2.6E+05	2,300	NC	NC	9.9E+05	5.0E+06
Generic GSI Protection Criteria	NC	410 ⁽⁴⁾	1,000 ⁽⁴⁾	NA	4.2E+05	4,200	NC	NC	4.3E+05	1.7E+05 ⁽²⁾
Non-Residential Groundwater Contact Protection Criteria	NC	7.8E+07	2.0E+08	1.0E+09	1.0E+09	1.5E+07	NC	NC	1.0E+09	1.0E+09
Non-Residential VIAP Screening Level	NC	NA	NA	NA	NA	NA	NC	NC	NA	NA
Non-Residential Direct Contact Criteria	NC	9.6E+06	9.0E+06	1.0E+09	1.0E+09	1.3E+05	NC	NC	5.5E+06	6.3E+08
Statewide Default Background Levels	NC	410 ⁽⁴⁾	1,000 ⁽⁴⁾	NC	NC	NC	NC	NC	NC	47,000
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	Potassium	Selenium	Silver	Sodium	Strontium	Thallium	Thorium	Titanium	Vanadium	Zinc
Investigation Area: Southern Area (continued)													
AOC10-TP01-B	Non-Residential	10 ft	12/12/2022	106,000	< 400	< 200	< 20,000	2,520	< 200	1,400	23,200	2,230	4,520
AOC10-TP01-E	Non-Residential	5 ft	12/12/2022	84,800	< 400	< 200	< 20,000	2,410	< 200	1,000	62,100	2,720	5,190
AOC10-TP01-N	Non-Residential	5 ft	12/12/2022	347,000	< 400	< 200	< 20,000	5,990	< 200	1,000	55,300	5,520	16,600
AOC10-TP01-S	Non-Residential	5 ft	12/12/2022	174,000	< 400	330	27,200	13,500	< 200	1,000	48,600	4,880	22,500
AOC10-TP01-W	Non-Residential	5 ft	12/12/2022	79,000	< 400	< 200	< 20,000	2,080	< 200	1,400	64,100	5,070	4,540
AOC10-TP02-B	Non-Residential	10 ft	12/12/2022	126,000	< 400	930	< 20,000	3,010	< 200	1,200	22,000	4,080	30,000
AOC10-TP02-E	Non-Residential	5 ft	12/12/2022	98,900	< 400	< 200	< 20,000	16,800	< 200	990	20,000	2,770	8,540
AOC10-TP02-N	Non-Residential	5 ft	12/12/2022	94,800	< 400	< 200	< 20,000	8,670	< 200	1,200	20,100	2,600	7,300
AOC10-TP02-S	Non-Residential	5 ft	12/12/2022	117,000	< 400	< 200	21,900	13,300	< 200	930	24,800	4,250	9,940
AOC10-TP02-W	Non-Residential	5 ft	12/12/2022	101,000	< 400	< 200	< 20,000	4,360	< 200	1,200	35,500	3,220	7,110
AOC11-TP01-B	Non-Residential	10 ft	12/13/2022	145,000	< 400	< 200	< 20,000	11,800	< 200	820	48,800	5,300	30,900
AOC11-TP01-E	Non-Residential	5 ft	12/13/2022	151,000	< 400	< 200	23,900	11,700	< 200	1,300	46,400	3,270	14,900
AOC11-TP01-N	Non-Residential	5 ft	12/13/2022	167,000	< 400	< 200	< 20,000	12,800	< 200	1,200	42,200	5,060	21,600
AOC11-TP01-S	Non-Residential	5 ft	12/13/2022	126,000	< 400	< 200	< 20,000	7,420	< 200	1,100	57,200	2,900	11,300
DUP-03S (AOC11-TP01-S)	Non-Residential	5 ft	12/13/2022	109,000	< 400	< 200	< 20,000	7,310	< 200	970	25,600	2,760	9,750
AOC11-TP01-W	Non-Residential	5 ft	12/13/2022	127,000	< 400	< 200	< 20,000	12,400	< 200	1,000	39,600	3,510	9,460

Notes:
 Residential (R)/Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, R/NR Groundwater Contact Protection Criteria, R/NR Soil Direct Contact Criteria, R/NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and R/NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.
 Residential (R) and Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).
 Only analytes with one or more detection are reported.
 ug/kg = microgram per kilogram
 NA = Not Applicable; NC = No Criterion; NLV = Not Likely to Volatilize; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed
Bold font denotes concentrations detected above laboratory reporting limits.
 Denotes concentrations above one or more criteria.
 1) Criterion for chromium (VI).
 2) Criterion dependent on hardness (Footnote {G}, Michigan Part 201 Criteria Tables); Criterion shown is based on an estimated hardness of 150 mg CaCO₃/L for the southern Lower Peninsula per the EGLE RRD *GSI Pathway Compliance Options*, April 2018.
 3) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote {X}, Michigan Part 201 Criteria Tables).
 4) Background as defined in R299.5701(b) may be substituted if higher than the calculated clean up criterion (Footnote {B}, Michigan Part 201 Criteria Tables).
 5) Value for total chromium.

Table 6
 Summary of Detected Metals in Soil
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Potassium	Selenium	Silver	Sodium	Strontium	Thallium	Thorium	Titanium	Vanadium	Zinc
Non-Residential DWP Criteria	NC	4,000	13,000	2.5E+06	2.6E+05	2,300	NC	NC	9.9E+05	5.0E+06
Generic GSI Protection Criteria	NC	410 ⁽⁴⁾	1,000 ⁽⁴⁾	NA	4.2E+05	4,200	NC	NC	4.3E+05	1.7E+05 ⁽²⁾
Non-Residential Groundwater Contact Protection Criteria	NC	7.8E+07	2.0E+08	1.0E+09	1.0E+09	1.5E+07	NC	NC	1.0E+09	1.0E+09
Non-Residential VIAP Screening Level	NC	NA	NA	NA	NA	NA	NC	NC	NA	NA
Non-Residential Direct Contact Criteria	NC	9.6E+06	9.0E+06	1.0E+09	1.0E+09	1.3E+05	NC	NC	5.5E+06	6.3E+08
Statewide Default Background Levels	NC	410 ⁽⁴⁾	1,000 ⁽⁴⁾	NC	NC	NC	NC	NC	NC	47,000
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	Potassium	Selenium	Silver	Sodium	Strontium	Thallium	Thorium	Titanium	Vanadium	Zinc
Investigation Area: Southern Area (continued)													
AOC11-TP02-B	Non-Residential	10 ft	12/13/2022	118,000	< 400	< 200	< 20,000	13,100	< 200	1,200	17,300	1,720	10,100
AOC11-TP02-E	Non-Residential	5 ft	12/13/2022	113,000	< 400	< 200	24,700	13,900	< 200	1,300	22,700	2,070	14,800
AOC11-TP02-N	Non-Residential	5 ft	12/13/2022	86,800	< 400	< 200	< 20,000	11,100	< 200	980	22,300	1,880	8,930
DUP-04S (AOC11-TP02-N)	Non-Residential	5 ft	12/13/2022	100,000	< 400	< 200	24,300	19,000	< 200	1,500	29,200	2,420	10,800
AOC11-TP02-S	Non-Residential	5 ft	12/13/2022	111,000	< 400	< 200	21,500	10,400	< 200	1,100	19,500	1,980	10,500
AOC11-TP02-W	Non-Residential	5 ft	12/13/2022	161,000	< 400	< 200	23,100	29,300	< 200	670	33,400	3,080	18,100
AOC11-TP03-B	Non-Residential	10 ft	12/13/2022	97,200	< 400	< 200	< 20,000	10,600	< 200	950	24,600	2,500	9,290
AOC11-TP03-E	Non-Residential	5 ft	12/13/2022	97,300	< 400	< 200	< 20,000	12,200	< 200	950	30,000	3,160	10,500
AOC11-TP03-N	Non-Residential	5 ft	12/13/2022	92,600	< 400	< 200	< 20,000	11,500	< 200	1,100	26,600	2,380	9,630
DUP-05S (AOC11-TP03-N)	Non-Residential	5 ft	12/13/2022	77,000	< 400	< 200	< 20,000	2,340	< 200	940	36,200	2,700	4,280
AOC11-TP03-S	Non-Residential	5 ft	12/13/2022	103,000	< 400	< 200	28,900	33,200	< 200	960	18,400	1,800	6,730
AOC11-TP03-W	Non-Residential	5 ft	12/13/2022	94,800	< 400	< 200	< 20,000	13,800	< 200	1,000	17,100	1,810	5,880
AOC11-TP04-B	Non-Residential	10 ft	12/13/2022	97,200	< 400	< 200	< 20,000	7,490	< 200	1,100	26,600	2,380	6,420
AOC11-TP04-E	Non-Residential	5 ft	12/13/2022	135,000	< 400	< 200	< 20,000	11,200	< 200	1,500	39,000	2,680	23,600
AOC11-TP04-N	Non-Residential	5 ft	12/13/2022	139,000	< 400	< 200	33,600	12,000	< 200	890	33,800	2,970	19,800
DUP-06S (AOC11-TP04-N)	Non-Residential	5 ft	12/13/2022	161,000	< 400	< 200	26,600	21,700	< 200	850	38,600	3,330	20,400
AOC11-TP04-S	Non-Residential	5 ft	12/13/2022	130,000	< 400	< 200	20,200	16,600	< 200	910	29,100	2,700	14,700
AOC11-TP04-W	Non-Residential	5 ft	12/13/2022	187,000	< 400	< 200	27,100	18,800	< 200	1,000	49,400	3,320	15,500

Notes:
 Residential (R)/Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, R/NR Groundwater Contact Protection Criteria, R/NR Soil Direct Contact Criteria, R/NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and R/NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.
 Residential (R) and Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).
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Bold font denotes concentrations detected above laboratory reporting limits.
 Denotes concentrations above one or more criteria.

- 1) Criterion for chromium (VI).
- 2) Criterion dependent on hardness (Footnote {G}, Michigan Part 201 Criteria Tables); Criterion shown is based on an estimated hardness of 150 mg CaCO₃/L for the southern Lower Peninsula per the EGLE RRD *GSI Pathway Compliance Options*, April 2018.
- 3) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote {X}, Michigan Part 201 Criteria Tables).
- 4) Background as defined in R299.5701(b) may be substituted if higher than the calculated clean up criterion (Footnote {B}, Michigan Part 201 Criteria Tables).
- 5) Value for total chromium.

Table 6
 Summary of Detected Metals in Soil
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Potassium	Selenium	Silver	Sodium	Strontium	Thallium	Thorium	Titanium	Vanadium	Zinc
Non-Residential DWP Criteria	NC	4,000	13,000	2.5E+06	2.6E+05	2,300	NC	NC	9.9E+05	5.0E+06
Generic GSI Protection Criteria	NC	410 ⁽⁴⁾	1,000 ⁽⁴⁾	NA	4.2E+05	4,200	NC	NC	4.3E+05	1.7E+05 ⁽²⁾
Non-Residential Groundwater Contact Protection Criteria	NC	7.8E+07	2.0E+08	1.0E+09	1.0E+09	1.5E+07	NC	NC	1.0E+09	1.0E+09
Non-Residential VIAP Screening Level	NC	NA	NA	NA	NA	NA	NC	NC	NA	NA
Non-Residential Direct Contact Criteria	NC	9.6E+06	9.0E+06	1.0E+09	1.0E+09	1.3E+05	NC	NC	5.5E+06	6.3E+08
Statewide Default Background Levels	NC	410 ⁽⁴⁾	1,000 ⁽⁴⁾	NC	NC	NC	NC	NC	NC	47,000
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	Potassium	Selenium	Silver	Sodium	Strontium	Thallium	Thorium	Titanium	Vanadium	Zinc
Investigation Area: Southern Area (continued)													
AOC12-TP01-B	Non-Residential	10 ft	12/15/2022	857,000	< 400	< 200	276,000	81,700	< 200	--	107,000	13,500	112,000
AOC12-TP01-E	Non-Residential	5 ft	12/15/2022	966,000	< 400	< 200	416,000	75,600	< 200	--	95,600	14,500	96,000
DUP-11S (AOC12-TP01-E)	Non-Residential	5 ft	12/15/2022	291,000	< 400	< 200	108,000	42,900	< 200	1,300	53,600	10,900	68,900
AOC12-TP01-N	Non-Residential	5 ft	12/15/2022	2,570,000	< 400	< 200	687,000	102,000	< 200	1,700	153,000	19,200	156,000
AOC12-TP01-S	Non-Residential	5 ft	12/15/2022	621,000	< 400	< 200	170,000	64,600	< 200	2,000	83,700	10,300	78,300
AOC12-TP01-W	Non-Residential	5 ft	12/15/2022	1,820,000	< 400	< 200	556,000	78,700	< 200	2,600	121,000	14,400	99,000
AOC12-TP02-B	Non-Residential	10 ft	12/15/2022	96,200	< 400	< 200	< 20,000	2,100	< 200	1,200	29,200	4,780	7,500
AOC12-TP02-E	Non-Residential	5 ft	12/15/2022	107,000	< 400	< 200	< 20,000	1,540	< 200	1,500	33,000	4,670	6,970
DUP-12S (AOC12-TP02-E)	Non-Residential	5 ft	12/15/2022	79,100	< 400	< 200	< 20,000	1,530	< 200	1,100	38,300	5,000	6,330
AOC12-TP02-N	Non-Residential	5 ft	12/15/2022	203,000	< 400	< 200	< 20,000	3,460	< 200	1,700	28,900	6,650	11,800
AOC12-TP02-S	Non-Residential	5 ft	12/15/2022	122,000	< 400	< 200	< 20,000	2,100	< 200	1,800	28,600	6,240	8,410
AOC12-TP02-W	Non-Residential	5 ft	12/15/2022	131,000	< 400	< 200	< 20,000	2,470	< 200	1,600	26,100	8,130	8,580
AOC12-TP03-B	Non-Residential	10 ft	12/15/2022	130,000	< 400	< 200	< 20,000	18,100	< 200	1,500	31,700	5,900	19,500
AOC12-TP03-E	Non-Residential	5 ft	12/15/2022	100,000	< 400	< 200	22,100	18,200	< 200	1,000	26,600	3,680	8,450
AOC12-TP03-N	Non-Residential	5 ft	12/15/2022	109,000	< 400	< 200	23,300	22,000	< 200	1,100	28,900	3,730	7,800
AOC12-TP03-S	Non-Residential	5 ft	12/15/2022	112,000	< 400	< 200	25,600	19,700	< 200	960	21,300	4,360	10,500
AOC12-TP03-W	Non-Residential	5 ft	12/15/2022	113,000	< 400	< 200	21,800	16,800	< 200	1,200	25,700	4,980	12,300

Notes:
 Residential (R)/Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, R/NR Groundwater Contact Protection Criteria, R/NR Soil Direct Contact Criteria, R/NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and R/NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.
 Residential (R) and Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).
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Bold font denotes concentrations detected above laboratory reporting limits.
 Denotes concentrations above one or more criteria.
 1) Criterion for chromium (VI).
 2) Criterion dependent on hardness (Footnote {G}, Michigan Part 201 Criteria Tables); Criterion shown is based on an estimated hardness of 150 mg CaCO₃/L for the southern Lower Peninsula per the EGLE RRD *GSI Pathway Compliance Options*, April 2018.
 3) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote {X}, Michigan Part 201 Criteria Tables).
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 5) Value for total chromium.

Table 6
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 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Potassium	Selenium	Silver	Sodium	Strontium	Thallium	Thorium	Titanium	Vanadium	Zinc
Non-Residential DWP Criteria	NC	4,000	13,000	2.5E+06	2.6E+05	2,300	NC	NC	9.9E+05	5.0E+06
Generic GSI Protection Criteria	NC	410 ⁽⁴⁾	1,000 ⁽⁴⁾	NA	4.2E+05	4,200	NC	NC	4.3E+05	1.7E+05 ⁽²⁾
Non-Residential Groundwater Contact Protection Criteria	NC	7.8E+07	2.0E+08	1.0E+09	1.0E+09	1.5E+07	NC	NC	1.0E+09	1.0E+09
Non-Residential VIAP Screening Level	NC	NA	NA	NA	NA	NA	NC	NC	NA	NA
Non-Residential Direct Contact Criteria	NC	9.6E+06	9.0E+06	1.0E+09	1.0E+09	1.3E+05	NC	NC	5.5E+06	6.3E+08
Statewide Default Background Levels	NC	410 ⁽⁴⁾	1,000 ⁽⁴⁾	NC	NC	NC	NC	NC	NC	47,000
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	Potassium	Selenium	Silver	Sodium	Strontium	Thallium	Thorium	Titanium	Vanadium	Zinc
Investigation Area: Southern Area (continued)													
AOC3-TP01-B	Non-Residential	10 ft	12/14/2022	116,000	< 400	< 200	37,100	1,740	< 200	970	3,880	1,650	6,890
AOC3-TP01-E	Non-Residential	5 ft	12/14/2022	76,600	< 400	< 200	43,700	600	< 200	1,100	17,300	5,110	1,770
AOC3-TP01-N	Non-Residential	5 ft	12/14/2022	91,400	< 400	< 200	64,500	600	< 200	1,200	11,300	2,910	2,430
AOC3-TP01-S	Non-Residential	5 ft	12/14/2022	90,000	< 400	< 200	64,700	670	< 200	1,700	13,900	2,440	1,830
AOC3-TP01-W	Non-Residential	5 ft	12/14/2022	84,600	< 400	< 200	29,800	530	< 200	810	10,000	2,630	1,950
DUP-07S (AOC3-TP01-W)	Non-Residential	5 ft	12/14/2022	82,100	< 400	< 200	28,700	550	< 200	810	16,000	2,020	2,730
AOC3-TP02-B	Non-Residential	10 ft	12/14/2022	74,000	< 400	< 200	25,100	11,600	< 200	910	18,200	3,390	7,380
AOC3-TP02-E	Non-Residential	5 ft	12/14/2022	70,800	< 400	< 200	40,100	1,170	< 200	1,600	7,750	6,030	5,820
AOC3-TP02-N	Non-Residential	5 ft	12/14/2022	74,700	< 400	< 200	42,900	1,060	< 200	1,900	11,900	5,420	4,720
DUP-08S (AOC3-TP02-N)	Non-Residential	5 ft	12/14/2022	78,300	< 400	< 200	31,000	1,310	< 200	1,700	39,100	11,300	8,880
AOC3-TP02-S	Non-Residential	5 ft	12/14/2022	73,300	< 400	< 200	37,100	1,000	< 200	1,400	12,500	6,460	4,520
AOC3-TP02-W	Non-Residential	5 ft	12/14/2022	75,400	< 400	< 200	36,000	1,250	< 200	1,500	9,840	5,560	6,450
AOC3-TP03-B	Non-Residential	10 ft	12/14/2022	85,700	< 400	< 200	29,000	3,360	< 200	920	26,300	5,010	9,220
AOC3-TP03-E	Non-Residential	5 ft	12/14/2022	62,500	< 400	< 200	49,000	1,400	< 200	1,100	31,800	3,480	5,220
AOC3-TP03-N	Non-Residential	5 ft	12/14/2022	< 60,000	< 400	< 200	46,800	800	< 200	1,200	29,200	4,680	5,420
DUP-09S (AOC3-TP03-N)	Non-Residential	5 ft	12/14/2022	71,400	< 400	< 200	55,400	1,080	< 200	1,000	39,800	7,200	6,350
AOC3-TP03-S	Non-Residential	5 ft	12/14/2022	82,100	< 400	< 200	53,000	1,180	< 200	1,200	25,100	3,250	5,880
AOC3-TP03-W	Non-Residential	5 ft	12/14/2022	62,100	< 400	< 200	49,000	1,000	< 200	1,100	38,000	2,540	4,960
AOC3-TP04-B	Non-Residential	10 ft	12/14/2022	75,100	< 400	< 200	20,000	23,200	< 200	910	28,300	3,170	6,000
AOC3-TP04-E	Non-Residential	5 ft	12/14/2022	68,900	< 400	< 200	< 20,000	880	< 200	1,400	31,700	53,900	5,660
AOC3-TP04-N	Non-Residential	5 ft	12/14/2022	81,000	< 400	< 200	21,200	1,860	< 200	1,300	25,400	4,320	6,960
AOC3-TP04-S	Non-Residential	5 ft	12/14/2022	61,000	< 400	< 200	30,600	1,200	< 200	1,500	58,000	30,600	11,300
AOC3-TP04-W	Non-Residential	5 ft	12/14/2022	< 60,000	< 400	< 200	55,800	1,720	< 200	2,100	55,600	7,560	7,710
DUP-10S (AOC3-TP04-W)	Non-Residential	5 ft	12/14/2022	75,800	< 400	< 200	83,200	1,920	< 200	1,400	112,000	13,200	12,300

Notes:
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Analyte	Potassium	Selenium	Silver	Sodium	Strontium	Thallium	Thorium	Titanium	Vanadium	Zinc
Non-Residential DWP Criteria	NC	4,000	13,000	2.5E+06	2.6E+05	2,300	NC	NC	9.9E+05	5.0E+06
Generic GSI Protection Criteria	NC	410 ⁽⁴⁾	1,000 ⁽⁴⁾	NA	4.2E+05	4,200	NC	NC	4.3E+05	1.7E+05 ⁽²⁾
Non-Residential Groundwater Contact Protection Criteria	NC	7.8E+07	2.0E+08	1.0E+09	1.0E+09	1.5E+07	NC	NC	1.0E+09	1.0E+09
Non-Residential VIAP Screening Level	NC	NA	NA	NA	NA	NA	NC	NC	NA	NA
Non-Residential Direct Contact Criteria	NC	9.6E+06	9.0E+06	1.0E+09	1.0E+09	1.3E+05	NC	NC	5.5E+06	6.3E+08
Statewide Default Background Levels	NC	410 ⁽⁴⁾	1,000 ⁽⁴⁾	NC	NC	NC	NC	NC	NC	47,000
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	Potassium	Selenium	Silver	Sodium	Strontium	Thallium	Thorium	Titanium	Vanadium	Zinc
Investigation Area: Southern Area (continued)													
AOC11-MW-22-07	Non-Residential	2 - 4 ft	12/13/2022	282,000	< 400	< 200	40,800	44,400	< 200	7,000	82,800	7,920	35,700
		8 - 10 ft	12/13/2022	126,000	< 400	< 200	24,600	12,400	< 200	800	23,600	2,040	3,370
AOC7-MW-22-08	Non-Residential	2 - 3 ft	12/12/2022	187,000	< 400	< 200	37,700	24,300	< 200	1,200	48,700	3,980	42,900
		8 - 10 ft	12/13/2022	84,200	< 400	< 200	< 20,000	4,820	< 200	870	5,340	930	2,560
AOC7-MW-22-09	Non-Residential	2 - 4 ft	12/12/2022	186,000	< 400	< 200	45,200	20,100	< 200	1,100	24,600	2,660	7,120
		8 - 10 ft	12/12/2022	1,880,000	430	790	487,000	108,000	< 200	1,900	217,000	17,500	177,000
AOC11-MW-22-10	Non-Residential	2 - 4 ft	12/13/2022	276,000	< 400	810	56,900	39,200	< 200	1,300	80,800	8,120	47,900
		8 - 10 ft	12/13/2022	119,000	< 400	< 200	32,700	32,400	< 200	940	17,100	1,870	13,400
AOC3-MW-22-11	Non-Residential	2 - 4 ft	12/13/2022	42,000	< 400	< 200	44,900	790	< 200	1,000	22,800	< 500	1,090
		8 - 10 ft	12/13/2022	53,800	< 400	< 200	24,700	1,060	< 200	780	6,060	830	2,710
AOC3-MW-22-12	Non-Residential	2 - 4 ft	12/13/2022	21,200	< 400	< 200	< 20,000	< 500	< 200	640	< 64,300	< 4,560	1,330
		8 - 10 ft	12/13/2022	54,400	< 400	< 200	< 20,000	18,800	< 200	820	3,350	< 500	1,500
AOC9-MW-22-13	Non-Residential	2 - 4 ft	12/14/2022	45,100	< 400	< 200	64,600	690	< 200	1,100	44,000	2,170	1,020
		8 - 10 ft	12/14/2022	67,800	< 400	< 200	44,500	29,200	< 200	1,300	5,370	950	2,430
AOC9-MW-22-14	Non-Residential	2 - 4 ft	12/14/2022	63,300	< 400	< 200	24,100	1,470	< 200	560	5,860	530	2,910
		8 - 10 ft	12/14/2022	100,000	< 400	< 200	32,100	1,680	< 200	780	6,120	1,890	3,890
AOC9-MW-22-15	Non-Residential	2 - 4 ft	12/14/2022	67,300	< 400	< 200	33,300	1,690	< 200	680	11,800	3,230	2,270
		8 - 10 ft	12/14/2022	36,600	< 400	< 200	< 15,000	1,590	< 200	870	4,290	4,020	6,010
AOC9-MW-22-16	Non-Residential	2 - 4 ft	12/14/2022	90,000	< 400	< 200	23,000	6,070	< 200	810	23,100	3,300	5,550
		8 - 10 ft	12/14/2022	91,400	< 400	< 200	43,300	27,200	< 200	1,100	3,900	2,330	4,950
AOC10-MW-22-17	Non-Residential	2 - 4 ft	12/15/2022	65,200	< 400	< 200	< 20,000	2,100	< 200	1,700	66,300	6,240	8,300
		8 - 10 ft	12/15/2022	65,100	< 400	< 200	< 20,000	2,730	< 200	1,100	43,900	6,510	5,650
AOC8-MW-22-18	Non-Residential	2 - 4 ft	12/15/2022	174,000	440	< 200	94,700	33,900	< 200	1,300	34,100	10,000	27,900
		8 - 10 ft	12/15/2022	94,800	< 400	< 200	235,000	1,570	< 200	1,200	9,250	3,910	6,130
AOC8-MW-22-19	Non-Residential	2 - 4 ft	12/15/2022	106,000	< 400	< 200	< 20,000	8,950	< 200	1,500	37,400	4,970	10,800
		8 - 10 ft	12/15/2022	107,000	< 400	< 200	< 20,000	13,200	< 200	1,100	45,900	6,700	9,400
AOC12-MW-22-20	Non-Residential	2 - 4 ft	12/15/2022	125,000	< 400	< 200	43,000	19,000	< 200	1,200	24,800	4,730	12,100
		10 - 12 ft	12/15/2022	309,000	< 400	< 200	54,300	33,800	< 200	910	21,500	4,360	16,300
AOC12-MW-22-21	Non-Residential	2 - 4 ft	12/16/2022	103,000	< 400	< 200	< 20,000	4,990	< 200	1,200	23,800	3,870	10,100
		8 - 10 ft	12/16/2022	355,000	< 400	< 200	119,000	97,500	< 200	4,500	192,000	13,500	89,400
AOC9-SB-01	Non-Residential	2 - 4 ft	12/14/2022	89,100	< 400	< 200	52,000	820	< 200	1,600	30,500	2,160	2,340
		8 - 10 ft	12/14/2022	107,000	< 400	< 200	36,800	960	< 200	2,000	2,040	1,140	3,950
AOC9-SB-02	Non-Residential	2 - 4 ft	12/14/2022	92,600	< 400	< 200	24,500	5,240	< 200	950	15,500	2,800	10,900
		8 - 10 ft	12/14/2022	100,000	< 400	< 200	24,800	1,490	< 200	690	2,530	2,680	3,690

Notes:
 Residential (R)/Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, R/NR Groundwater Contact Protection Criteria, R/NR Soil Direct Contact Criteria, R/NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and R/NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.
 Residential (R) and Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).
 Only analytes with one or more detection are reported.
 ug/kg = microgram per kilogram
 NA = Not Applicable; NC = No Criterion; NLV = Not Likely to Volatilize; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed
Bold font denotes concentrations detected above laboratory reporting limits.
 Denotes concentrations above one or more criteria.
 1) Criterion for chromium (VI).
 2) Criterion dependent on hardness (Footnote {G}, Michigan Part 201 Criteria Tables); Criterion shown is based on an estimated hardness of 150 mg CaCO₃/L for the southern Lower Peninsula per the EGLE RRD *GSI Pathway Compliance Options*, April 2018.
 3) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote {X}, Michigan Part 201 Criteria Tables).
 4) Background as defined in R299.5701(b) may be substituted if higher than the calculated clean up criterion (Footnote {B}, Michigan Part 201 Criteria Tables).
 5) Value for total chromium.

Table 7
 Summary of Detected Volatile Organic Compounds and Alcohols in Soil
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	1,4-Dioxane	Acetone	Hexachloro-butadiene	Methanol	Naphthalene	Trichlorofluoro-methane (Freon 11)
Non-Residential DWP Criteria	7,000	42,000	72,000	2.0E+05	1.0E+05	1.5E+05
Generic GSI Protection Criteria	56,000 ⁽¹⁾	34,000	91	3.1E+06	730	NA
Non-Residential Groundwater Contact Protection Criteria	3.4E+07	1.1E+08	3.5E+05	3.1E+06	2.1E+06	5.6E+05
Non-Residential VIAP Screening Level	10,000	3.1E+06	69	1.7E+07	1,900	340
Non-Residential Direct Contact Criteria	2.4E+06	7.3E+07	3.5E+05	3.1E+06	5.2E+07	5.6E+05
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	1,4-Dioxane	Acetone	Hexachloro-butadiene	Methanol	Naphthalene	Trichlorofluoro-methane (Freon 11)
Investigation Area: Southern Area									
MW-116	Non-Residential	7 - 8 ft	3/30/2020	--	< 1,330	--	9,010	< 382	< 133
MW-117	Non-Residential	6 - 7 ft	3/30/2020	--	< 2,380	--	5,230	< 375	< 238
MW-118	Non-Residential	10 - 11 ft	3/30/2020	--	< 1,730	--	17,100	< 350	< 173
MW-122	Non-Residential	4 - 5 ft	6/15/2020	--	< 1,050	--	< 4,830	< 348	< 105
MW-123	Non-Residential	4 - 5 ft	6/15/2020	--	< 957	--	< 4,700	< 316	< 95.7
MW-124	Non-Residential	4 - 5 ft	6/15/2020	--	< 986	--	< 4,700	< 326	< 98.6
MW-125	Non-Residential	4 - 5 ft	6/16/2020	--	< 1,050	--	< 4,670	< 347	< 105
MW-126	Non-Residential	4 - 5 ft	6/15/2020	--	< 950	--	< 4,610	< 313	< 95
		7.5 - 8.5 ft	6/15/2020	--	< 995	--	< 4,710	< 328	< 99.5
MW-127	Non-Residential	6 - 7 ft	6/15/2020	--	< 1,220	--	< 4,990	< 366	< 122
		10 - 11 ft	6/15/2020	--	< 1,070	--	< 4,770	< 353	< 107
MW-128	Non-Residential	4 - 5 ft	6/15/2020	--	< 1,310	--	< 5,150	< 432	< 131
		8 - 9 ft	6/15/2020	--	< 1,270	--	< 4,890	< 347	< 127
MW-129	Non-Residential	3 - 4 ft	6/15/2020	--	< 1,020	--	< 4,620	< 337	< 102
MW-130	Non-Residential	4 - 5 ft	6/15/2020	--	< 991	--	< 4,650	< 327	< 99.1
MW-131	Non-Residential	2 - 3 ft	6/15/2020	--	< 1,480	--	< 5,650	< 422	< 148
MW-132	Non-Residential	5.5 - 6.5 ft	8/12/2020	--	< 902	--	--	< 298	< 90.2
MW-133	Non-Residential	3 - 4 ft	8/12/2020	--	< 802	--	--	< 265	< 80.2
		10 - 11 ft	8/12/2020	--	< 921	--	--	< 304	< 92.1

Notes:

Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, NR Soil Direct Contact Criteria, NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.

Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).

Only analytes with one or more detection are reported.

ug/kg = microgram per kilogram

NA = Not Applicable; -- = Parameter Not Analyzed

Bold font denotes concentrations detected above laboratory reporting limits.

 Denotes concentrations above one or more criteria.

1) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).

Table 7
 Summary of Detected Volatile Organic Compounds and Alcohols in Soil
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	1,4-Dioxane	Acetone	Hexachloro-butadiene	Methanol	Naphthalene	Trichlorofluoro-methane (Freon 11)
Non-Residential DWP Criteria	7,000	42,000	72,000	2.0E+05	1.0E+05	1.5E+05
Generic GSI Protection Criteria	56,000 ⁽¹⁾	34,000	91	3.1E+06	730	NA
Non-Residential Groundwater Contact Protection Criteria	3.4E+07	1.1E+08	3.5E+05	3.1E+06	2.1E+06	5.6E+05
Non-Residential VIAP Screening Level	10,000	3.1E+06	69	1.7E+07	1,900	340
Non-Residential Direct Contact Criteria	2.4E+06	7.3E+07	3.5E+05	3.1E+06	5.2E+07	5.6E+05
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	1,4-Dioxane	Acetone	Hexachloro-butadiene	Methanol	Naphthalene	Trichlorofluoro-methane (Freon 11)
Investigation Area: Southern Area (continued)									
AOC10-TP01-B	Non-Residential	10 ft	12/12/2022	< 50	< 1,000	< 50	< 4,400	< 300	< 100
AOC10-TP01-E	Non-Residential	5 ft	12/12/2022	< 60	< 1,000	< 60	< 4,600	< 300	< 100
AOC10-TP01-N	Non-Residential	5 ft	12/12/2022	< 60	< 1,000	< 60	< 4,000	< 300	< 100
AOC10-TP01-S	Non-Residential	5 ft	12/12/2022	< 60	< 1,000	< 60	< 3,900	< 300	< 100
AOC10-TP01-W	Non-Residential	5 ft	12/12/2022	< 50	< 1,000	< 50	< 3,900	< 300	< 100
AOC10-TP02-B	Non-Residential	10 ft	12/12/2022	< 60	< 1,000	< 60	< 4,400	< 300	< 100
AOC10-TP02-E	Non-Residential	5 ft	12/12/2022	< 50	< 1,000	< 50	< 3,800	< 200	< 100
AOC10-TP02-N	Non-Residential	5 ft	12/12/2022	< 50	< 1,000	< 50	< 4,000	< 300	< 100
AOC10-TP02-S	Non-Residential	5 ft	12/12/2022	< 50	< 1,000	< 50	< 3,800	< 300	< 100
AOC10-TP02-W	Non-Residential	5 ft	12/12/2022	< 50	< 1,000	< 50	< 3,900	< 300	< 100
AOC11-TP01-B	Non-Residential	10 ft	12/13/2022	< 60	< 1,000	< 60	< 2,100	< 300	< 100
AOC11-TP01-E	Non-Residential	5 ft	12/13/2022	< 60	< 1,000	< 60	< 2,100	< 300	< 100
AOC11-TP01-N	Non-Residential	5 ft	12/13/2022	< 50	< 1,000	< 50	< 2,100	< 300	< 100
AOC11-TP01-S	Non-Residential	5 ft	12/13/2022	< 100	< 2,000	< 100	< 2,200	< 600	< 200
DUP-03S (AOC11-TP01-S)	Non-Residential	5 ft	12/13/2022	< 60	< 1,000	< 60	< 2,200	< 300	< 100
AOC11-TP01-W	Non-Residential	5 ft	12/13/2022	< 60	< 1,000	< 60	< 2,100	< 300	< 100
AOC11-TP02-B	Non-Residential	10 ft	12/13/2022	< 50	< 1,000	< 50	< 2,400	< 300	< 100
AOC11-TP02-E	Non-Residential	5 ft	12/13/2022	< 50	< 1,000	< 50	< 2,000	< 300	< 100
AOC11-TP02-N	Non-Residential	5 ft	12/13/2022	< 50	< 1,000	< 50	< 2,100	< 300	< 100
DUP-04S (AOC11-TP02-N)	Non-Residential	5 ft	12/13/2022	< 50	< 1,000	< 50	< 2,100	< 300	< 100
AOC11-TP02-S	Non-Residential	5 ft	12/13/2022	< 70	< 2,000	< 70	< 2,100	< 400	< 100
AOC11-TP02-W	Non-Residential	5 ft	12/13/2022	< 50	< 1,000	< 50	< 2,100	< 300	< 100
AOC11-TP03-B	Non-Residential	10 ft	12/13/2022	< 60	< 1,000	< 60	< 2,200	< 300	< 100
AOC11-TP03-E	Non-Residential	5 ft	12/13/2022	< 50	< 1,000	< 50	< 2,100	< 300	< 100
AOC11-TP03-N	Non-Residential	5 ft	12/13/2022	< 50	< 1,000	< 50	< 2,100	< 300	< 100
DUP-05S (AOC11-TP03-N)	Non-Residential	5 ft	12/13/2022	< 60	< 1,000	< 60	< 2,000	< 300	< 100
AOC11-TP03-S	Non-Residential	5 ft	12/13/2022	< 50	< 1,000	< 50	< 2,100	< 300	< 100
AOC11-TP03-W	Non-Residential	5 ft	12/13/2022	< 60	< 1,000	< 60	< 2,100	< 300	< 100
AOC11-TP04-B	Non-Residential	10 ft	12/13/2022	< 60	< 1,000	< 60	< 2,300	< 300	< 100
AOC11-TP04-E	Non-Residential	5 ft	12/13/2022	< 50	< 1,000	< 50	< 2,100	< 300	< 100
AOC11-TP04-N	Non-Residential	5 ft	12/13/2022	< 60	< 1,000	< 60	< 2,100	< 300	< 100
DUP-06S (AOC11-TP04-N)	Non-Residential	5 ft	12/13/2022	< 60	< 1,000	< 60	< 2,200	< 300	< 100
AOC11-TP04-S	Non-Residential	5 ft	12/13/2022	< 60	< 1,000	< 60	< 2,100	< 300	< 100
AOC11-TP04-W	Non-Residential	5 ft	12/13/2022	< 60	< 1,000	< 60	< 2,100	< 300	< 100
AOC12-TP01-B	Non-Residential	10 ft	12/15/2022	< 70	< 1,000	< 70	< 2,200	< 300	< 100
AOC12-TP01-E	Non-Residential	5 ft	12/15/2022	< 60	< 1,000	< 60	--	< 300	< 100
DUP-11S (AOC12-TP01-E)	Non-Residential	5 ft	12/15/2022	< 60	< 1,000	< 60	< 2,100	< 300	< 100
AOC12-TP01-N	Non-Residential	5 ft	12/15/2022	< 60	< 1,000	< 60	< 2,200	< 300	< 100
AOC12-TP01-S	Non-Residential	5 ft	12/15/2022	< 60	< 1,000	< 60	< 2,300	< 300	< 100
AOC12-TP01-W	Non-Residential	5 ft	12/15/2022	< 60	< 1,000	< 60	< 2,200	< 300	< 100

Notes:

Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, NR Soil Direct Contact Criteria, NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.

Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).

Only analytes with one or more detection are reported.

ug/kg = microgram per kilogram

NA = Not Applicable; -- = Parameter Not Analyzed

Bold font denotes concentrations detected above laboratory reporting limits.

Green background denotes concentrations above one or more criteria.

1) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).

Table 7
 Summary of Detected Volatile Organic Compounds and Alcohols in Soil
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	1,4-Dioxane	Acetone	Hexachloro-butadiene	Methanol	Naphthalene	Trichlorofluoro-methane (Freon 11)
Non-Residential DWP Criteria	7,000	42,000	72,000	2.0E+05	1.0E+05	1.5E+05
Generic GSI Protection Criteria	56,000 ⁽¹⁾	34,000	91	3.1E+06	730	NA
Non-Residential Groundwater Contact Protection Criteria	3.4E+07	1.1E+08	3.5E+05	3.1E+06	2.1E+06	5.6E+05
Non-Residential VIAP Screening Level	10,000	3.1E+06	69	1.7E+07	1,900	340
Non-Residential Direct Contact Criteria	2.4E+06	7.3E+07	3.5E+05	3.1E+06	5.2E+07	5.6E+05
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	1,4-Dioxane	Acetone	Hexachloro-butadiene	Methanol	Naphthalene	Trichlorofluoro-methane (Freon 11)
Investigation Area: Southern Area (continued)									
AOC12-TP02-B	Non-Residential	10 ft	12/15/2022	< 60	< 1,000	< 60	3,600	< 300	< 100
AOC12-TP02-E	Non-Residential	5 ft	12/15/2022	< 50	< 1,000	< 50	< 2,000	< 300	< 100
DUP-12S (AOC12-TP02-E)	Non-Residential	5 ft	12/15/2022	< 50	< 1,000	< 50	< 2,100	< 300	< 100
AOC12-TP02-N	Non-Residential	5 ft	12/15/2022	< 60	< 1,000	< 60	3,900	< 300	< 100
AOC12-TP02-S	Non-Residential	5 ft	12/15/2022	< 50	< 1,000	< 50	3,000	< 300	< 100
AOC12-TP02-W	Non-Residential	5 ft	12/15/2022	< 50	< 1,000	< 50	4,000	< 300	< 100
AOC12-TP03-B	Non-Residential	10 ft	12/15/2022	< 70	< 1,000	< 70	< 2,100	< 400	< 100
AOC12-TP03-E	Non-Residential	5 ft	12/15/2022	< 50	< 1,000	< 50	< 2,100	< 300	< 100
AOC12-TP03-N	Non-Residential	5 ft	12/15/2022	< 50	< 1,000	< 50	< 2,100	< 300	< 100
AOC12-TP03-S	Non-Residential	5 ft	12/15/2022	< 50	< 1,000	< 50	2,700	< 300	< 100
AOC12-TP03-W	Non-Residential	5 ft	12/15/2022	< 60	< 1,000	< 60	< 2,200	< 300	< 100
AOC3-TP01-B	Non-Residential	10 ft	12/14/2022	< 70	< 1,000	< 70	< 2,300	< 300	< 100
AOC3-TP01-E	Non-Residential	5 ft	12/14/2022	< 50	< 1,000	< 50	< 2,000	< 300	< 100
AOC3-TP01-N	Non-Residential	5 ft	12/14/2022	< 50	< 1,000	< 50	< 2,000	< 300	< 100
AOC3-TP01-S	Non-Residential	5 ft	12/14/2022	< 50	< 1,000	< 50	< 2,000	< 300	< 100
AOC3-TP01-W	Non-Residential	5 ft	12/14/2022	< 50	< 1,000	< 50	< 1,900	< 300	< 100
DUP-07S (AOC3-TP01-W)	Non-Residential	5 ft	12/14/2022	< 50	< 1,000	< 50	< 2,100	< 300	< 100
AOC3-TP02-B	Non-Residential	10 ft	12/14/2022	< 60	< 1,000	< 60	< 2,300	< 300	< 100
AOC3-TP02-E	Non-Residential	5 ft	12/14/2022	< 50	< 1,000	< 50	< 2,000	< 300	< 100
AOC3-TP02-N	Non-Residential	5 ft	12/14/2022	< 50	< 1,000	< 50	< 2,100	< 300	< 100
DUP-08S (AOC3-TP02-N)	Non-Residential	5 ft	12/14/2022	< 50	< 1,000	< 50	< 2,000	< 300	< 100
AOC3-TP02-S	Non-Residential	5 ft	12/14/2022	< 50	< 1,000	< 50	< 2,000	< 300	< 100
AOC3-TP02-W	Non-Residential	5 ft	12/14/2022	< 50	< 1,000	< 50	< 2,100	< 300	< 100
AOC3-TP03-B	Non-Residential	10 ft	12/14/2022	< 60	< 1,000	< 60	< 2,400	< 300	< 100
AOC3-TP03-E	Non-Residential	5 ft	12/14/2022	< 60	< 1,000	< 60	4,000	< 300	< 100
AOC3-TP03-N	Non-Residential	5 ft	12/14/2022	< 50	< 1,000	< 50	< 2,100	< 300	< 100
DUP-09S (AOC3-TP03-N)	Non-Residential	5 ft	12/14/2022	< 50	< 1,000	< 50	5,700	< 300	< 100
AOC3-TP03-S	Non-Residential	5 ft	12/14/2022	< 60	< 1,000	< 60	3,900	< 300	< 100
AOC3-TP03-W	Non-Residential	5 ft	12/14/2022	< 50	< 1,000	< 50	4,800	< 300	< 100
AOC3-TP04-B	Non-Residential	10 ft	12/14/2022	< 60	2,000	< 60	16,000	< 300	< 100
AOC3-TP04-E	Non-Residential	5 ft	12/14/2022	< 50	< 1,000	170	4,600	< 300	< 100
AOC3-TP04-N	Non-Residential	5 ft	12/14/2022	< 50	< 1,000	< 50	< 2,100	< 200	< 100
AOC3-TP04-S	Non-Residential	5 ft	12/14/2022	< 50	< 1,000	200	9,100	< 300	< 100
AOC3-TP04-W	Non-Residential	5 ft	12/14/2022	< 50	< 1,000	80	3,600	< 300	< 100
DUP-10S (AOC3-TP04-W)	Non-Residential	5 ft	12/14/2022	< 50	2,000	< 50	< 4,000	< 300	< 100

Notes:

Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, NR Soil Direct Contact Criteria, NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.

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 Ferndale, MI

Analyte	1,4-Dioxane	Acetone	Hexachloro-butadiene	Methanol	Naphthalene	Trichlorofluoro-methane (Freon 11)
Non-Residential DWP Criteria	7,000	42,000	72,000	2.0E+05	1.0E+05	1.5E+05
Generic GSI Protection Criteria	56,000 ⁽¹⁾	34,000	91	3.1E+06	730	NA
Non-Residential Groundwater Contact Protection Criteria	3.4E+07	1.1E+08	3.5E+05	3.1E+06	2.1E+06	5.6E+05
Non-Residential VIAP Screening Level	10,000	3.1E+06	69	1.7E+07	1,900	340
Non-Residential Direct Contact Criteria	2.4E+06	7.3E+07	3.5E+05	3.1E+06	5.2E+07	5.6E+05
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	1,4-Dioxane	Acetone	Hexachloro-butadiene	Methanol	Naphthalene	Trichlorofluoro-methane (Freon 11)
Investigation Area: Southern Area (continued)									
MW-22-07	Non-Residential	2 - 4 ft	12/13/2022	< 60	< 1,000	< 60	150,000	< 300	< 100
		8 - 10 ft	12/13/2022	70	< 1,000	< 60	180,000	< 300	< 100
MW-22-08	Non-Residential	2 - 3 ft	12/12/2022	< 60	< 1,000	< 60	< 3,800	< 300	< 100
		8 - 10 ft	12/13/2022	80	< 1,000	< 60	280,000	< 300	< 100
MW-22-09	Non-Residential	2 - 4 ft	12/12/2022	< 70	< 1,000	< 50	< 3,900	< 300	< 100
		8 - 10 ft	12/12/2022	< 70	< 1,000	< 70	< 4,100	900	500
MW-22-10	Non-Residential	2 - 4 ft	12/13/2022	< 60	< 1,000	< 60	160,000	< 300	< 100
		8 - 10 ft	12/13/2022	60	< 1,000	< 50	110,000	< 300	< 100
MW-22-11	Non-Residential	2 - 4 ft	12/13/2022	< 50	< 1,000	< 50	270,000	< 300	< 100
		8 - 10 ft	12/13/2022	< 80	< 2,000	< 50	560,000	< 300	< 100
MW-22-12	Non-Residential	2 - 4 ft	12/13/2022	< 60	< 1,000	< 60	140,000	< 300	< 100
		8 - 10 ft	12/13/2022	< 50	< 1,000	< 50	250,000	< 300	< 100
MW-22-13	Non-Residential	2 - 4 ft	12/14/2022	< 50	< 1,000	< 50	100,000	< 300	< 100
		8 - 10 ft	12/14/2022	< 50	< 1,000	< 50	210,000	< 300	< 100
MW-22-14	Non-Residential	2 - 4 ft	12/14/2022	90	1,000	< 50	< 2,100	< 300	< 100
		8 - 10 ft	12/14/2022	< 50	1,000	< 50	< 2,100	< 300	< 100
MW-22-15	Non-Residential	2 - 4 ft	12/14/2022	< 60	1,000	< 60	< 2,200	< 300	< 100
		8 - 10 ft	12/14/2022	< 60	2,000	< 60	< 2,000	< 300	< 100
MW-22-16	Non-Residential	2 - 4 ft	12/14/2022	< 60	2,000	< 60	< 2,000	< 300	< 100
		8 - 10 ft	12/14/2022	< 50	2,000	< 50	< 2,000	< 300	< 100
MW-22-17	Non-Residential	2 - 4 ft	12/15/2022	< 70	< 1,000	< 70	< 2,200	< 300	< 100
		8 - 10 ft	12/15/2022	< 60	< 1,000	< 60	< 2,200	< 300	< 100
MW-22-18	Non-Residential	2 - 4 ft	12/15/2022	< 60	< 1,000	< 60	< 2,100	< 300	< 100
		8 - 10 ft	12/15/2022	< 50	< 1,000	< 50	< 2,200	< 300	< 100
MW-22-19	Non-Residential	2 - 4 ft	12/15/2022	< 50	< 1,000	< 50	< 2,100	< 300	< 100
		8 - 10 ft	12/15/2022	< 50	< 1,000	< 50	< 2,100	< 300	< 100
MW-22-20	Non-Residential	2 - 4 ft	12/15/2022	< 70	< 1,000	< 70	< 2,100	< 300	< 100
		10 - 12 ft	12/15/2022	< 50	< 1,000	< 50	< 2,300	< 300	< 100
MW-22-21	Non-Residential	2 - 4 ft	12/16/2022	1,250	< 1,000	< 60	< 2,200	< 300	< 100
		8 - 10 ft	12/16/2022	< 60	< 1,000	< 60	< 2,200	< 300	< 100
SB-01	Non-Residential	2 - 4 ft	12/14/2022	< 50	1,000	< 50	< 2,000	< 200	< 100
		8 - 10 ft	12/14/2022	60	1,000	< 50	< 2,100	< 300	< 100
SB-02	Non-Residential	2 - 4 ft	12/14/2022	< 60	2,000	< 60	< 2,200	< 300	< 100
		8 - 10 ft	12/14/2022	< 50	1,000	< 50	< 2,100	< 300	< 100

Notes:

Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, NR Soil Direct Contact Criteria, NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.

Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).

Only analytes with one or more detection are reported.

ug/kg = microgram per kilogram

NA = Not Applicable; -- = Parameter Not Analyzed

Bold font denotes concentrations detected above laboratory reporting limits.

Green background denotes concentrations above one or more criteria.

1) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote [X], Michigan Part 201 Criteria Tables).

Table 8
 Summary of Detected Semi-Volatile Organic Compounds in Soil
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)-anthracene ⁽¹⁾	Benzo(a)pyrene ⁽¹⁾	Benzo(b)-fluoranthene ⁽¹⁾	Benzo(g,h,i)-perylene
Non-Residential DWP Criteria	1.7E+05	8.8E+05	17,000	41,000	NLL	NLL	NLL	NLL
Generic GSI Protection Criteria	4,200	8,700	ID	ID	NLL	NLL	NLL	NLL
Non-Residential Groundwater Contact Protection Criteria	5.5E+06	9.7E+05	4.4E+05	41,000	NLL	NLL	NLL	NLL
Non-Residential VIAP Screening Level	30,000	3.6E+06	ID	2.2E+08	1.1E+07	NA	NA	NA
Non-Residential Direct Contact Criteria	2.6E+07	1.3E+08	5.2E+06	7.3E+08	80,000	8,000	80,000	7.0E+06
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)-anthracene ⁽¹⁾	Benzo(a)pyrene ⁽¹⁾	Benzo(b)-fluoranthene ⁽¹⁾	Benzo(g,h,i)-perylene
Investigation Area: Southern Area											
MW-116	Non-Residential	7 - 8 ft	3/30/2020	< 382	< 382	< 382	< 382	< 382	< 382	< 382	< 382
MW-117	Non-Residential	6 - 7 ft	3/30/2020	< 375	< 375	< 375	< 375	< 375	< 375	< 375	< 375
MW-118	Non-Residential	10 - 11 ft	3/30/2020	< 350	< 350	< 350	< 350	< 350	< 350	< 350	< 350
MW-122	Non-Residential	4 - 5 ft	6/15/2020	< 352	< 352	< 352	< 352	< 352	< 352	427	< 352
MW-123	Non-Residential	4 - 5 ft	6/15/2020	< 344	< 344	< 344	< 344	< 344	< 344	< 344	< 344
MW-124	Non-Residential	4 - 5 ft	6/15/2020	< 350	< 350	< 350	< 350	< 350	< 350	< 350	< 350
MW-125	Non-Residential	4 - 5 ft	6/16/2020	< 347	< 347	< 347	549	2,190	1,860	2,650	1,000
MW-126	Non-Residential	4 - 5 ft	6/15/2020	< 344	< 344	< 344	< 344	< 344	< 344	461	< 344
MW-126	Non-Residential	7.5 - 8.5 ft	6/15/2020	< 333	< 333	< 333	< 333	< 333	< 333	< 333	< 333
MW-127	Non-Residential	6 - 7 ft	6/15/2020	< 366	< 366	< 366	< 366	< 366	< 366	< 366	< 366
		10 - 11 ft	6/15/2020	61,800	< 8,880	< 8,880	9,250	< 8,880	< 8,880	< 8,880	< 8,880
MW-128	Non-Residential	4 - 5 ft	6/15/2020	< 427	< 427	< 427	841	1,510	765	1,110	496
		8 - 9 ft	6/15/2020	< 347	< 347	< 347	< 347	< 347	< 347	< 347	< 347
MW-129	Non-Residential	3 - 4 ft	6/15/2020	< 1,630	< 1,630	< 1,630	< 1,630	1,650	< 1,630	2,220	< 1,630
MW-130	Non-Residential	4 - 5 ft	6/15/2020	< 348	< 348	< 348	< 348	< 348	< 348	< 348	< 348
MW-131	Non-Residential	2 - 3 ft	6/15/2020	< 422	< 422	< 422	< 422	< 422	< 422	< 422	< 422
MW-132	Non-Residential	5.5 - 6.5 ft	8/12/2020	< 369	< 369	< 369	485	1,490	1,370	1,750	851
MW-133	Non-Residential	3 - 4 ft	8/12/2020	< 1,790	5,470	< 1,790	7,580	21,100	20,400	27,200	13,300
		10 - 11 ft	8/12/2020	< 3,940	< 3,940	< 3,940	5,700	16,100	14,500	20,500	8,410

Notes:

Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, NR Soil Direct Contact Criteria, NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.

Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).

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Bold font denotes concentrations detected above laboratory reporting limits.

Green background denotes concentrations above one or more criteria.

1) Criteria for carcinogenic polycyclic aromatic hydrocarbons were developed using relative potential potencies to benzo(a)pyrene (Footnote (Q), Michigan Part 201 Criteria Tables).

2) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).

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Non-Residential DWP Criteria	1.7E+05	8.8E+05	17,000	41,000	NLL	NLL	NLL	NLL
Generic GSI Protection Criteria	4,200	8,700	ID	ID	NLL	NLL	NLL	NLL
Non-Residential Groundwater Contact Protection Criteria	5.5E+06	9.7E+05	4.4E+05	41,000	NLL	NLL	NLL	NLL
Non-Residential VIAP Screening Level	30,000	3.6E+06	ID	2.2E+08	1.1E+07	NA	NA	NA
Non-Residential Direct Contact Criteria	2.6E+07	1.3E+08	5.2E+06	7.3E+08	80,000	8,000	80,000	7.0E+06
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)-anthracene ⁽¹⁾	Benzo(a)pyrene ⁽¹⁾	Benzo(b)-fluoranthene ⁽¹⁾	Benzo(g,h,i)-perylene
Investigation Area: Southern Area (continued)											
AOC10-TP01-B	Non-Residential	10 ft	12/12/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC10-TP01-E	Non-Residential	5 ft	12/12/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC10-TP01-N	Non-Residential	5 ft	12/12/2022	--	580	< 330	1,440	4,830	4,200	5,450	1,270
AOC10-TP01-S	Non-Residential	5 ft	12/12/2022	--	< 330	< 330	< 330	1,230	1,260	1,290	520
AOC10-TP01-W	Non-Residential	5 ft	12/12/2022	--	< 330	< 330	< 330	390	370	380	< 330
AOC10-TP02-B	Non-Residential	10 ft	12/12/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC10-TP02-E	Non-Residential	5 ft	12/12/2022	--	< 330	< 330	< 330	420	360	< 330	< 330
AOC10-TP02-N	Non-Residential	5 ft	12/12/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC10-TP02-S	Non-Residential	5 ft	12/12/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC10-TP02-W	Non-Residential	5 ft	12/12/2022	--	< 330	< 330	< 330	340	< 330	< 330	< 330
AOC11-TP01-B	Non-Residential	10 ft	12/13/2022	--	< 330	< 330	< 330	630	750	750	530
AOC11-TP01-E	Non-Residential	5 ft	12/13/2022	--	950	< 330	2,560	4,610	3,800	3,950	1,050
AOC11-TP01-N	Non-Residential	5 ft	12/13/2022	--	640	< 330	1,350	3,800	3,580	4,040	1,410
AOC11-TP01-S	Non-Residential	5 ft	12/13/2022	--	< 330	< 330	< 330	390	410	440	< 330
DUP-03S (AOC11-TP01-S)	Non-Residential	5 ft	12/13/2022	--	< 330	< 330	< 330	570	710	890	< 330
AOC11-TP01-W	Non-Residential	5 ft	12/13/2022	--	< 330	< 330	< 330	430	440	420	< 330
AOC11-TP02-B	Non-Residential	10 ft	12/13/2022	--	< 330	< 330	< 330	360	360	340	< 330
AOC11-TP02-E	Non-Residential	5 ft	12/13/2022	--	< 330	< 330	< 330	430	410	430	< 330
AOC11-TP02-N	Non-Residential	5 ft	12/13/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
DUP-04S (AOC11-TP02-N)	Non-Residential	5 ft	12/13/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC11-TP02-S	Non-Residential	5 ft	12/13/2022	--	< 330	< 330	< 330	430	440	450	< 330
AOC11-TP02-W	Non-Residential	5 ft	12/13/2022	--	< 330	< 330	370	1,620	1,460	1,940	450
AOC11-TP03-B	Non-Residential	10 ft	12/13/2022	--	< 330	< 330	< 330	490	470	460	< 330
AOC11-TP03-E	Non-Residential	5 ft	12/13/2022	--	1,300	< 1,000	5,000	13,400	11,800	10,500	5,900
AOC11-TP03-N	Non-Residential	5 ft	12/13/2022	--	< 330	< 330	< 330	360	340	< 330	< 330
DUP-05S (AOC11-TP03-N)	Non-Residential	5 ft	12/13/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC11-TP03-S	Non-Residential	5 ft	12/13/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC11-TP03-W	Non-Residential	5 ft	12/13/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC11-TP04-B	Non-Residential	10 ft	12/13/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC11-TP04-E	Non-Residential	5 ft	12/13/2022	--	< 330	< 330	< 330	400	450	420	< 330
AOC11-TP04-N	Non-Residential	5 ft	12/13/2022	--	< 330	< 330	< 330	720	970	1,060	770
DUP-06S (AOC11-TP04-N)	Non-Residential	5 ft	12/13/2022	--	< 330	< 330	< 330	640	740	800	350
AOC11-TP04-S	Non-Residential	5 ft	12/13/2022	--	< 330	< 330	< 330	920	970	1,010	610
AOC11-TP04-W	Non-Residential	5 ft	12/13/2022	--	< 1,300	< 1,300	4,200	16,400	12,600	11,900	6,900

Notes:

Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, NR Soil Direct Contact Criteria, NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.

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Non-Residential DWP Criteria	1.7E+05	8.8E+05	17,000	41,000	NLL	NLL	NLL	NLL
Generic GSI Protection Criteria	4,200	8,700	ID	ID	NLL	NLL	NLL	NLL
Non-Residential Groundwater Contact Protection Criteria	5.5E+06	9.7E+05	4.4E+05	41,000	NLL	NLL	NLL	NLL
Non-Residential VIAP Screening Level	30,000	3.6E+06	ID	2.2E+08	1.1E+07	NA	NA	NA
Non-Residential Direct Contact Criteria	2.6E+07	1.3E+08	5.2E+06	7.3E+08	80,000	8,000	80,000	7.0E+06
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)-anthracene ⁽¹⁾	Benzo(a)pyrene ⁽¹⁾	Benzo(b)-fluoranthene ⁽¹⁾	Benzo(g,h,i)-perylene
Investigation Area: Southern Area (continued)											
AOC12-TP01-B	Non-Residential	10 ft	12/15/2022	--	5,240	< 430	10,740	27,490	27,770	28,910	12,070
AOC12-TP01-E	Non-Residential	5 ft	12/15/2022	--	2,330	< 330	5,250	19,060	19,990	23,270	7,700
DUP-11S (AOC12-TP01-E)	Non-Residential	5 ft	12/15/2022	--	5,430	< 400	10,560	32,990	33,660	38,190	13,640
AOC12-TP01-N	Non-Residential	5 ft	12/15/2022	--	2,890	< 330	6,100	22,340	23,840	25,860	8,120
AOC12-TP01-S	Non-Residential	5 ft	12/15/2022	--	2,560	< 330	5,530	20,010	22,020	24,820	6,860
AOC12-TP01-W	Non-Residential	5 ft	12/15/2022	--	3,450	< 330	6,490	22,060	24,020	28,580	8,570
AOC12-TP02-B	Non-Residential	10 ft	12/15/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC12-TP02-E	Non-Residential	5 ft	12/15/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
DUP-12S (AOC12-TP02-E)	Non-Residential	5 ft	12/15/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC12-TP02-N	Non-Residential	5 ft	12/15/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC12-TP02-S	Non-Residential	5 ft	12/15/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC12-TP02-W	Non-Residential	5 ft	12/15/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC12-TP03-B	Non-Residential	10 ft	12/15/2022	--	< 330	< 330	< 330	370	360	350	< 330
AOC12-TP03-E	Non-Residential	5 ft	12/15/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC12-TP03-N	Non-Residential	5 ft	12/15/2022	--	< 330	< 330	< 330	< 330	< 330	440	< 330
AOC12-TP03-S	Non-Residential	5 ft	12/15/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC12-TP03-W	Non-Residential	5 ft	12/15/2022	--	< 330	< 330	< 330	440	410	440	< 330
AOC3-TP01-B	Non-Residential	10 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP01-E	Non-Residential	5 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP01-N	Non-Residential	5 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP01-S	Non-Residential	5 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP01-W	Non-Residential	5 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
DUP-07S (AOC3-TP01-W)	Non-Residential	5 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP02-B	Non-Residential	10 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP02-E	Non-Residential	5 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP02-N	Non-Residential	5 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
DUP-08S (AOC3-TP02-N)	Non-Residential	5 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP02-S	Non-Residential	5 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP02-W	Non-Residential	5 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP03-B	Non-Residential	10 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP03-E	Non-Residential	5 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP03-N	Non-Residential	5 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
DUP-09S (AOC3-TP03-N)	Non-Residential	5 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP03-S	Non-Residential	5 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP03-W	Non-Residential	5 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP04-B	Non-Residential	10 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP04-E	Non-Residential	5 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP04-N	Non-Residential	5 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP04-S	Non-Residential	5 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP04-W	Non-Residential	5 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
DUP-10S (AOC3-TP04-W)	Non-Residential	5 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330

Notes:

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Bold font denotes concentrations detected above laboratory reporting limits.

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2) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).

Table 8
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 Former Hayes Lemmerz Site - Southern Area
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 Ferndale, MI

Analyte	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)-anthracene ⁽¹⁾	Benzo(a)pyrene ⁽¹⁾	Benzo(b)-fluoranthene ⁽¹⁾	Benzo(g,h,i)-perylene
Non-Residential DWP Criteria	1.7E+05	8.8E+05	17,000	41,000	NLL	NLL	NLL	NLL
Generic GSI Protection Criteria	4,200	8,700	ID	ID	NLL	NLL	NLL	NLL
Non-Residential Groundwater Contact Protection Criteria	5.5E+06	9.7E+05	4.4E+05	41,000	NLL	NLL	NLL	NLL
Non-Residential VIAP Screening Level	30,000	3.6E+06	ID	2.2E+08	1.1E+07	NA	NA	NA
Non-Residential Direct Contact Criteria	2.6E+07	1.3E+08	5.2E+06	7.3E+08	80,000	8,000	80,000	7.0E+06
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)-anthracene ⁽¹⁾	Benzo(a)pyrene ⁽¹⁾	Benzo(b)-fluoranthene ⁽¹⁾	Benzo(g,h,i)-perylene
Investigation Area: Southern Area (continued)											
MW-22-07	Non-Residential	2 - 4 ft	12/13/2022	--	< 330	< 330	< 330	1,060	1,080	1,150	570
		8 - 10 ft	12/13/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
MW-22-08	Non-Residential	2 - 3 ft	12/12/2022	--	< 330	< 330	480	1,950	2,040	2,200	730
		8 - 10 ft	12/13/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
MW-22-09	Non-Residential	2 - 4 ft	12/12/2022	--	< 330	< 330	< 330	600	530	480	< 330
		8 - 10 ft	12/12/2022	--	910	< 330	2,240	7,600	7,670	8,640	2,350
MW-22-10	Non-Residential	2 - 4 ft	12/13/2022	--	< 330	< 330	< 330	390	1,750	1,780	1,610
		8 - 10 ft	12/13/2022	--	< 330	< 330	< 330	840	810	800	500
MW-22-11	Non-Residential	2 - 4 ft	12/13/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
		8 - 10 ft	12/13/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
MW-22-12	Non-Residential	2 - 4 ft	12/13/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
		8 - 10 ft	12/13/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
MW-22-13	Non-Residential	2 - 4 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
		8 - 10 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
MW-22-14	Non-Residential	2 - 4 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
		8 - 10 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
MW-22-15	Non-Residential	2 - 4 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
		8 - 10 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
MW-22-16	Non-Residential	2 - 4 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
		8 - 10 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
MW-22-17	Non-Residential	2 - 4 ft	12/15/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
		8 - 10 ft	12/15/2022	--	350	390	1,840	4,990	4,130	3,800	1,470
MW-22-18	Non-Residential	2 - 4 ft	12/15/2022	--	< 330	< 330	< 330	540	590	490	< 330
		8 - 10 ft	12/15/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
MW-22-19	Non-Residential	2 - 4 ft	12/15/2022	--	< 330	< 330	< 330	370	360	360	< 330
		8 - 10 ft	12/15/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
MW-22-20	Non-Residential	2 - 4 ft	12/15/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
		10 - 12 ft	12/15/2022	--	550	< 330	650	1,360	1,150	2,340	630
MW-22-21	Non-Residential	2 - 4 ft	12/16/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
		8 - 10 ft	12/16/2022	--	900	< 330	1,470	5,450	5,310	5,980	2,120
SB-01	Non-Residential	2 - 4 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
		8 - 10 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
SB-02	Non-Residential	2 - 4 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330
		8 - 10 ft	12/14/2022	--	< 330	< 330	< 330	< 330	< 330	< 330	< 330

Notes:

Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, NR Soil Direct Contact Criteria, NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.

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Analyte	Benzo(k)-fluoranthene ⁽¹⁾	Bis(2-ethylhexyl)-phthalate	Butylbenzyl-phthalate	Carbazole	Chrysene ⁽¹⁾	Dibenzo(a,h)-anthracene ⁽¹⁾	Dibenzofuran	Di-n-octyl-phthalate
Non-Residential DWP Criteria	NLL	NLL	3.1E+05	39,000	NLL	NLL	ID	1.4E+08
Generic GSI Protection Criteria	NLL	NLL	1.2E+05 ⁽²⁾	1,100	NLL	NLL	1,700	ID
Non-Residential Groundwater Contact Protection Criteria	NLL	NLL	3.1E+05	8.2E+05	NLL	NLL	ID	1.4E+08
Non-Residential VIAP Screening Level	NA	NA	NA	NA	NA	NA	1.3E+08	ID
Non-Residential Direct Contact Criteria	8.0E+05	1.0E+07	3.1E+05	2.4E+06	8.0E+06	8,000	ID	2.0E+07
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	Benzo(k)-fluoranthene ⁽¹⁾	Bis(2-ethylhexyl)-phthalate	Butylbenzyl-phthalate	Carbazole	Chrysene ⁽¹⁾	Dibenzo(a,h)-anthracene ⁽¹⁾	Dibenzofuran	Di-n-octyl-phthalate
Investigation Area: Southern Area											
MW-116	Non-Residential	7 - 8 ft	3/30/2020	< 382	--	--	--	< 382	< 382	--	--
MW-117	Non-Residential	6 - 7 ft	3/30/2020	< 375	--	--	--	< 375	< 375	--	--
MW-118	Non-Residential	10 - 11 ft	3/30/2020	< 350	--	--	--	< 350	< 350	--	--
MW-122	Non-Residential	4 - 5 ft	6/15/2020	< 352	< 352	< 352	< 352	< 352	< 352	< 352	< 352
MW-123	Non-Residential	4 - 5 ft	6/15/2020	< 344	< 344	< 344	< 344	< 344	< 344	< 344	< 344
MW-124	Non-Residential	4 - 5 ft	6/15/2020	< 350	< 350	< 350	< 350	< 350	< 350	< 350	< 350
MW-125	Non-Residential	4 - 5 ft	6/16/2020	1,040	< 347	< 347	< 347	2,070	< 347	< 347	< 347
MW-126	Non-Residential	4 - 5 ft	6/15/2020	< 344	< 344	< 344	< 344	< 344	< 344	< 344	< 344
MW-126	Non-Residential	7.5 - 8.5 ft	6/15/2020	< 333	< 333	< 333	< 333	< 333	< 333	< 333	< 333
MW-127	Non-Residential	6 - 7 ft	6/15/2020	< 366	< 366	< 366	< 366	< 366	< 366	< 366	< 366
		10 - 11 ft	6/15/2020	< 8,880	< 8,880	< 8,880	< 8,880	11,600	< 8,880	< 8,880	< 8,880
MW-128	Non-Residential	4 - 5 ft	6/15/2020	545	< 427	< 427	620	1,280	< 427	988	< 427
		8 - 9 ft	6/15/2020	< 347	< 347	< 347	< 347	< 347	< 347	< 347	< 347
MW-129	Non-Residential	3 - 4 ft	6/15/2020	< 1,630	< 1,630	90,700	< 1,630	< 1,630	< 1,630	< 1,630	< 1,630
MW-130	Non-Residential	4 - 5 ft	6/15/2020	< 348	< 348	< 348	< 348	< 348	< 348	< 348	< 348
MW-131	Non-Residential	2 - 3 ft	6/15/2020	< 422	< 422	< 422	< 422	< 422	< 422	< 422	< 422
MW-132	Non-Residential	5.5 - 6.5 ft	8/12/2020	791	< 369	42,200	< 369	1,480	< 369	< 369	< 369
MW-133	Non-Residential	3 - 4 ft	8/12/2020	10,600	< 1,790	< 1,790	5,010	21,800	3,620	2,430	< 1,790
		10 - 11 ft	8/12/2020	6,710	5,170	43,500	< 3,940	15,500	< 3,940	< 3,940	5,080

Notes:

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Non-Residential DWP Criteria	NLL	NLL	3.1E+05	39,000	NLL	NLL	ID	1.4E+08
Generic GSI Protection Criteria	NLL	NLL	1.2E+05 ⁽²⁾	1,100	NLL	NLL	1,700	ID
Non-Residential Groundwater Contact Protection Criteria	NLL	NLL	3.1E+05	8.2E+05	NLL	NLL	ID	1.4E+08
Non-Residential VIAP Screening Level	NA	NA	NA	NA	NA	NA	1.3E+08	ID
Non-Residential Direct Contact Criteria	8.0E+05	1.0E+07	3.1E+05	2.4E+06	8.0E+06	8,000	ID	2.0E+07
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	Benzo(k)-fluoranthene ⁽¹⁾	Bis(2-ethylhexyl)-phthalate	Butylbenzyl-phthalate	Carbazole	Chrysene ⁽¹⁾	Dibenzo(a,h)-anthracene ⁽¹⁾	Dibenzofuran	Di-n-octyl-phthalate
Investigation Area: Southern Area (continued)											
AOC10-TP01-B	Non-Residential	10 ft	12/12/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC10-TP01-E	Non-Residential	5 ft	12/12/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC10-TP01-N	Non-Residential	5 ft	12/12/2022	4,480	< 330	< 330	--	5,820	570	< 330	< 330
AOC10-TP01-S	Non-Residential	5 ft	12/12/2022	1,070	< 330	< 330	--	1,320	< 330	< 330	< 330
AOC10-TP01-W	Non-Residential	5 ft	12/12/2022	< 330	< 330	< 330	--	440	< 330	< 330	< 330
AOC10-TP02-B	Non-Residential	10 ft	12/12/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC10-TP02-E	Non-Residential	5 ft	12/12/2022	< 330	< 330	< 330	--	430	< 330	< 330	< 330
AOC10-TP02-N	Non-Residential	5 ft	12/12/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC10-TP02-S	Non-Residential	5 ft	12/12/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC10-TP02-W	Non-Residential	5 ft	12/12/2022	< 330	< 330	< 330	--	360	< 330	< 330	< 330
AOC11-TP01-B	Non-Residential	10 ft	12/13/2022	700	< 330	< 330	--	790	< 330	< 330	< 330
AOC11-TP01-E	Non-Residential	5 ft	12/13/2022	3,790	< 330	< 330	--	4,650	470	< 330	< 330
AOC11-TP01-N	Non-Residential	5 ft	12/13/2022	3,150	< 330	< 330	--	4,570	600	< 330	< 330
AOC11-TP01-S	Non-Residential	5 ft	12/13/2022	360	< 330	< 330	--	430	< 330	< 330	< 330
DUP-03S (AOC11-TP01-S)	Non-Residential	5 ft	12/13/2022	650	< 330	< 330	--	660	< 330	< 330	< 330
AOC11-TP01-W	Non-Residential	5 ft	12/13/2022	440	< 330	< 330	--	480	< 330	< 330	< 330
AOC11-TP02-B	Non-Residential	10 ft	12/13/2022	340	< 330	< 330	--	380	< 330	< 330	< 330
AOC11-TP02-E	Non-Residential	5 ft	12/13/2022	380	< 330	< 330	--	470	< 330	< 330	< 330
AOC11-TP02-N	Non-Residential	5 ft	12/13/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
DUP-04S (AOC11-TP02-N)	Non-Residential	5 ft	12/13/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC11-TP02-S	Non-Residential	5 ft	12/13/2022	430	< 330	< 330	--	480	< 330	< 330	< 330
AOC11-TP02-W	Non-Residential	5 ft	12/13/2022	1,500	< 330	< 330	--	2,000	< 330	< 330	< 330
AOC11-TP03-B	Non-Residential	10 ft	12/13/2022	440	< 330	< 330	--	580	< 330	< 330	< 330
AOC11-TP03-E	Non-Residential	5 ft	12/13/2022	10,300	< 1,000	< 1,000	--	13,500	2,000	< 1,000	< 1,000
AOC11-TP03-N	Non-Residential	5 ft	12/13/2022	< 330	< 330	< 330	--	370	< 330	< 330	< 330
DUP-05S (AOC11-TP03-N)	Non-Residential	5 ft	12/13/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC11-TP03-S	Non-Residential	5 ft	12/13/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC11-TP03-W	Non-Residential	5 ft	12/13/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC11-TP04-B	Non-Residential	10 ft	12/13/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC11-TP04-E	Non-Residential	5 ft	12/13/2022	430	< 330	< 330	--	450	< 330	< 330	< 330
AOC11-TP04-N	Non-Residential	5 ft	12/13/2022	840	< 330	< 330	--	1,000	< 330	< 330	< 330
DUP-06S (AOC11-TP04-N)	Non-Residential	5 ft	12/13/2022	590	< 330	< 330	--	760	< 330	< 330	< 330
AOC11-TP04-S	Non-Residential	5 ft	12/13/2022	780	< 330	< 330	--	1,060	< 330	< 330	< 330
AOC11-TP04-W	Non-Residential	5 ft	12/13/2022	11,400	< 1,300	< 1,300	--	16,000	2,400	< 1,300	< 1,300

Notes:

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Generic GSI Protection Criteria	NLL	NLL	1.2E+05 ⁽²⁾	1,100	NLL	NLL	1,700	ID
Non-Residential Groundwater Contact Protection Criteria	NLL	NLL	3.1E+05	8.2E+05	NLL	NLL	ID	1.4E+08
Non-Residential VIAP Screening Level	NA	NA	NA	NA	NA	NA	1.3E+08	ID
Non-Residential Direct Contact Criteria	8.0E+05	1.0E+07	3.1E+05	2.4E+06	8.0E+06	8,000	ID	2.0E+07
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	Benzo(k)-fluoranthene ⁽¹⁾	Bis(2-ethylhexyl)-phthalate	Butylbenzyl-phthalate	Carbazole	Chrysene ⁽¹⁾	Dibenzo(a,h)-anthracene ⁽¹⁾	Dibenzofuran	Di-n-octyl-phthalate
Investigation Area: Southern Area (continued)											
AOC12-TP01-B	Non-Residential	10 ft	12/15/2022	24,770	2,340	1,580	--	31,550	2,850	--	460
AOC12-TP01-E	Non-Residential	5 ft	12/15/2022	15,480	1,790	14,390	--	21,840	1,740	--	6,290
DUP-11S (AOC12-TP01-E)	Non-Residential	5 ft	12/15/2022	26,530	1,320	1,640	--	36,540	3,160	--	590
AOC12-TP01-N	Non-Residential	5 ft	12/15/2022	21,700	1,510	1,430	--	25,290	2,140	--	400
AOC12-TP01-S	Non-Residential	5 ft	12/15/2022	18,720	1,280	8,700	--	22,560	1,660	--	3,130
AOC12-TP01-W	Non-Residential	5 ft	12/15/2022	18,440	1,390	1,070	--	24,290	2,120	--	520
AOC12-TP02-B	Non-Residential	10 ft	12/15/2022	< 330	< 330	< 330	--	< 330	< 330	--	< 330
AOC12-TP02-E	Non-Residential	5 ft	12/15/2022	< 330	< 330	< 330	--	< 330	< 330	--	< 330
DUP-12S (AOC12-TP02-E)	Non-Residential	5 ft	12/15/2022	< 330	< 330	< 330	--	< 330	< 330	--	< 330
AOC12-TP02-N	Non-Residential	5 ft	12/15/2022	< 330	< 330	< 330	--	< 330	< 330	--	< 330
AOC12-TP02-S	Non-Residential	5 ft	12/15/2022	< 330	< 330	< 330	--	< 330	< 330	--	< 330
AOC12-TP02-W	Non-Residential	5 ft	12/15/2022	< 330	< 330	< 330	--	< 330	< 330	--	< 330
AOC12-TP03-B	Non-Residential	10 ft	12/15/2022	< 330	< 330	< 330	--	380	< 330	--	< 330
AOC12-TP03-E	Non-Residential	5 ft	12/15/2022	< 330	< 330	< 330	--	< 330	< 330	--	< 330
AOC12-TP03-N	Non-Residential	5 ft	12/15/2022	450	< 330	< 330	--	< 330	< 330	--	< 330
AOC12-TP03-S	Non-Residential	5 ft	12/15/2022	< 330	< 330	< 330	--	< 330	< 330	--	< 330
AOC12-TP03-W	Non-Residential	5 ft	12/15/2022	340	< 330	< 330	--	480	< 330	--	< 330
AOC3-TP01-B	Non-Residential	10 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC3-TP01-E	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC3-TP01-N	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC3-TP01-S	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC3-TP01-W	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
DUP-07S (AOC3-TP01-W)	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC3-TP02-B	Non-Residential	10 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC3-TP02-E	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC3-TP02-N	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
DUP-08S (AOC3-TP02-N)	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC3-TP02-S	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC3-TP02-W	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC3-TP03-B	Non-Residential	10 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC3-TP03-E	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC3-TP03-N	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
DUP-09S (AOC3-TP03-N)	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC3-TP03-S	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC3-TP03-W	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC3-TP04-B	Non-Residential	10 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC3-TP04-E	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC3-TP04-N	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC3-TP04-S	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC3-TP04-W	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
DUP-10S (AOC3-TP04-W)	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330

Notes:

Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, NR Soil Direct Contact Criteria, NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.

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Only analytes with one or more detection are reported.

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NA = Not Applicable; NLL = Not Likely to Leach; NLV = Not Likely to Volatilize; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed

Bold font denotes concentrations detected above laboratory reporting limits.

Green background denotes concentrations above one or more criteria.

1) Criteria for carcinogenic polycyclic aromatic hydrocarbons were developed using relative potential potencies to benzo(a)pyrene (Footnote (Q), Michigan Part 201 Criteria Tables).

2) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).

Table 8
 Summary of Detected Semi-Volatile Organic Compounds in Soil
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Benzo(k)-fluoranthene ⁽¹⁾	Bis(2-ethylhexyl)-phthalate	Butylbenzyl-phthalate	Carbazole	Chrysene ⁽¹⁾	Dibenzo(a,h)-anthracene ⁽¹⁾	Dibenzofuran	Di-n-octyl-phthalate
Non-Residential DWP Criteria	NLL	NLL	3.1E+05	39,000	NLL	NLL	ID	1.4E+08
Generic GSI Protection Criteria	NLL	NLL	1.2E+05 ⁽²⁾	1,100	NLL	NLL	1,700	ID
Non-Residential Groundwater Contact Protection Criteria	NLL	NLL	3.1E+05	8.2E+05	NLL	NLL	ID	1.4E+08
Non-Residential VIAP Screening Level	NA	NA	NA	NA	NA	NA	1.3E+08	ID
Non-Residential Direct Contact Criteria	8.0E+05	1.0E+07	3.1E+05	2.4E+06	8.0E+06	8,000	ID	2.0E+07
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	Benzo(k)-fluoranthene ⁽¹⁾	Bis(2-ethylhexyl)-phthalate	Butylbenzyl-phthalate	Carbazole	Chrysene ⁽¹⁾	Dibenzo(a,h)-anthracene ⁽¹⁾	Dibenzofuran	Di-n-octyl-phthalate
Investigation Area: Southern Area (continued)											
AOC11-MW-22-07	Non-Residential	2 - 4 ft	12/13/2022	900	< 330	930	--	1,240	< 330	< 330	< 330
		8 - 10 ft	12/13/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC7-MW-22-08	Non-Residential	2 - 3 ft	12/12/2022	1,920	< 330	< 330	--	2,190	< 330	< 330	< 330
		8 - 10 ft	12/13/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC7-MW-22-09	Non-Residential	2 - 4 ft	12/12/2022	500	< 330	< 330	--	650	< 330	< 330	< 330
		8 - 10 ft	12/12/2022	7,550	< 330	3,830	--	9,110	1,010	< 330	< 330
AOC11-MW-22-10	Non-Residential	2 - 4 ft	12/13/2022	1,620	< 330	< 330	--	1,920	< 330	< 330	< 330
		8 - 10 ft	12/13/2022	680	< 330	< 330	--	920	< 330	< 330	< 330
AOC3-MW-22-11	Non-Residential	2 - 4 ft	12/13/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
		8 - 10 ft	12/13/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC3-MW-22-12	Non-Residential	2 - 4 ft	12/13/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
		8 - 10 ft	12/13/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC9-MW-22-13	Non-Residential	2 - 4 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
		8 - 10 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC9-MW-22-14	Non-Residential	2 - 4 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
		8 - 10 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC9-MW-22-15	Non-Residential	2 - 4 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
		8 - 10 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC9-MW-22-16	Non-Residential	2 - 4 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
		8 - 10 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC10-MW-22-17	Non-Residential	2 - 4 ft	12/15/2022	< 330	< 330	< 330	--	< 330	< 330	--	< 330
		8 - 10 ft	12/15/2022	3,900	< 330	< 330	--	4,500	340	--	< 330
AOC8-MW-22-18	Non-Residential	2 - 4 ft	12/15/2022	510	< 330	< 330	--	620	< 330	--	< 330
		8 - 10 ft	12/15/2022	< 330	< 330	< 330	--	< 330	< 330	--	< 330
AOC8-MW-22-19	Non-Residential	2 - 4 ft	12/15/2022	< 330	< 330	< 330	--	420	< 330	--	< 330
		8 - 10 ft	12/15/2022	< 330	< 330	< 330	--	< 330	< 330	--	< 330
AOC12-MW-22-20	Non-Residential	2 - 4 ft	12/15/2022	< 330	< 330	< 330	--	< 330	< 330	--	< 330
		10 - 12 ft	12/15/2022	2,410	< 330	< 330	--	1,590	< 330	--	< 330
AOC12-MW-22-21	Non-Residential	2 - 4 ft	12/16/2022	< 330	< 330	< 330	--	< 330	< 330	--	< 330
		8 - 10 ft	12/16/2022	4,540	12,770	< 330	--	6,140	450	--	< 330
AOC9-SB-01	Non-Residential	2 - 4 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
		8 - 10 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
AOC9-SB-02	Non-Residential	2 - 4 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330
		8 - 10 ft	12/14/2022	< 330	< 330	< 330	--	< 330	< 330	< 330	< 330

Notes:

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Analyte	Fluoranthene	Fluorene	Hexachlorobenzene	Indeno(1,2,3-cd)-pyrene ⁽¹⁾	Naphthalene	Phenanthrene	Pyrene
Non-Residential DWP Criteria	7.3E+05	8.9E+05	1,800	NLL	1.0E+05	1.6E+05	4.8E+05
Generic GSI Protection Criteria	5,500	5,300	350	NLL	730	2,100	ID
Non-Residential Groundwater Contact Protection Criteria	7.3E+05	8.9E+05	8,200	NLL	2.1E+06	1.1E+06	4.8E+05
Non-Residential VIAP Screening Level	NA	8.3E+06	120	NA	1,900	29,000	4.4E+08
Non-Residential Direct Contact Criteria	1.3E+08	8.7E+07	37,000	80,000	5.2E+07	5.2E+06	8.4E+07
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	Fluoranthene	Fluorene	Hexachlorobenzene	Indeno(1,2,3-cd)-pyrene ⁽¹⁾	Naphthalene	Phenanthrene	Pyrene
Investigation Area: Southern Area										
MW-116	Non-Residential	7 - 8 ft	3/30/2020	< 382	< 382	--	< 382	< 382	< 382	< 382
MW-117	Non-Residential	6 - 7 ft	3/30/2020	< 375	< 375	--	< 375	< 375	< 375	< 375
MW-118	Non-Residential	10 - 11 ft	3/30/2020	< 350	< 350	--	< 350	< 350	< 350	< 350
MW-122	Non-Residential	4 - 5 ft	6/15/2020	689	< 352	< 352	< 352	< 352	< 352	586
MW-123	Non-Residential	4 - 5 ft	6/15/2020	< 344	< 344	< 344	< 344	< 344	< 344	< 344
MW-124	Non-Residential	4 - 5 ft	6/15/2020	< 350	< 350	< 350	< 350	< 350	< 350	< 350
MW-125	Non-Residential	4 - 5 ft	6/16/2020	4,260	< 347	< 347	914	< 347	2,250	3,800
MW-126	Non-Residential	4 - 5 ft	6/15/2020	426	< 344	< 344	< 344	< 344	< 344	436
MW-126	Non-Residential	7.5 - 8.5 ft	6/15/2020	< 333	< 333	< 333	< 333	< 333	< 333	< 333
MW-127	Non-Residential	6 - 7 ft	6/15/2020	< 366	< 366	< 366	< 366	< 366	< 366	< 366
		10 - 11 ft	6/15/2020	< 8,880	16,500	< 8,880	< 8,880	< 8,880	68,700	23,800
MW-128	Non-Residential	4 - 5 ft	6/15/2020	5,490	< 427	< 427	454	591	6,780	4,370
		8 - 9 ft	6/15/2020	< 347	< 347	< 347	< 347	< 347	< 347	< 347
MW-129	Non-Residential	3 - 4 ft	6/15/2020	2,960	< 1,630	< 1,630	< 1,630	< 1,630	1,870	2,620
MW-130	Non-Residential	4 - 5 ft	6/15/2020	< 348	< 348	< 348	< 348	< 348	< 348	< 348
MW-131	Non-Residential	2 - 3 ft	6/15/2020	< 422	< 422	< 422	< 422	< 422	< 422	< 422
MW-132	Non-Residential	5.5 - 6.5 ft	8/12/2020	3,230	< 369	< 369	718	< 369	2,130	3,040
MW-133	Non-Residential	3 - 4 ft	8/12/2020	53,000	4,150	< 1,790	11,400	1,960	38,300	46,900
		10 - 11 ft	8/12/2020	38,500	< 3,940	< 3,940	7,940	< 3,940	22,100	25,600

Notes:

Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, NR Soil Direct Contact Criteria, NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.

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Non-Residential DWP Criteria	7.3E+05	8.9E+05	1,800	NLL	1.0E+05	1.6E+05	4.8E+05
Generic GSI Protection Criteria	5,500	5,300	350	NLL	730	2,100	ID
Non-Residential Groundwater Contact Protection Criteria	7.3E+05	8.9E+05	8,200	NLL	2.1E+06	1.1E+06	4.8E+05
Non-Residential VIAP Screening Level	NA	8.3E+06	120	NA	1,900	29,000	4.4E+08
Non-Residential Direct Contact Criteria	1.3E+08	8.7E+07	37,000	80,000	5.2E+07	5.2E+06	8.4E+07
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	Fluoranthene	Fluorene	Hexachlorobenzene	Indeno(1,2,3-cd)-pyrene ⁽¹⁾	Naphthalene	Phenanthrene	Pyrene
Investigation Area: Southern Area (continued)										
AOC10-TP01-B	Non-Residential	10 ft	12/12/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC10-TP01-E	Non-Residential	5 ft	12/12/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC10-TP01-N	Non-Residential	5 ft	12/12/2022	12,140	590	< 330	1,430	< 330	8,710	9,980
AOC10-TP01-S	Non-Residential	5 ft	12/12/2022	2,750	< 330	< 330	500	< 330	1,450	2,300
AOC10-TP01-W	Non-Residential	5 ft	12/12/2022	910	< 330	< 330	< 330	< 330	520	730
AOC10-TP02-B	Non-Residential	10 ft	12/12/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC10-TP02-E	Non-Residential	5 ft	12/12/2022	960	< 330	< 330	< 330	< 330	590	770
AOC10-TP02-N	Non-Residential	5 ft	12/12/2022	460	< 330	< 330	< 330	< 330	< 330	410
AOC10-TP02-S	Non-Residential	5 ft	12/12/2022	610	< 330	< 330	< 330	< 330	390	540
AOC10-TP02-W	Non-Residential	5 ft	12/12/2022	720	< 330	< 330	< 330	< 330	340	640
AOC11-TP01-B	Non-Residential	10 ft	12/13/2022	1,320	< 330	< 330	450	< 330	560	1,170
AOC11-TP01-E	Non-Residential	5 ft	12/13/2022	10,150	1,070	< 330	1,130	< 330	8,750	8,490
AOC11-TP01-N	Non-Residential	5 ft	12/13/2022	9,820	730	< 330	1,520	< 330	7,340	7,610
AOC11-TP01-S	Non-Residential	5 ft	12/13/2022	770	< 330	< 330	< 330	< 330	< 330	680
DUP-03S (AOC11-TP01-S)	Non-Residential	5 ft	12/13/2022	860	< 330	< 330	< 330	< 330	< 330	770
AOC11-TP01-W	Non-Residential	5 ft	12/13/2022	900	< 330	< 330	< 330	< 330	450	770
AOC11-TP02-B	Non-Residential	10 ft	12/13/2022	770	< 330	< 330	< 330	< 330	< 330	680
AOC11-TP02-E	Non-Residential	5 ft	12/13/2022	880	< 330	< 330	< 330	< 330	400	770
AOC11-TP02-N	Non-Residential	5 ft	12/13/2022	490	< 330	< 330	< 330	< 330	< 330	420
DUP-04S (AOC11-TP02-N)	Non-Residential	5 ft	12/13/2022	510	< 330	< 330	< 330	< 330	< 330	430
AOC11-TP02-S	Non-Residential	5 ft	12/13/2022	900	< 330	< 330	< 330	< 330	410	770
AOC11-TP02-W	Non-Residential	5 ft	12/13/2022	3,800	< 330	< 330	480	< 330	2,460	3,200
AOC11-TP03-B	Non-Residential	10 ft	12/13/2022	1,120	< 330	< 330	< 330	< 330	630	940
AOC11-TP03-E	Non-Residential	5 ft	12/13/2022	30,900	1,400	< 1,000	5,600	< 1,000	14,700	25,300
AOC11-TP03-N	Non-Residential	5 ft	12/13/2022	740	< 330	< 330	< 330	< 330	410	640
DUP-05S (AOC11-TP03-N)	Non-Residential	5 ft	12/13/2022	330	< 330	< 330	< 330	< 330	< 330	< 330
AOC11-TP03-S	Non-Residential	5 ft	12/13/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC11-TP03-W	Non-Residential	5 ft	12/13/2022	630	< 330	< 330	< 330	< 330	330	530
AOC11-TP04-B	Non-Residential	10 ft	12/13/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC11-TP04-E	Non-Residential	5 ft	12/13/2022	710	< 330	< 330	< 330	< 330	< 330	650
AOC11-TP04-N	Non-Residential	5 ft	12/13/2022	1,290	< 330	< 330	550	< 330	500	1,170
DUP-06S (AOC11-TP04-N)	Non-Residential	5 ft	12/13/2022	1,380	< 330	< 330	330	< 330	700	1,200
AOC11-TP04-S	Non-Residential	5 ft	12/13/2022	2,000	< 330	< 330	550	< 330	1,140	1,660
AOC11-TP04-W	Non-Residential	5 ft	12/13/2022	36,500	1,800	< 1,300	6,500	< 1,300	26,900	28,400

Notes:

Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, NR Soil Direct Contact Criteria, NR Infinite Source Volatile Soil Inhalation Criteria (VSIC),

and NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.

Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).

Only analytes with one or more detection are reported.

ug/kg = microgram per kilogram

NA = Not Applicable; NLL = Not Likely to Leach; NLV = Not Likely to Volatilize; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed

Bold font denotes concentrations detected above laboratory reporting limits.

Green background Denotes concentrations above one or more criteria.

1) Criteria for carcinogenic polycyclic aromatic hydrocarbons were developed using relative potential potencies to benzo(a)pyrene (Footnote (Q), Michigan Part 201 Criteria Tables).

2) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).

Table 8
 Summary of Detected Semi-Volatile Organic Compounds in Soil
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Fluoranthene	Fluorene	Hexachlorobenzene	Indeno(1,2,3-cd)-pyrene ⁽¹⁾	Naphthalene	Phenanthrene	Pyrene
Non-Residential DWP Criteria	7.3E+05	8.9E+05	1,800	NLL	1.0E+05	1.6E+05	4.8E+05
Generic GSI Protection Criteria	5,500	5,300	350	NLL	730	2,100	ID
Non-Residential Groundwater Contact Protection Criteria	7.3E+05	8.9E+05	8,200	NLL	2.1E+06	1.1E+06	4.8E+05
Non-Residential VIAP Screening Level	NA	8.3E+06	120	NA	1,900	29,000	4.4E+08
Non-Residential Direct Contact Criteria	1.3E+08	8.7E+07	37,000	80,000	5.2E+07	5.2E+06	8.4E+07
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	Fluoranthene	Fluorene	Hexachlorobenzene	Indeno(1,2,3-cd)-pyrene ⁽¹⁾	Naphthalene	Phenanthrene	Pyrene
Investigation Area: Southern Area (continued)										
AOC12-TP01-B	Non-Residential	10 ft	12/15/2022	64,880	5,180	< 430	12,170	1,880	44,040	53,420
AOC12-TP01-E	Non-Residential	5 ft	12/15/2022	40,440	1,950	< 330	8,040	460	21,480	35,470
DUP-11S (AOC12-TP01-E)	Non-Residential	5 ft	12/15/2022	75,430	4,670	< 400	14,390	2,270	46,740	62,420
AOC12-TP01-N	Non-Residential	5 ft	12/15/2022	46,210	2,410	< 330	8,800	630	25,500	41,430
AOC12-TP01-S	Non-Residential	5 ft	12/15/2022	43,720	2,100	< 330	7,450	570	23,570	38,460
AOC12-TP01-W	Non-Residential	5 ft	12/15/2022	48,660	2,610	< 330	9,120	1,020	26,940	42,150
AOC12-TP02-B	Non-Residential	10 ft	12/15/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC12-TP02-E	Non-Residential	5 ft	12/15/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
DUP-12S (AOC12-TP02-E)	Non-Residential	5 ft	12/15/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC12-TP02-N	Non-Residential	5 ft	12/15/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC12-TP02-S	Non-Residential	5 ft	12/15/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC12-TP02-W	Non-Residential	5 ft	12/15/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC12-TP03-B	Non-Residential	10 ft	12/15/2022	790	< 330	< 330	< 330	< 330	450	650
AOC12-TP03-E	Non-Residential	5 ft	12/15/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC12-TP03-N	Non-Residential	5 ft	12/15/2022	540	< 330	< 330	< 330	< 330	< 330	450
AOC12-TP03-S	Non-Residential	5 ft	12/15/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC12-TP03-W	Non-Residential	5 ft	12/15/2022	970	< 330	< 330	< 330	< 330	480	830
AOC3-TP01-B	Non-Residential	10 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP01-E	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP01-N	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP01-S	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP01-W	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
DUP-07S (AOC3-TP01-W)	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP02-B	Non-Residential	10 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP02-E	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP02-N	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
DUP-08S (AOC3-TP02-N)	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP02-S	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP02-W	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP03-B	Non-Residential	10 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP03-E	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP03-N	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
DUP-09S (AOC3-TP03-N)	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP03-S	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP03-W	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP04-B	Non-Residential	10 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP04-E	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP04-N	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
AOC3-TP04-S	Non-Residential	5 ft	12/14/2022	< 330	< 330	1,240	< 330	< 330	< 330	< 330
AOC3-TP04-W	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
DUP-10S (AOC3-TP04-W)	Non-Residential	5 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330

Notes:

Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, NR Soil Direct Contact Criteria, NR Infinite Source Volatile Soil Inhalation Criteria (VSIC),

and NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.

Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).

Only analytes with one or more detection are reported.

ug/kg = microgram per kilogram

NA = Not Applicable; NLL = Not Likely to Leach; NLV = Not Likely to Volatilize; ID = Insufficient Data to Develop Criterion; -- = Parameter Not Analyzed

Bold font denotes concentrations detected above laboratory reporting limits.

Green background denotes concentrations above one or more criteria.

¹⁾ Criteria for carcinogenic polycyclic aromatic hydrocarbons were developed using relative potential potencies to benzo(a)pyrene (Footnote (Q), Michigan Part 201 Criteria Tables).

²⁾ The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).

Table 8
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 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte	Fluoranthene	Fluorene	Hexachlorobenzene	Indeno(1,2,3-cd)-pyrene ⁽¹⁾	Naphthalene	Phenanthrene	Pyrene
Non-Residential DWP Criteria	7.3E+05	8.9E+05	1,800	NLL	1.0E+05	1.6E+05	4.8E+05
Generic GSI Protection Criteria	5,500	5,300	350	NLL	730	2,100	ID
Non-Residential Groundwater Contact Protection Criteria	7.3E+05	8.9E+05	8,200	NLL	2.1E+06	1.1E+06	4.8E+05
Non-Residential VIAP Screening Level	NA	8.3E+06	120	NA	1,900	29,000	4.4E+08
Non-Residential Direct Contact Criteria	1.3E+08	8.7E+07	37,000	80,000	5.2E+07	5.2E+06	8.4E+07
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	Fluoranthene	Fluorene	Hexachlorobenzene	Indeno(1,2,3-cd)-pyrene ⁽¹⁾	Naphthalene	Phenanthrene	Pyrene
Investigation Area: Southern Area (continued)										
MW-22-07	Non-Residential	2 - 4 ft	12/13/2022	2,260	< 330	< 330	530	< 330	910	1,840
		8 - 10 ft	12/13/2022	490	< 330	< 330	< 330	< 330	< 330	390
MW-22-08	Non-Residential	2 - 3 ft	12/12/2022	4,490	< 330	< 330	740	< 330	2,220	3,750
		8 - 10 ft	12/13/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
MW-22-09	Non-Residential	2 - 4 ft	12/12/2022	1,380	< 330	< 330	< 330	< 330	730	1,180
		8 - 10 ft	12/12/2022	17,620	820	< 330	2,580	< 330	9,100	14,650
MW-22-10	Non-Residential	2 - 4 ft	12/13/2022	3,890	< 330	< 330	970	< 330	1,790	3,380
		8 - 10 ft	12/13/2022	1,910	< 330	< 330	450	< 330	850	1,590
MW-22-11	Non-Residential	2 - 4 ft	12/13/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
		8 - 10 ft	12/13/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
MW-22-12	Non-Residential	2 - 4 ft	12/13/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
		8 - 10 ft	12/13/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
MW-22-13	Non-Residential	2 - 4 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
		8 - 10 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
MW-22-14	Non-Residential	2 - 4 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
		8 - 10 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
MW-22-15	Non-Residential	2 - 4 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
		8 - 10 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
MW-22-16	Non-Residential	2 - 4 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
		8 - 10 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
MW-22-17	Non-Residential	2 - 4 ft	12/15/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
		8 - 10 ft	12/15/2022	11,870	1,540	< 330	1,560	360	10,190	9,320
MW-22-18	Non-Residential	2 - 4 ft	12/15/2022	590	< 330	< 330	< 330	< 330	420	770
		8 - 10 ft	12/15/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
MW-22-19	Non-Residential	2 - 4 ft	12/15/2022	820	< 330	< 330	< 330	< 330	380	710
		8 - 10 ft	12/15/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
MW-22-20	Non-Residential	2 - 4 ft	12/15/2022	640	< 330	< 330	< 330	< 330	420	580
		10 - 12 ft	12/15/2022	3,730	980	< 330	580	490	3,350	2,940
MW-22-21	Non-Residential	2 - 4 ft	12/16/2022	430	< 330	< 330	< 330	< 330	< 330	360
		8 - 10 ft	12/16/2022	12,000	700	< 330	2,080	< 330	7,480	11,950
SB-01	Non-Residential	2 - 4 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
		8 - 10 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330
SB-02	Non-Residential	2 - 4 ft	12/14/2022	530	< 330	< 330	< 330	< 330	< 330	440
		8 - 10 ft	12/14/2022	< 330	< 330	< 330	< 330	< 330	< 330	< 330

Notes:

Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, NR Soil Direct Contact Criteria, NR Infinite Source Volatile Soil Inhalation Criteria (VSIC),

and NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.

Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).

Only analytes with one or more detection are reported.

ug/kg = microgram per kilogram

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Bold font denotes concentrations detected above laboratory reporting limits.

Green background denotes concentrations above one or more criteria.

1) Criteria for carcinogenic polycyclic aromatic hydrocarbons were developed using relative potential potencies to benzo(a)pyrene (Footnote (Q), Michigan Part 201 Criteria Tables).

2) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).

Table 9
 Summary of Detected Polychlorinated Biphenyls in Soil
 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte				Aroclor-1248
Non-Residential DWP Criteria				NC
Generic GSI Protection Criteria				NC
Non-Residential Groundwater Contact Protection Criteria				NC
Non-Residential VIAP Screening Level				NC
Non-Residential Direct Contact Criteria				NC
Units				ug/kg
Sample Location	Residential Status	Sample Interval	Date Sampled	
Investigation Area: Southern Area				
MW-123	Non-Residential	4 - 5 ft	6/15/2020	< 350
MW-125	Non-Residential	4 - 5 ft	6/16/2020	< 350
MW-127	Non-Residential	10 - 11 ft	6/15/2020	< 358
MW-128	Non-Residential	4 - 5 ft	6/15/2020	< 383
MW-130	Non-Residential	4 - 5 ft	6/15/2020	< 349
MW-132	Non-Residential	5.5 - 6.5 ft	8/12/2020	< 359
AOC10-TP01-B	Non-Residential	10 ft	12/12/2022	< 330
AOC10-TP01-E	Non-Residential	5 ft	12/12/2022	< 330
AOC10-TP01-N	Non-Residential	5 ft	12/12/2022	< 330
AOC10-TP01-S	Non-Residential	5 ft	12/12/2022	< 330
AOC10-TP01-W	Non-Residential	5 ft	12/12/2022	< 330
AOC10-TP02-B	Non-Residential	10 ft	12/12/2022	< 330
AOC10-TP02-E	Non-Residential	5 ft	12/12/2022	< 330
AOC10-TP02-N	Non-Residential	5 ft	12/12/2022	< 330
AOC10-TP02-S	Non-Residential	5 ft	12/12/2022	< 330
AOC10-TP02-W	Non-Residential	5 ft	12/12/2022	< 330
AOC11-TP01-B	Non-Residential	10 ft	12/13/2022	< 330
AOC11-TP01-E	Non-Residential	5 ft	12/13/2022	< 330
AOC11-TP01-N	Non-Residential	5 ft	12/13/2022	< 330
AOC11-TP01-S	Non-Residential	5 ft	12/13/2022	< 330
DUP-03S (AOC11-TP01-S)	Non-Residential	5 ft	12/13/2022	< 330
AOC11-TP01-W	Non-Residential	5 ft	12/13/2022	< 330
AOC11-TP02-B	Non-Residential	10 ft	12/13/2022	< 330
AOC11-TP02-E	Non-Residential	5 ft	12/13/2022	< 330
AOC11-TP02-N	Non-Residential	5 ft	12/13/2022	< 330
DUP-04S (AOC11-TP02-N)	Non-Residential	5 ft	12/13/2022	< 330
AOC11-TP02-S	Non-Residential	5 ft	12/13/2022	< 330
AOC11-TP02-W	Non-Residential	5 ft	12/13/2022	< 330
AOC11-TP03-B	Non-Residential	10 ft	12/13/2022	< 330
AOC11-TP03-E	Non-Residential	5 ft	12/13/2022	< 330
AOC11-TP03-N	Non-Residential	5 ft	12/13/2022	< 330
DUP-05S (AOC11-TP03-N)	Non-Residential	5 ft	12/13/2022	< 330
AOC11-TP03-S	Non-Residential	5 ft	12/13/2022	< 330
AOC11-TP03-W	Non-Residential	5 ft	12/13/2022	< 330
AOC11-TP04-B	Non-Residential	10 ft	12/13/2022	< 330
AOC11-TP04-E	Non-Residential	5 ft	12/13/2022	< 330
AOC11-TP04-N	Non-Residential	5 ft	12/13/2022	< 330
DUP-06S (AOC11-TP04-N)	Non-Residential	5 ft	12/13/2022	< 330
AOC11-TP04-S	Non-Residential	5 ft	12/13/2022	< 330
AOC11-TP04-W	Non-Residential	5 ft	12/13/2022	< 330
AOC12-TP01-B	Non-Residential	10 ft	12/15/2022	400
AOC12-TP01-E	Non-Residential	5 ft	12/15/2022	< 330
DUP-11S (AOC12-TP01-E)	Non-Residential	5 ft	12/15/2022	< 330
AOC12-TP01-N	Non-Residential	5 ft	12/15/2022	< 330
AOC12-TP01-S	Non-Residential	5 ft	12/15/2022	< 330
AOC12-TP01-W	Non-Residential	5 ft	12/15/2022	< 330
AOC12-TP02-B	Non-Residential	10 ft	12/15/2022	< 330
AOC12-TP02-E	Non-Residential	5 ft	12/15/2022	< 330
DUP-12S (AOC12-TP02-E)	Non-Residential	5 ft	12/15/2022	< 330
AOC12-TP02-N	Non-Residential	5 ft	12/15/2022	< 330
AOC12-TP02-S	Non-Residential	5 ft	12/15/2022	< 330
AOC12-TP02-W	Non-Residential	5 ft	12/15/2022	< 330

Notes:
 Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, R/NR Soil Direct Contact Criteria, NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and R/NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, NR Groundwater Contact Protection Criteria, as promulgated September 28, 2012.
 Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).
 Non-Residential (NR) locations are only compared to the NR DWC, NR Groundwater Contact Protection, NR VIAP, NR Direct Contact and GSI criteria
 Only analytes with one or more detection are reported.
 ug/kg = microgram per kilogram
 NC = No Criterion
Bold font denotes concentrations detected above laboratory reporting limits.
Denotes concentrations above one or more criteria.

Table 9
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 Former Hayes Lemmerz Site - Southern Area
 2000 West 8 Mile Road
 Ferndale, MI

Analyte				Aroclor-1248
Non-Residential DWP Criteria				NC
Generic GSI Protection Criteria				NC
Non-Residential Groundwater Contact Protection Criteria				NC
Non-Residential VIAP Screening Level				NC
Non-Residential Direct Contact Criteria				NC
Units				ug/kg
Sample Location	Residential Status	Sample Interval	Date Sampled	
Investigation Area: Southern Area (continued)				
AOC12-TP03-B	Non-Residential	10 ft	12/15/2022	< 330
AOC12-TP03-E	Non-Residential	5 ft	12/15/2022	< 330
AOC12-TP03-N	Non-Residential	5 ft	12/15/2022	< 330
AOC12-TP03-S	Non-Residential	5 ft	12/15/2022	< 330
AOC12-TP03-W	Non-Residential	5 ft	12/15/2022	< 330
AOC3-TP01-B	Non-Residential	10 ft	12/14/2022	< 330
AOC3-TP01-E	Non-Residential	5 ft	12/14/2022	< 330
AOC3-TP01-N	Non-Residential	5 ft	12/14/2022	< 330
AOC3-TP01-S	Non-Residential	5 ft	12/14/2022	< 330
AOC3-TP01-W	Non-Residential	5 ft	12/14/2022	< 330
DUP-07S (AOC3-TP01-W)	Non-Residential	5 ft	12/14/2022	< 330
AOC3-TP02-B	Non-Residential	10 ft	12/14/2022	< 330
AOC3-TP02-E	Non-Residential	5 ft	12/14/2022	< 330
AOC3-TP02-N	Non-Residential	5 ft	12/14/2022	< 330
DUP-08S (AOC3-TP02-N)	Non-Residential	5 ft	12/14/2022	< 330
AOC3-TP02-S	Non-Residential	5 ft	12/14/2022	< 330
AOC3-TP02-W	Non-Residential	5 ft	12/14/2022	< 330
AOC3-TP03-B	Non-Residential	10 ft	12/14/2022	< 330
AOC3-TP03-E	Non-Residential	5 ft	12/14/2022	< 330
AOC3-TP03-N	Non-Residential	5 ft	12/14/2022	< 330
DUP-09S (AOC3-TP03-N)	Non-Residential	5 ft	12/14/2022	< 330
AOC3-TP03-S	Non-Residential	5 ft	12/14/2022	< 330
AOC3-TP03-W	Non-Residential	5 ft	12/14/2022	< 330
AOC3-TP04-B	Non-Residential	10 ft	12/14/2022	< 330
AOC3-TP04-E	Non-Residential	5 ft	12/14/2022	< 330
AOC3-TP04-N	Non-Residential	5 ft	12/14/2022	< 330
AOC3-TP04-S	Non-Residential	5 ft	12/14/2022	< 330
AOC3-TP04-W	Non-Residential	5 ft	12/14/2022	< 330
DUP-10S (AOC3-TP04-W)	Non-Residential	5 ft	12/14/2022	< 330
AOC11-MW-22-07	Non-Residential	2 - 4 ft	12/13/2022	< 330
		8 - 10 ft	12/13/2022	< 330
AOC7-MW-22-08	Non-Residential	2 - 3 ft	12/12/2022	< 330
		8 - 10 ft	12/13/2022	< 330
AOC7-MW-22-09	Non-Residential	2 - 4 ft	12/12/2022	< 330
		8 - 10 ft	12/12/2022	< 330
AOC11-MW-22-10	Non-Residential	2 - 4 ft	12/13/2022	< 330
		8 - 10 ft	12/13/2022	< 330
AOC3-MW-22-11	Non-Residential	2 - 4 ft	12/13/2022	< 330
		8 - 10 ft	12/13/2022	< 330
AOC3-MW-22-12	Non-Residential	2 - 4 ft	12/13/2022	< 330
		8 - 10 ft	12/13/2022	< 330
AOC9-MW-22-13	Non-Residential	2 - 4 ft	12/14/2022	< 330
		8 - 10 ft	12/14/2022	< 330
AOC9-MW-22-14	Non-Residential	2 - 4 ft	12/14/2022	< 330
		8 - 10 ft	12/14/2022	< 330
AOC9-MW-22-15	Non-Residential	2 - 4 ft	12/14/2022	< 330
		8 - 10 ft	12/14/2022	< 330
AOC9-MW-22-16	Non-Residential	2 - 4 ft	12/14/2022	< 330
		8 - 10 ft	12/14/2022	< 330
AOC10-MW-22-17	Non-Residential	2 - 4 ft	12/15/2022	< 330
		8 - 10 ft	12/15/2022	< 330
AOC8-MW-22-18	Non-Residential	2 - 4 ft	12/15/2022	< 330
		8 - 10 ft	12/15/2022	< 330
AOC8-MW-22-19	Non-Residential	2 - 4 ft	12/15/2022	< 330
		8 - 10 ft	12/15/2022	< 330
AOC12-MW-22-20	Non-Residential	2 - 4 ft	12/15/2022	< 330
		10 - 12 ft	12/15/2022	< 330
AOC12-MW-22-21	Non-Residential	2 - 4 ft	12/16/2022	< 330
		8 - 10 ft	12/16/2022	< 330
AOC9-SB-01	Non-Residential	2 - 4 ft	12/14/2022	< 330
		8 - 10 ft	12/14/2022	< 330
AOC9-SB-02	Non-Residential	2 - 4 ft	12/14/2022	< 330
		8 - 10 ft	12/14/2022	< 330

Notes:

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Bold font denotes concentrations detected above laboratory reporting limits.

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Non-Residential DWP Criteria	NC	NC	NC	NC	NC	NC	NC	NC
Generic GSI Protection Criteria	NC	NC	NC	NC	NC	NC	NC	NC
Non-Residential Groundwater Contact Protection Criteria	NC	NC	NC	NC	NC	NC	NC	NC
Non-Residential VIAP Screening Level	NC	NC	NC	NC	NC	NC	NC	NC
Non-Residential Direct Contact Criteria	NC	NC	NC	NC	NC	NC	NC	NC
Units	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg

Sample Location	Residential Status	Sample Interval	Date Sampled								
Investigation Area: Southern Area											
AOC10-TP01-B	Non-Residential	10 ft	12/12/2022	< 41	< 41	< 41	< 41	< 41	< 41	< 41	< 41
AOC10-TP01-E	Non-Residential	5 ft	12/12/2022	< 39	< 39	< 39	< 39	< 39	< 39	< 39	< 39
AOC10-TP01-N	Non-Residential	5 ft	12/12/2022	< 32	< 32	< 32	< 32	< 32	< 32	< 32	< 32
AOC10-TP01-S	Non-Residential	5 ft	12/12/2022	< 53	< 53	< 53	< 53	< 53	< 53	< 53	< 53
AOC10-TP01-W	Non-Residential	5 ft	12/12/2022	< 39	< 39	< 39	< 39	< 39	< 39	< 39	< 39
AOC10-TP02-B	Non-Residential	10 ft	12/12/2022	< 33	< 33	< 33	< 33	< 33	< 33	< 33	< 33
AOC10-TP02-E	Non-Residential	5 ft	12/12/2022	< 47	< 47	< 47	< 47	< 47	< 47	< 47	< 47
AOC10-TP02-N	Non-Residential	5 ft	12/12/2022	< 51	< 51	< 51	< 51	< 51	< 51	< 51	< 51
AOC10-TP02-S	Non-Residential	5 ft	12/12/2022	< 54	< 54	< 54	< 54	< 54	< 54	< 54	< 54
AOC10-TP02-W	Non-Residential	5 ft	12/12/2022	< 43	< 43	< 43	< 43	< 43	< 43	< 43	< 43
AOC11-TP01-B	Non-Residential	10 ft	12/13/2022	< 43	< 43	< 43	< 43	< 43	< 43	< 43	< 43
AOC11-TP01-E	Non-Residential	5 ft	12/13/2022	< 47	< 47	< 47	< 47	< 47	53	< 47	< 47
AOC11-TP01-N	Non-Residential	5 ft	12/13/2022	< 91	< 91	< 91	< 91	< 91	< 91	< 91	< 91
AOC11-TP01-S	Non-Residential	5 ft	12/13/2022	< 88	< 88	< 88	< 88	< 88	< 88	< 88	< 88
DUP-03S (AOC11-TP01-S)	Non-Residential	5 ft	12/13/2022	< 62	< 62	< 62	< 62	< 62	< 62	< 62	< 62
AOC11-TP01-W	Non-Residential	5 ft	12/13/2022	< 56	< 56	< 56	< 56	< 56	< 56	< 56	< 56
AOC11-TP02-B	Non-Residential	10 ft	12/13/2022	< 45	< 45	< 45	< 45	< 45	< 45	< 45	< 45
AOC11-TP02-E	Non-Residential	5 ft	12/13/2022	< 49	< 49	< 49	< 49	< 49	< 49	< 49	< 49
AOC11-TP02-N	Non-Residential	5 ft	12/13/2022	< 51	< 51	< 51	< 51	< 51	< 51	< 51	< 51
DUP-04S (AOC11-TP02-N)	Non-Residential	5 ft	12/13/2022	< 41	< 41	< 41	< 41	< 41	< 41	< 41	< 41
AOC11-TP02-S	Non-Residential	5 ft	12/13/2022	< 35	< 35	< 35	< 35	< 35	< 35	< 35	< 35
AOC11-TP02-W	Non-Residential	5 ft	12/13/2022	< 36	< 36	< 36	< 36	< 36	< 36	< 36	< 36
AOC11-TP03-B	Non-Residential	10 ft	12/13/2022	< 55	< 55	< 55	< 55	< 55	< 55	< 55	< 55
AOC11-TP03-E	Non-Residential	5 ft	12/13/2022	< 73	< 73	< 73	< 73	< 73	< 73	< 73	< 73
AOC11-TP03-N	Non-Residential	5 ft	12/13/2022	< 66	< 66	< 66	< 66	< 66	< 66	< 66	< 66
DUP-05S (AOC11-TP03-N)	Non-Residential	5 ft	12/13/2022	< 58	< 58	< 58	< 58	< 58	< 58	< 58	< 58
AOC11-TP03-S	Non-Residential	5 ft	12/13/2022	< 42	< 42	< 42	< 42	< 42	< 42	< 42	< 42
AOC11-TP03-W	Non-Residential	5 ft	12/13/2022	< 57	< 57	< 57	< 57	< 57	< 57	< 57	< 57

Notes:

Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, NR Soil Direct Contact Criteria, NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.

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Non-Residential DWP Criteria	NC	NC	NC	NC	NC	NC	NC	NC
Generic GSI Protection Criteria	NC	NC	NC	NC	NC	NC	NC	NC
Non-Residential Groundwater Contact Protection Criteria	NC	NC	NC	NC	NC	NC	NC	NC
Non-Residential VIAP Screening Level	NC	NC	NC	NC	NC	NC	NC	NC
Non-Residential Direct Contact Criteria	NC	NC	NC	NC	NC	NC	NC	NC
Units	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg

Investigation Area: Southern Area (continued)											
AOC	Use	Depth	Date	NEtFOSAA	NMeFOSAA	PFDS	PFDA	PFDoA	PFHpA	PFHxS	PFHxS-LN
AOC11-TP04-B	Non-Residential	10 ft	12/13/2022	< 44	< 44	< 44	< 44	< 44	< 44	< 44	< 44
AOC11-TP04-E	Non-Residential	5 ft	12/13/2022	< 61	< 61	< 61	< 61	< 61	< 61	< 61	< 61
AOC11-TP04-N	Non-Residential	5 ft	12/13/2022	< 67	< 67	< 67	< 67	< 67	< 67	< 67	< 67
DUP-06S (AOC11-TP04-N)	Non-Residential	5 ft	12/13/2022	< 42	< 42	180	< 42	< 42	< 42	< 42	< 42
AOC11-TP04-S	Non-Residential	5 ft	12/13/2022	< 78	< 78	< 78	< 78	< 78	< 78	< 78	< 78
AOC11-TP04-W	Non-Residential	5 ft	12/13/2022	< 72	< 72	79	< 72	< 72	< 72	< 72	< 72
AOC12-TP01-B	Non-Residential	10 ft	12/15/2022	950	81	480	< 73	< 73	< 73	< 73	< 73
AOC12-TP01-E	Non-Residential	5 ft	12/15/2022	< 52	< 52	490	170	62	< 52	< 52	< 52
AOC12-TP01-N	Non-Residential	5 ft	12/15/2022	< 72	< 72	310	120	< 72	< 72	< 72	< 72
AOC12-TP01-S	Non-Residential	5 ft	12/15/2022	< 54	< 54	410	140	57	< 54	< 54	< 54
AOC12-TP01-W	Non-Residential	5 ft	12/15/2022	< 42	< 42	< 42	< 42	< 42	< 42	< 42	< 42
AOC12-TP02-B	Non-Residential	10 ft	12/15/2022	< 84	< 84	< 84	< 84	< 84	< 84	< 84	< 84
AOC12-TP02-E	Non-Residential	5 ft	12/15/2022	< 37	< 37	< 37	< 37	< 37	< 37	< 37	< 37
AOC12-TP02-N	Non-Residential	5 ft	12/15/2022	< 31	< 31	< 31	< 31	< 31	< 31	< 31	< 31
AOC12-TP02-S	Non-Residential	5 ft	12/15/2022	< 41	< 41	< 41	< 41	< 41	< 41	< 41	< 41
AOC12-TP02-W	Non-Residential	5 ft	12/15/2022	< 43	< 43	< 43	< 43	< 43	< 43	< 43	< 43
AOC12-TP03-B	Non-Residential	10 ft	12/15/2022	< 47	< 47	< 47	< 47	< 47	< 47	< 47	< 47
AOC12-TP03-E	Non-Residential	5 ft	12/15/2022	< 53	< 53	< 53	< 53	< 53	< 53	< 53	< 53
AOC12-TP03-N	Non-Residential	5 ft	12/15/2022	< 32	< 32	< 32	< 32	< 32	< 32	< 32	< 32
AOC12-TP03-S	Non-Residential	5 ft	12/15/2022	< 34	< 34	< 34	< 34	< 34	< 34	< 34	< 34
AOC12-TP03-W	Non-Residential	5 ft	12/15/2022	< 62	< 62	< 62	< 62	< 62	< 62	< 62	< 62
AOC3-TP01-B	Non-Residential	10 ft	12/14/2022	< 45	< 45	< 45	< 45	< 45	< 45	< 45	< 45
AOC3-TP01-E	Non-Residential	5 ft	12/14/2022	< 51	< 51	< 51	< 51	< 51	< 51	< 51	< 51
AOC3-TP01-N	Non-Residential	5 ft	12/14/2022	< 52	< 52	< 52	< 52	< 52	< 52	< 52	< 52
AOC3-TP01-S	Non-Residential	5 ft	12/14/2022	< 74	< 74	< 74	< 74	< 74	< 74	< 74	< 74
AOC3-TP01-W	Non-Residential	5 ft	12/14/2022	< 51	< 51	< 51	< 51	< 51	< 51	< 51	< 51
DUP-07S (AOC3-TP01-W)	Non-Residential	5 ft	12/14/2022	< 60	< 60	< 60	< 60	< 60	< 60	< 60	< 60

Notes:

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Non-Residential DWP Criteria	NC	NC	NC	NC	NC	NC	NC	NC
Generic GSI Protection Criteria	NC	NC	NC	NC	NC	NC	NC	NC
Non-Residential Groundwater Contact Protection Criteria	NC	NC	NC	NC	NC	NC	NC	NC
Non-Residential VIAP Screening Level	NC	NC	NC	NC	NC	NC	NC	NC
Non-Residential Direct Contact Criteria	NC	NC	NC	NC	NC	NC	NC	NC
Units	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg

Investigation Area: Southern Area (continued)											
AOC3-TP02-B	Non-Residential	10 ft	12/14/2022	< 64	< 64	< 64	< 64	< 64	< 64	< 64	< 64
AOC3-TP02-E	Non-Residential	5 ft	12/14/2022	< 47	< 47	< 47	< 47	< 47	< 47	< 47	< 47
AOC3-TP02-N	Non-Residential	5 ft	12/14/2022	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
DUP-08S (AOC3-TP02-N)	Non-Residential	5 ft	12/14/2022	< 69	< 69	< 69	< 69	< 69	< 69	< 69	< 69
AOC3-TP02-S	Non-Residential	5 ft	12/14/2022	< 44	< 44	< 44	< 44	< 44	< 44	< 44	< 44
AOC3-TP02-W	Non-Residential	5 ft	12/14/2022	< 83	< 83	< 83	< 83	< 83	< 83	< 83	< 83
AOC3-TP03-B	Non-Residential	10 ft	12/14/2022	< 37	< 37	< 37	< 37	< 37	< 37	< 37	< 37
AOC3-TP03-E	Non-Residential	5 ft	12/14/2022	< 84	< 84	< 84	< 84	< 84	< 84	< 84	< 84
AOC3-TP03-N	Non-Residential	5 ft	12/14/2022	< 53	< 53	< 53	< 53	< 53	< 53	< 53	< 53
DUP-09S (AOC3-TP03-N)	Non-Residential	5 ft	12/14/2022	< 41	< 41	< 41	< 41	< 41	< 41	< 41	< 41
AOC3-TP03-S	Non-Residential	5 ft	12/14/2022	< 60	< 60	< 60	< 60	< 60	< 60	< 60	< 60
AOC3-TP03-W	Non-Residential	5 ft	12/14/2022	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40
AOC3-TP04-B	Non-Residential	10 ft	12/14/2022	< 61	< 61	< 61	< 61	< 61	< 61	< 61	< 61
AOC3-TP04-E	Non-Residential	5 ft	12/14/2022	< 64	< 64	< 64	< 64	< 64	< 64	< 64	< 64
AOC3-TP04-N	Non-Residential	5 ft	12/14/2022	< 52	< 52	< 52	< 52	< 52	< 52	< 52	< 52
AOC3-TP04-S	Non-Residential	5 ft	12/14/2022	< 51	< 51	< 51	< 51	< 51	< 51	< 51	< 51
AOC3-TP04-W	Non-Residential	5 ft	12/14/2022	< 64	< 64	< 64	< 64	< 64	< 64	< 64	< 64
DUP-10S (AOC3-TP04-W)	Non-Residential	5 ft	12/14/2022	< 44	< 44	< 44	< 44	< 44	< 44	< 44	< 44

Notes:

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Non-Residential DWP Criteria	NC	NC	NC	NC	NC	NC	NC	NC
Generic GSI Protection Criteria	NC	NC	NC	NC	NC	NC	NC	NC
Non-Residential Groundwater Contact Protection Criteria	NC	NC	NC	NC	NC	NC	NC	NC
Non-Residential VIAP Screening Level	NC	NC	NC	NC	NC	NC	NC	NC
Non-Residential Direct Contact Criteria	NC	NC	NC	NC	NC	NC	NC	NC
Units	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg

Investigation Area: Southern Area (continued)											
MW-22-07	Non-Residential	2 - 4 ft	12/13/2022	< 57	< 57	58	< 57	< 57	< 57	< 57	< 57
		8 - 10 ft	12/13/2022	< 64	< 64	< 64	78	< 64	< 64	< 64	< 64
MW-22-08	Non-Residential	2 - 3 ft	12/12/2022	< 40	< 40	76	< 40	< 40	< 40	< 40	< 40
		8 - 10 ft	12/13/2022	< 57	< 57	< 57	< 57	< 57	< 57	< 57	< 57
MW-22-09	Non-Residential	2 - 4 ft	12/12/2022	< 80	< 80	< 80	< 80	< 80	< 80	< 80	< 80
		8 - 10 ft	12/12/2022	< 41	< 41	340	230	48	80	< 41	< 41
MW-22-10	Non-Residential	2 - 4 ft	12/13/2022	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
		8 - 10 ft	12/13/2022	< 51	< 51	< 51	< 51	< 51	< 51	< 51	< 51
MW-22-11	Non-Residential	2 - 4 ft	12/13/2022	< 71	< 71	< 71	< 71	< 71	< 71	< 71	< 71
		8 - 10 ft	12/13/2022	< 48	< 48	< 48	< 48	< 48	< 48	150	140
MW-22-12	Non-Residential	2 - 4 ft	12/13/2022	< 72	< 72	< 72	< 72	< 72	< 72	< 72	< 72
		8 - 10 ft	12/13/2022	< 59	< 59	< 59	< 59	< 59	< 59	< 59	< 59
MW-22-13	Non-Residential	2 - 4 ft	12/14/2022	< 49	< 49	< 49	< 49	< 49	< 49	< 49	< 49
		8 - 10 ft	12/14/2022	< 38	< 38	< 38	< 38	< 38	< 38	< 38	< 38
MW-22-14	Non-Residential	2 - 4 ft	12/14/2022	< 44	< 44	< 44	< 44	< 44	< 44	< 44	< 44
		8 - 10 ft	12/14/2022	< 41	< 41	< 41	< 41	< 41	< 41	< 41	< 41
MW-22-15	Non-Residential	2 - 4 ft	12/14/2022	--	--	--	--	--	--	--	--
		8 - 10 ft	12/14/2022	< 59	< 59	< 59	< 59	< 59	< 59	< 59	< 59
MW-22-16	Non-Residential	2 - 4 ft	12/14/2022	--	--	--	--	--	--	--	--
		8 - 10 ft	12/14/2022	< 48	< 48	< 48	< 48	< 48	< 48	< 48	< 48
MW-22-17	Non-Residential	2 - 4 ft	12/15/2022	< 41	< 41	< 41	< 41	< 41	< 41	< 41	< 41
		8 - 10 ft	12/15/2022	< 56	< 56	< 56	< 56	< 56	< 56	< 56	< 56
MW-22-18	Non-Residential	2 - 4 ft	12/15/2022	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
		8 - 10 ft	12/15/2022	< 57	< 57	< 57	< 57	< 57	< 57	< 57	< 57
MW-22-19	Non-Residential	2 - 4 ft	12/15/2022	< 48	< 48	< 48	< 48	< 48	< 48	< 48	< 48
		8 - 10 ft	12/15/2022	< 51	< 51	< 51	< 51	< 51	< 51	< 51	< 51
MW-22-20	Non-Residential	2 - 4 ft	12/15/2022	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40
		10 - 12 ft	12/15/2022	480	< 47	93	< 47	< 47	< 47	< 47	< 47
MW-22-21	Non-Residential	2 - 4 ft	12/16/2022	< 44	< 44	< 44	< 44	< 44	< 44	< 44	< 44
		8 - 10 ft	12/16/2022	170	350	220	< 52	< 52	< 52	< 52	< 52
SB-01	Non-Residential	2 - 4 ft	12/14/2022	< 51	< 51	< 51	< 51	< 51	< 51	< 51	< 51
		8 - 10 ft	12/14/2022	< 55	< 55	< 55	< 55	< 55	< 55	< 55	< 55
SB-02	Non-Residential	2 - 4 ft	12/14/2022	< 66	< 66	< 66	< 66	< 66	< 66	< 66	< 66
		8 - 10 ft	12/14/2022	< 62	< 62	< 62	< 62	< 62	< 62	< 62	< 62

Notes:

Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, NR Soil Direct Contact Criteria, NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.

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Bold font denotes concentrations detected above laboratory reporting limits.

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Table 10
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Analyte	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctane sulfonic acid (PFOS)	PFOS-BR	PFOS-LN	Perfluorooctanoic acid (PFOA)	Perfluoropentanoic acid (PFPeA)
Non-Residential DWP Criteria	NC	NC	NA	NC	NC	NA	NC
Generic GSI Protection Criteria	NC	NC	240 ⁽¹⁾	NC	NC	1.0E+07 ⁽¹⁾	NC
Non-Residential Groundwater Contact Protection Criteria	NC	NC	NC	NC	NC	NC	NC
Non-Residential VIAP Screening Level	NC	NC	NA	NC	NC	NA	NC
Non-Residential Direct Contact Criteria	NC	NC	NA	NC	NC	NA	NC
Units	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg

Sample Location	Residential Status	Sample Interval	Date Sampled	Perfluorohexanoic acid (PFHxA)	Perfluorononanoic acid (PFNA)	Perfluorooctane sulfonic acid (PFOS)	PFOS-BR	PFOS-LN	Perfluorooctanoic acid (PFOA)	Perfluoropentanoic acid (PFPeA)
Investigation Area: Southern Area										
AOC10-TP01-B	Non-Residential	10 ft	12/12/2022	< 41	< 41	54	< 41	< 41	110	< 41
AOC10-TP01-E	Non-Residential	5 ft	12/12/2022	< 39	< 39	< 39	< 39	< 39	< 39	< 39
AOC10-TP01-N	Non-Residential	5 ft	12/12/2022	< 32	< 32	44	< 32	< 32	< 32	< 32
AOC10-TP01-S	Non-Residential	5 ft	12/12/2022	< 53	< 53	360	110	250	< 53	< 53
AOC10-TP01-W	Non-Residential	5 ft	12/12/2022	< 39	< 39	< 39	< 39	< 39	< 39	< 39
AOC10-TP02-B	Non-Residential	10 ft	12/12/2022	< 33	< 33	35	< 33	< 33	< 33	< 33
AOC10-TP02-E	Non-Residential	5 ft	12/12/2022	< 47	< 47	< 47	< 47	< 47	57	< 47
AOC10-TP02-N	Non-Residential	5 ft	12/12/2022	< 51	< 51	100	< 51	74	< 51	< 51
AOC10-TP02-S	Non-Residential	5 ft	12/12/2022	< 54	< 54	54	< 54	< 54	< 54	< 54
AOC10-TP02-W	Non-Residential	5 ft	12/12/2022	< 43	< 43	< 43	< 43	< 43	< 43	< 43
AOC11-TP01-B	Non-Residential	10 ft	12/13/2022	< 43	< 43	300	68	230	68	< 43
AOC11-TP01-E	Non-Residential	5 ft	12/13/2022	59	< 47	120	99	< 47	110	74
AOC11-TP01-N	Non-Residential	5 ft	12/13/2022	< 91	< 91	970	330	640	< 91	< 91
AOC11-TP01-S	Non-Residential	5 ft	12/13/2022	< 88	< 88	200	< 88	160	< 88	< 88
DUP-03S (AOC11-TP01-S)	Non-Residential	5 ft	12/13/2022	< 62	< 62	330	99	230	64	< 62
AOC11-TP01-W	Non-Residential	5 ft	12/13/2022	< 56	< 56	< 56	< 56	< 56	160	< 56
AOC11-TP02-B	Non-Residential	10 ft	12/13/2022	< 45	< 45	140	48	93	61	< 45
AOC11-TP02-E	Non-Residential	5 ft	12/13/2022	< 49	< 49	< 49	< 49	< 49	< 49	< 49
AOC11-TP02-N	Non-Residential	5 ft	12/13/2022	< 51	< 51	< 51	< 51	< 51	< 51	< 51
DUP-04S (AOC11-TP02-N)	Non-Residential	5 ft	12/13/2022	< 41	< 41	42	< 41	< 41	42	< 41
AOC11-TP02-S	Non-Residential	5 ft	12/13/2022	< 35	< 35	160	71	93	100	< 35
AOC11-TP02-W	Non-Residential	5 ft	12/13/2022	< 36	< 36	< 36	< 36	< 36	130	< 36
AOC11-TP03-B	Non-Residential	10 ft	12/13/2022	< 55	< 55	< 55	< 55	< 55	< 55	< 55
AOC11-TP03-E	Non-Residential	5 ft	12/13/2022	< 73	< 73	< 73	< 73	< 73	< 73	< 73
AOC11-TP03-N	Non-Residential	5 ft	12/13/2022	< 66	< 66	78	< 66	< 66	< 66	< 66
DUP-05S (AOC11-TP03-N)	Non-Residential	5 ft	12/13/2022	< 58	< 58	< 58	< 58	< 58	< 58	< 58
AOC11-TP03-S	Non-Residential	5 ft	12/13/2022	< 42	< 42	48	< 42	< 42	< 42	< 42
AOC11-TP03-W	Non-Residential	5 ft	12/13/2022	< 57	< 57	62	< 57	< 57	76	< 57

Notes:

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Non-Residential DWP Criteria	NC	NC	NA	NC	NC	NA	NC
Generic GSI Protection Criteria	NC	NC	240 ⁽¹⁾	NC	NC	1.0E+07 ⁽¹⁾	NC
Non-Residential Groundwater Contact Protection Criteria	NC	NC	NC	NC	NC	NC	NC
Non-Residential VIAP Screening Level	NC	NC	NA	NC	NC	NA	NC
Non-Residential Direct Contact Criteria	NC	NC	NA	NC	NC	NA	NC
Units	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg

Investigation Area: Southern Area (continued)										
Sample ID	Use	Depth	Date	PFHxA	PFNA	PFOS	PFOS-BR	PFOS-LN	PFOA	PFPeA
AOC11-TP04-B	Non-Residential	10 ft	12/13/2022	< 44	< 44	160	55	100	120	< 44
AOC11-TP04-E	Non-Residential	5 ft	12/13/2022	< 61	< 61	< 61	< 61	< 61	120	< 61
AOC11-TP04-N	Non-Residential	5 ft	12/13/2022	< 67	< 67	570	120	450	120	< 67
DUP-06S (AOC11-TP04-N)	Non-Residential	5 ft	12/13/2022	< 42	< 42	230	46	190	< 42	< 42
AOC11-TP04-S	Non-Residential	5 ft	12/13/2022	< 78	< 78	470	84	390	< 78	< 78
AOC11-TP04-W	Non-Residential	5 ft	12/13/2022	< 72	< 72	190	< 72	150	< 72	< 72
AOC12-TP01-B	Non-Residential	10 ft	12/15/2022	< 73	< 73	830	220	610	< 73	< 73
AOC12-TP01-E	Non-Residential	5 ft	12/15/2022	< 52	53	1,200	210	940	65	< 52
AOC12-TP01-N	Non-Residential	5 ft	12/15/2022	< 72	< 72	970	180	790	< 72	< 72
AOC12-TP01-S	Non-Residential	5 ft	12/15/2022	< 54	64	1,400	330	1,100	86	< 54
AOC12-TP01-W	Non-Residential	5 ft	12/15/2022	< 42	< 42	260	65	190	< 42	< 42
AOC12-TP02-B	Non-Residential	10 ft	12/15/2022	< 84	< 84	480	220	260	< 84	< 84
AOC12-TP02-E	Non-Residential	5 ft	12/15/2022	< 37	< 37	120	100	< 37	68	< 37
AOC12-TP02-N	Non-Residential	5 ft	12/15/2022	< 31	< 31	110	77	< 31	< 31	< 31
AOC12-TP02-S	Non-Residential	5 ft	12/15/2022	< 41	< 41	170	150	< 41	73	< 41
AOC12-TP02-W	Non-Residential	5 ft	12/15/2022	< 43	< 43	250	170	72	58	< 43
AOC12-TP03-B	Non-Residential	10 ft	12/15/2022	< 47	< 47	240	< 47	200	57	< 47
AOC12-TP03-E	Non-Residential	5 ft	12/15/2022	< 53	< 53	56	< 53	< 53	< 53	< 53
AOC12-TP03-N	Non-Residential	5 ft	12/15/2022	< 32	< 32	55	< 32	41	< 32	< 32
AOC12-TP03-S	Non-Residential	5 ft	12/15/2022	< 34	< 34	35	< 34	< 34	< 34	< 34
AOC12-TP03-W	Non-Residential	5 ft	12/15/2022	< 62	< 62	87	< 62	< 62	< 62	< 62
AOC3-TP01-B	Non-Residential	10 ft	12/14/2022	< 45	< 45	< 45	< 45	< 45	< 45	< 45
AOC3-TP01-E	Non-Residential	5 ft	12/14/2022	< 51	< 51	< 51	< 51	< 51	< 51	< 51
AOC3-TP01-N	Non-Residential	5 ft	12/14/2022	< 52	< 52	< 52	< 52	< 52	< 52	< 52
AOC3-TP01-S	Non-Residential	5 ft	12/14/2022	< 74	< 74	< 74	< 74	< 74	< 74	< 74
AOC3-TP01-W	Non-Residential	5 ft	12/14/2022	< 51	< 51	< 51	< 51	< 51	< 51	< 51
DUP-07S (AOC3-TP01-W)	Non-Residential	5 ft	12/14/2022	< 60	< 60	< 60	< 60	< 60	< 60	< 60

Notes:
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Non-Residential DWP Criteria	NC	NC	NA	NC	NC	NA	NC
Generic GSI Protection Criteria	NC	NC	240 ⁽¹⁾	NC	NC	1.0E+07 ⁽¹⁾	NC
Non-Residential Groundwater Contact Protection Criteria	NC	NC	NC	NC	NC	NC	NC
Non-Residential VIAP Screening Level	NC	NC	NA	NC	NC	NA	NC
Non-Residential Direct Contact Criteria	NC	NC	NA	NC	NC	NA	NC
Units	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg

Investigation Area: Southern Area (continued)										
AOC3-TP02-B	Non-Residential	10 ft	12/14/2022	< 64	< 64	< 64	< 64	< 64	< 64	< 64
AOC3-TP02-E	Non-Residential	5 ft	12/14/2022	< 47	< 47	< 47	< 47	< 47	< 47	< 47
AOC3-TP02-N	Non-Residential	5 ft	12/14/2022	< 100	< 100	< 100	< 100	< 100	< 100	< 100
DUP-08S (AOC3-TP02-N)	Non-Residential	5 ft	12/14/2022	< 69	< 69	< 69	< 69	< 69	< 69	< 69
AOC3-TP02-S	Non-Residential	5 ft	12/14/2022	< 44	< 44	< 44	< 44	< 44	< 44	< 44
AOC3-TP02-W	Non-Residential	5 ft	12/14/2022	< 83	< 83	< 83	< 83	< 83	< 83	< 83
AOC3-TP03-B	Non-Residential	10 ft	12/14/2022	< 37	< 37	< 37	< 37	< 37	< 37	< 37
AOC3-TP03-E	Non-Residential	5 ft	12/14/2022	< 84	< 84	< 84	< 84	< 84	< 84	< 84
AOC3-TP03-N	Non-Residential	5 ft	12/14/2022	< 53	< 53	< 53	< 53	< 53	< 53	< 53
DUP-09S (AOC3-TP03-N)	Non-Residential	5 ft	12/14/2022	< 41	< 41	< 41	< 41	< 41	< 41	< 41
AOC3-TP03-S	Non-Residential	5 ft	12/14/2022	< 60	< 60	< 60	< 60	< 60	< 60	< 60
AOC3-TP03-W	Non-Residential	5 ft	12/14/2022	< 40	< 40	< 40	< 40	< 40	< 40	< 40
AOC3-TP04-B	Non-Residential	10 ft	12/14/2022	< 61	< 61	< 61	< 61	< 61	< 61	< 61
AOC3-TP04-E	Non-Residential	5 ft	12/14/2022	< 64	< 64	< 64	< 64	< 64	< 64	< 64
AOC3-TP04-N	Non-Residential	5 ft	12/14/2022	< 52	< 52	< 52	< 52	< 52	< 52	< 52
AOC3-TP04-S	Non-Residential	5 ft	12/14/2022	< 51	< 51	< 51	< 51	< 51	< 51	< 51
AOC3-TP04-W	Non-Residential	5 ft	12/14/2022	< 64	< 64	< 64	< 64	< 64	< 64	< 64
DUP-10S (AOC3-TP04-W)	Non-Residential	5 ft	12/14/2022	< 44	< 44	< 44	< 44	< 44	< 44	< 44

Notes:

Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, NR Soil Direct Contact Criteria, NR Infinite Source Volatile Soil Inhalation Criteria (VSIC), and NR Particulate Soil Inhalation Criteria (PSIC) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.

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Non-Residential DWP Criteria	NC	NC	NA	NC	NC	NA	NC
Generic GSI Protection Criteria	NC	NC	240 ⁽¹⁾	NC	NC	1.0E+07 ⁽¹⁾	NC
Non-Residential Groundwater Contact Protection Criteria	NC	NC	NC	NC	NC	NC	NC
Non-Residential VIAP Screening Level	NC	NC	NA	NC	NC	NA	NC
Non-Residential Direct Contact Criteria	NC	NC	NA	NC	NC	NA	NC
Units	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg	ng/kg

Investigation Area: Southern Area (continued)										
MW-22-07	Non-Residential	2 - 4 ft	12/13/2022	< 57	< 57	< 57	< 57	< 57	< 57	< 57
		8 - 10 ft	12/13/2022	< 64	< 64	570	120	450	< 64	< 64
MW-22-08	Non-Residential	2 - 3 ft	12/12/2022	< 40	< 40	110	< 40	99	< 40	< 40
		8 - 10 ft	12/13/2022	< 57	< 57	< 57	< 57	< 57	< 57	< 57
MW-22-09	Non-Residential	2 - 4 ft	12/12/2022	< 80	< 80	< 80	< 80	< 80	< 80	< 80
		8 - 10 ft	12/12/2022	49	80	2,300	520	1,800	480	< 41
MW-22-10	Non-Residential	2 - 4 ft	12/13/2022	< 100	< 100	160	< 100	140	< 100	< 100
		8 - 10 ft	12/13/2022	< 51	< 51	120	< 51	71	120	< 51
MW-22-11	Non-Residential	2 - 4 ft	12/13/2022	< 71	< 71	77	< 71	< 71	< 71	< 71
		8 - 10 ft	12/13/2022	< 48	< 48	< 48	< 48	< 48	53	< 48
MW-22-12	Non-Residential	2 - 4 ft	12/13/2022	< 72	< 72	84	< 72	< 72	< 72	< 72
		8 - 10 ft	12/13/2022	< 59	< 59	< 59	< 59	< 59	< 59	< 59
MW-22-13	Non-Residential	2 - 4 ft	12/14/2022	< 49	< 49	< 49	< 49	< 49	< 49	< 49
		8 - 10 ft	12/14/2022	< 38	< 38	46	39	< 38	< 38	< 38
MW-22-14	Non-Residential	2 - 4 ft	12/14/2022	< 44	< 44	120	120	< 44	< 44	< 44
		8 - 10 ft	12/14/2022	< 41	< 41	63	< 41	< 41	61	< 41
MW-22-15	Non-Residential	2 - 4 ft	12/14/2022	--	--	--	--	--	--	--
		8 - 10 ft	12/14/2022	< 59	< 59	< 59	< 59	< 59	< 59	< 59
MW-22-16	Non-Residential	2 - 4 ft	12/14/2022	--	--	--	--	--	--	--
		8 - 10 ft	12/14/2022	< 48	< 48	< 48	< 48	< 48	< 48	< 48
MW-22-17	Non-Residential	2 - 4 ft	12/15/2022	< 41	76	320	98	220	41	< 41
		8 - 10 ft	12/15/2022	< 56	< 56	92	81	< 56	65	< 56
MW-22-18	Non-Residential	2 - 4 ft	12/15/2022	< 100	< 100	< 100	< 100	< 100	< 100	< 100
		8 - 10 ft	12/15/2022	< 57	< 57	< 57	< 57	< 57	< 57	< 57
MW-22-19	Non-Residential	2 - 4 ft	12/15/2022	< 48	< 48	< 48	< 48	< 48	< 48	< 48
		8 - 10 ft	12/15/2022	< 51	< 51	89	< 51	62	< 51	< 51
MW-22-20	Non-Residential	2 - 4 ft	12/15/2022	< 40	< 40	130	< 40	94	< 40	< 40
		10 - 12 ft	12/15/2022	< 47	< 47	99	< 47	55	< 47	< 47
MW-22-21	Non-Residential	2 - 4 ft	12/16/2022	< 44	< 44	260	< 44	220	46	< 44
		8 - 10 ft	12/16/2022	< 52	< 52	100	< 52	78	< 52	< 52
SB-01	Non-Residential	2 - 4 ft	12/14/2022	< 51	< 51	< 51	< 51	< 51	< 51	< 51
		8 - 10 ft	12/14/2022	< 55	< 55	< 55	< 55	< 55	< 55	< 55
SB-02	Non-Residential	2 - 4 ft	12/14/2022	< 66	< 66	< 66	< 66	< 66	< 66	< 66
		8 - 10 ft	12/14/2022	< 62	< 62	< 62	< 62	< 62	< 62	< 62

Notes:

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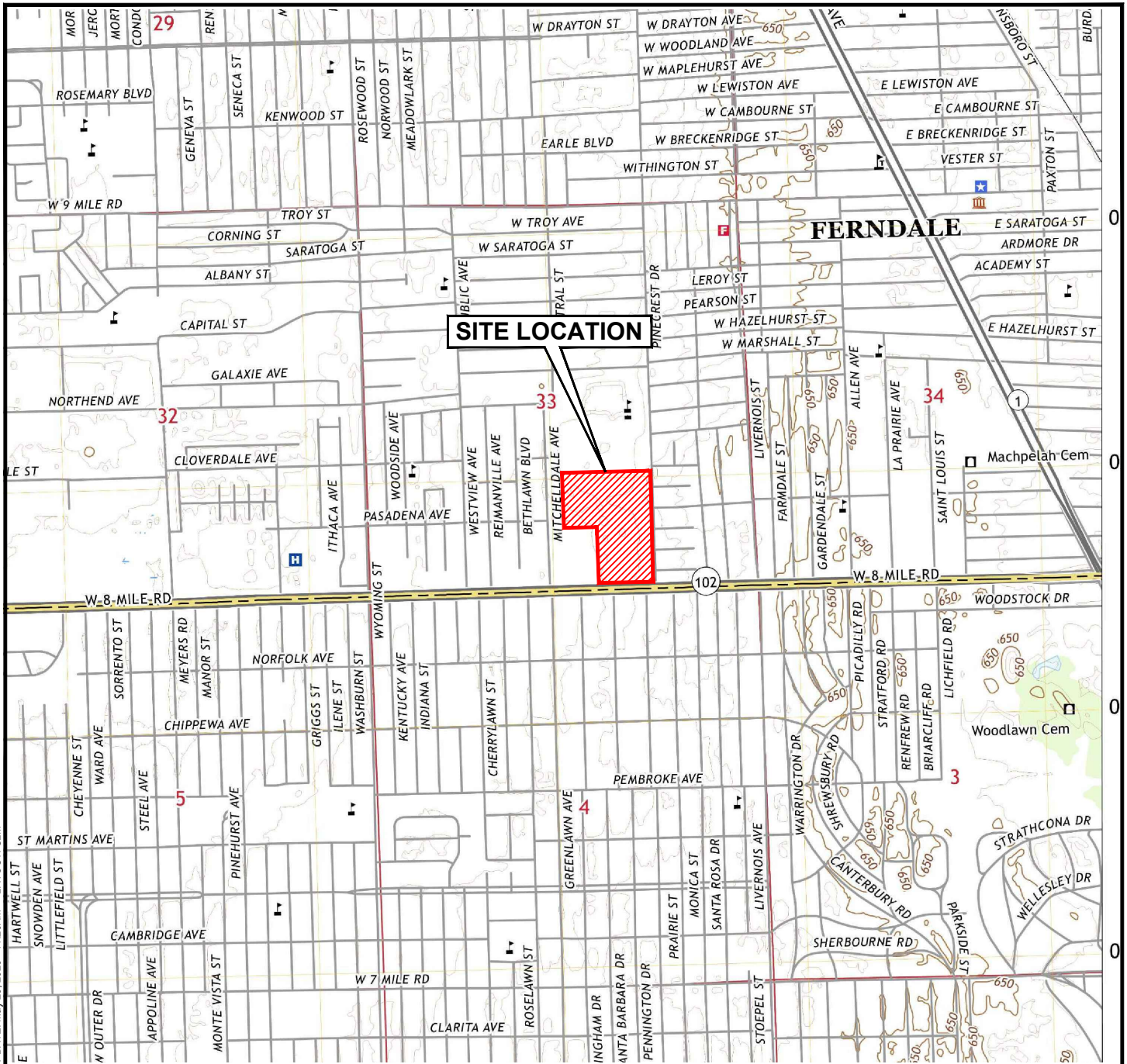
NA = Not Applicable; NC = No Criterion; -- = Parameter Not Analyzed

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Figures



6.541 -- USER: Ealexander -- ATTACHED XREFS: -- ATTACHED IMAGES: M:\Royal_Oak_20191216.TM
 DRAWING NAME: J:\Detroit\Ave Ferndale\495530.0001 FIG1 SLM.dwg -- PLOT DATE: May 25, 2023 - 11:20AM -- LAYOUT: SLM

LEGEND

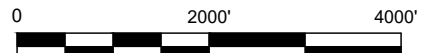
APPROXIMATE SITE BOUNDARY

MAP SOURCE:

MAP DEVELOPED FROM THE UNITED STATES GEOLOGICAL SURVEY (NAD 83), DATED 2019.



QUADRANGLE LOCATION



APPROXIMATE SCALE IN FEET



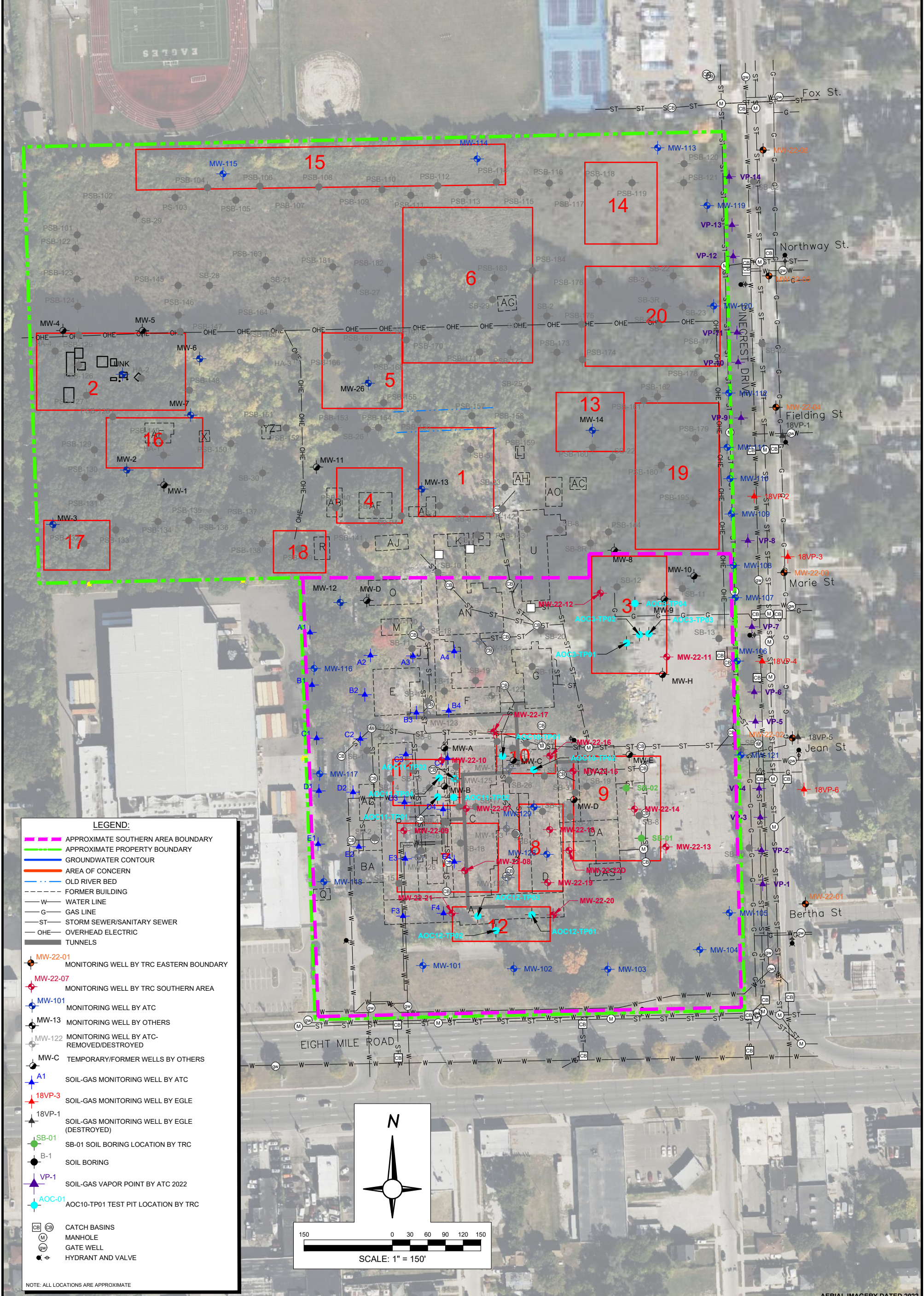
1540 Eisenhower Place
Ann Arbor, MI 48108
Phone: 734.971.7080
www.trcsolutions.com

PROJECT: **FORMER HAYES LEMMERZ SITE
SOUTHERN AREA
WEST EIGHT MILE ROAD
FERNDALE, MI**

TITLE: **SITE LOCATION MAP**

DRAWN BY: E.ALEXANDER
 CHECKED BY: B. YELEN
 APPROVED BY:
 DATE: MAY 2023
 PROJ. NO.: 495430.0001
 FILE: 495530.0001 FIG1 SLM.dwg

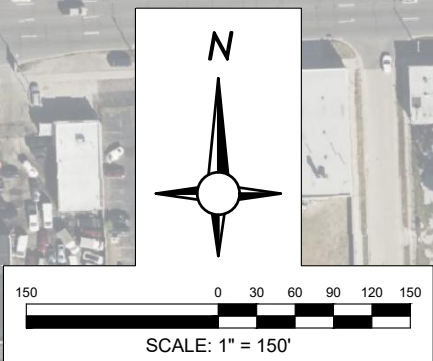
FIGURE 1



LEGEND:

- APPROXIMATE SOUTHERN AREA BOUNDARY
- APPROXIMATE PROPERTY BOUNDARY
- GROUNDWATER CONTOUR
- AREA OF CONCERN
- OLD RIVER BED
- FORMER BUILDING
- WATER LINE
- GAS LINE
- STORM SEWER/SANITARY SEWER
- OVERHEAD ELECTRIC
- TUNNELS
- MW-22-01 MONITORING WELL BY TRC EASTERN BOUNDARY
- MW-22-07 MONITORING WELL BY TRC SOUTHERN AREA
- MW-101 MONITORING WELL BY ATC
- MW-13 MONITORING WELL BY OTHERS
- MW-122 MONITORING WELL BY ATC-REMOVED/DESTROYED
- MW-C TEMPORARY/FORMER WELLS BY OTHERS
- ▲ A1 SOIL-GAS MONITORING WELL BY ATC
- ▲ 18VP-3 SOIL-GAS MONITORING WELL BY EGLE
- ▲ 18VP-1 SOIL-GAS MONITORING WELL BY EGLE (DESTROYED)
- SB-01 SOIL BORING LOCATION BY TRC
- B-1 SOIL BORING
- ▲ VP-1 SOIL-GAS VAPOR POINT BY ATC 2022
- AOC-01 AOC10-TP01 TEST PIT LOCATION BY TRC
- CB CATCH BASINS
- M MANHOLE
- GW GATE WELL
- HYDRANT AND VALVE

NOTE: ALL LOCATIONS ARE APPROXIMATE



AERIAL IMAGERY DATED 2022



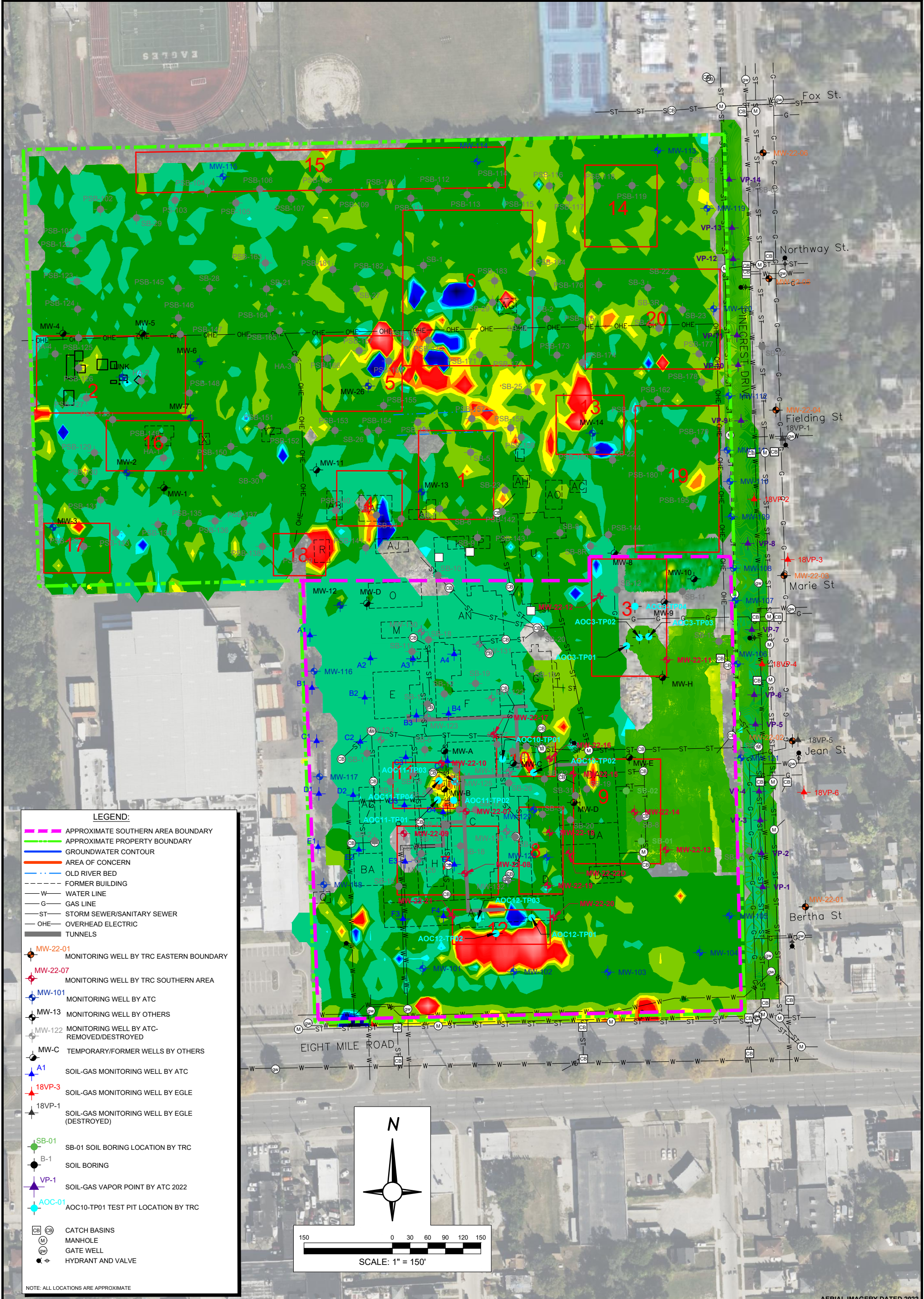
1540 Eisenhower Place
 Ann Arbor, MI 48108
 Phone: 734.971.7080
 www.trcsolutions.com

PROJECT: **FORMER HAYES LEMMERZ SITE SOUTHERN AREA WEST EIGHT MILE ROAD FERNDALE, MI**

TITLE: **SITE FEATURES MAP**

DRAWN BY:	E.ALEXANDER
CHECKED BY:	B.YELEN
APPROVED BY:	
DATE:	MAY 2023
PROJ. NO.:	495430.0001
FILE:	495430.0001 FIG2 SFM.dwg
FIGURE 2	

Version: 2017-10-21



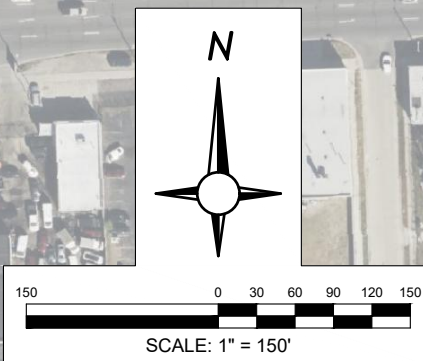
LEGEND:

- APPROXIMATE SOUTHERN AREA BOUNDARY
- APPROXIMATE PROPERTY BOUNDARY
- GROUNDWATER CONTOUR
- AREA OF CONCERN
- OLD RIVER BED
- FORMER BUILDING
- WATER LINE
- GAS LINE
- STORM SEWER/SANITARY SEWER
- OVERHEAD ELECTRIC
- TUNNELS

- MW-22-01 MONITORING WELL BY TRC EASTERN BOUNDARY
- MW-22-07 MONITORING WELL BY TRC SOUTHERN AREA
- MW-101 MONITORING WELL BY ATC
- MW-13 MONITORING WELL BY OTHERS
- MW-122 MONITORING WELL BY ATC-REMOVED/DESTROYED
- MW-C TEMPORARY/FORMER WELLS BY OTHERS
- ▲ A1 SOIL-GAS MONITORING WELL BY ATC
- ▲ 18VP-3 SOIL-GAS MONITORING WELL BY EGLE
- ▲ 18VP-1 SOIL-GAS MONITORING WELL BY EGLE (DESTROYED)
- SB-01 SB-01 SOIL BORING LOCATION BY TRC
- B-1 SOIL BORING
- ▲ VP-1 SOIL-GAS VAPOR POINT BY ATC 2022
- AOC-01 AOC10-TP01 TEST PIT LOCATION BY TRC

- CB CATCH BASINS
- M MANHOLE
- GW GATE WELL
- HYDRANT AND VALVE

NOTE: ALL LOCATIONS ARE APPROXIMATE



AERIAL IMAGERY DATED 2022

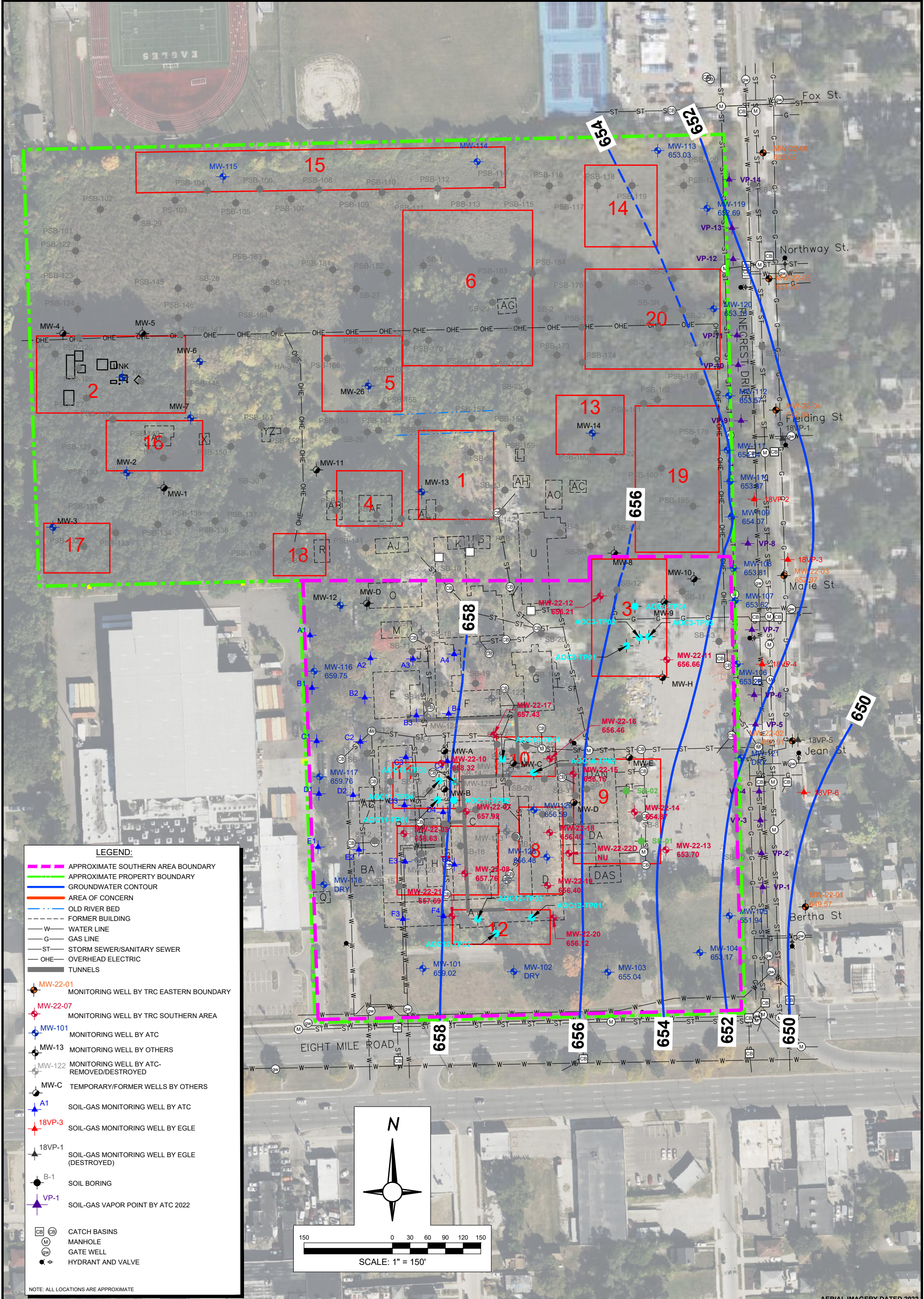
1540 Eisenhower Place
 Ann Arbor, MI 48108
 Phone: 734.971.7080
 www.trcsolutions.com

PROJECT: **FORMER HAYES LEMMERZ SITE
 SOUTHERN AREA
 WEST EIGHT MILE ROAD
 FERNDALE, MI**

TITLE: **GEOPHYSICAL ANOMALY MAP**

DRAWN BY:	E.ALEXANDER
CHECKED BY:	B.YELEN
APPROVED BY:	
DATE:	MAY 2023
PROJ. NO.:	495430.0001
FILE:	495430.0001 FIG3 GPR SM.dwg

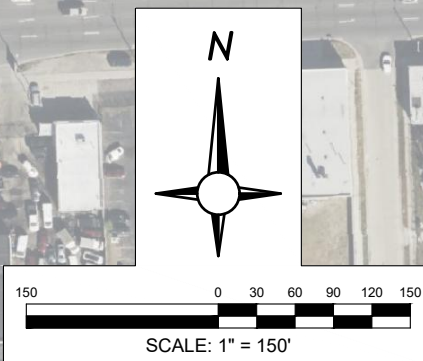
FIGURE 3



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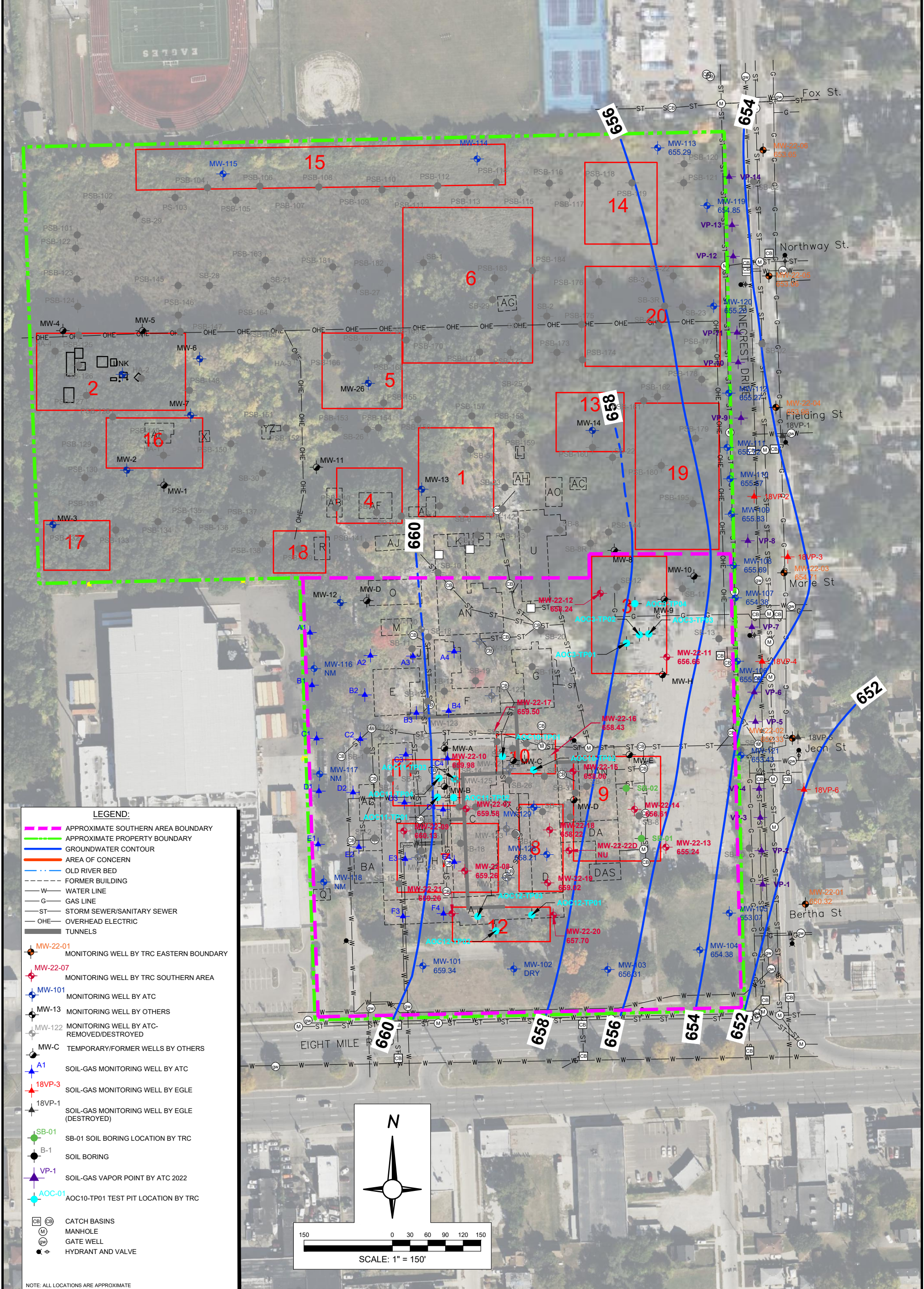
- APPROXIMATE SOUTHERN AREA BOUNDARY
- APPROXIMATE PROPERTY BOUNDARY
- GROUNDWATER CONTOUR
- AREA OF CONCERN
- OLD RIVER BED
- FORMER BUILDING
- WATER LINE
- GAS LINE
- STORM SEWER/SANITARY SEWER
- OVERHEAD ELECTRIC
- TUNNELS
- MW-22-01 MONITORING WELL BY TRC EASTERN BOUNDARY
- MW-22-07 MONITORING WELL BY TRC SOUTHERN AREA
- MW-101 MONITORING WELL BY ATC
- MW-13 MONITORING WELL BY OTHERS
- MW-122 MONITORING WELL BY ATC-REMOVED/DESTROYED
- MW-C TEMPORARY/FORMER WELLS BY OTHERS
- ▲ A1 SOIL-GAS MONITORING WELL BY ATC
- ▲ 18VP-3 SOIL-GAS MONITORING WELL BY EGLE
- ▲ 18VP-1 SOIL-GAS MONITORING WELL BY EGLE (DESTROYED)
- B-1 SOIL BORING
- ▲ VP-1 SOIL-GAS VAPOR POINT BY ATC 2022
- CB CATCH BASINS
- M MANHOLE
- GW GATE WELL
- HYDRANT AND VALVE

NOTE: ALL LOCATIONS ARE APPROXIMATE



AERIAL IMAGERY DATED 2022

<p>1540 Eisenhower Place Ann Arbor, MI 48108 Phone: 734.971.7080 www.trcsolutions.com</p>	<p>PROJECT: FORMER HAYES LEMMERZ SITE SOUTHERN AREA WEST EIGHT MILE ROAD FERNDALE, MI</p>	<p>DRAWN BY: E.ALEXANDER CHECKED BY: B.YELEN APPROVED BY: _____ DATE: MAY 2023 PROJ. NO.: 495430.0001 FILE: 495530.0001 FIG4 GW CM.dwg</p>
	<p>TITLE: GROUNDWATER CONTOUR MAP DECEMBER 2022</p>	<p>FIGURE 4</p>



LEGEND:

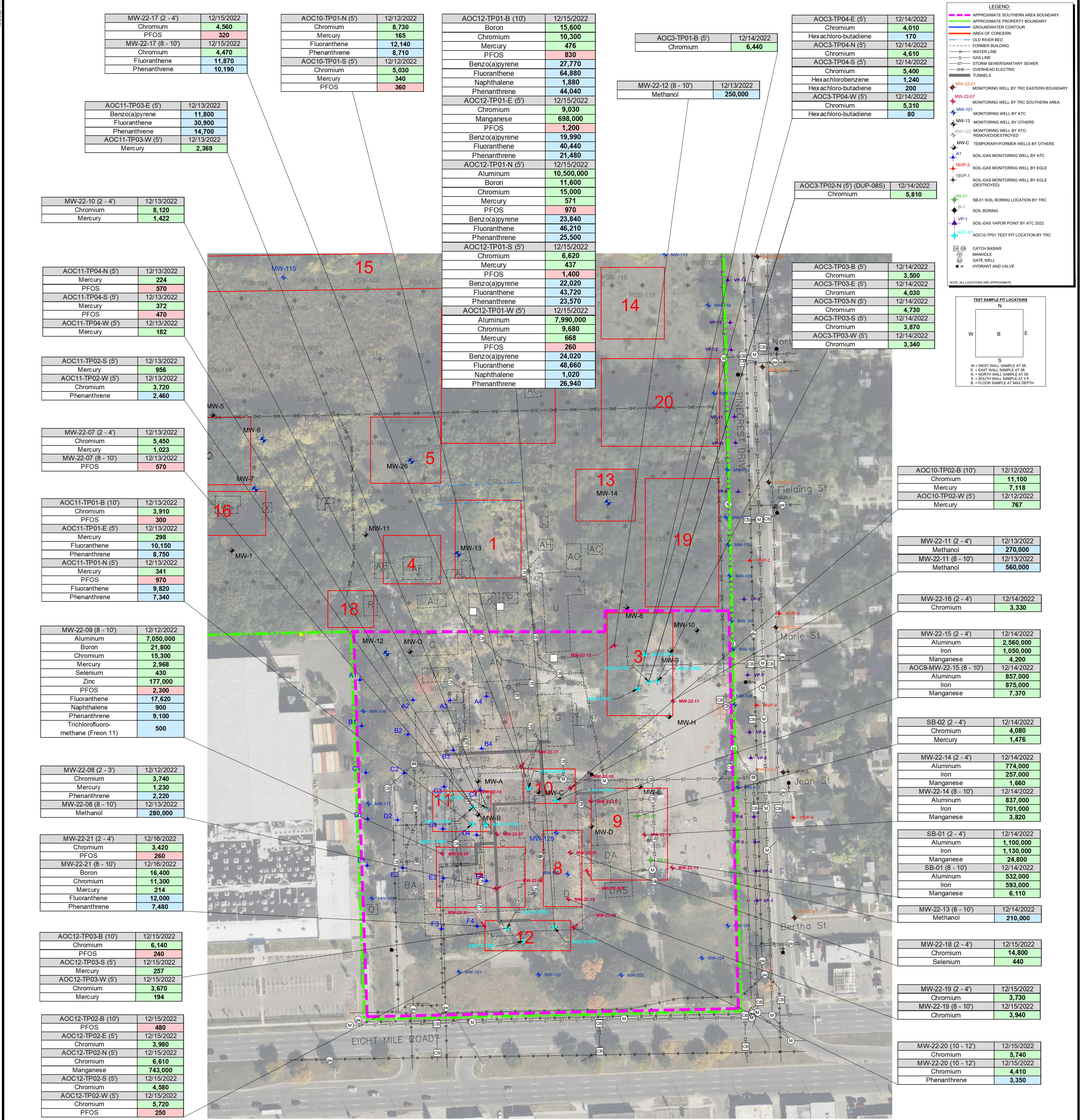
- APPROXIMATE SOUTHERN AREA BOUNDARY
- APPROXIMATE PROPERTY BOUNDARY
- GROUNDWATER CONTOUR
- AREA OF CONCERN
- OLD RIVER BED
- FORMER BUILDING
- WATER LINE
- GAS LINE
- STORM SEWER/SANITARY SEWER
- OVERHEAD ELECTRIC
- TUNNELS

- MW-22-01 MONITORING WELL BY TRC EASTERN BOUNDARY
- MW-22-07 MONITORING WELL BY TRC SOUTHERN AREA
- MW-101 MONITORING WELL BY ATC
- MW-13 MONITORING WELL BY OTHERS
- MW-122 MONITORING WELL BY ATC-REMOVED/DESTROYED
- MW-C TEMPORARY/FORMER WELLS BY OTHERS
- ▲ A1 SOIL-GAS MONITORING WELL BY ATC
- ▲ 18VP-3 SOIL-GAS MONITORING WELL BY EGLE
- ▲ 18VP-1 SOIL-GAS MONITORING WELL BY EGLE (DESTROYED)
- SB-01 SB-01 SOIL BORING LOCATION BY TRC
- B-1 SOIL BORING
- ▲ VP-1 SOIL-GAS VAPOR POINT BY ATC 2022
- AOC-01 AOC10-TP01 TEST PIT LOCATION BY TRC

- CB CATCH BASINS
- M MANHOLE
- GW GATE WELL
- HYDRANT AND VALVE

NOTE: ALL LOCATIONS ARE APPROXIMATE

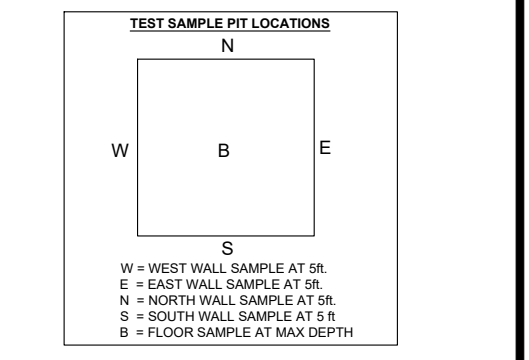
<p>PROJECT:</p> <p>FORMER HAYES LEMMERZ SITE SOUTHERN AREA WEST EIGHT MILE ROAD FERNDALE, MI</p>	<p>TITLE:</p> <p>GROUNDWATER CONTOUR MAP MARCH 2023</p>	<p>DRAWN BY: E.ALEXANDER</p> <p>CHECKED BY: B.YELEN</p> <p>APPROVED BY:</p> <p>DATE: MAY 2023</p> <p>PROJ. NO.: 495430.0001</p> <p>FILE: 495430.0001 FIG5 GWCM 3-23.dwg</p>
<p>TRC</p> <p>1540 Eisenhower Place Ann Arbor, MI 48108 Phone: 734.971.7080 www.trcsolutions.com</p>		<p>FIGURE 5</p>



LEGEND

- APPROXIMATE SOUTHERN AREA BOUNDARY
- APPROXIMATE PROPERTY BOUNDARY
- GROUNDWATER CONTOUR
- AREA OF CONCERN
- WATER LINE
- OLD RIVER BED
- FORMER BUILDING
- GAS LINE
- STORM SEWER/SANITARY SEWER
- OVERHEAD ELECTRIC
- TUNNELS
- MW-22-01 MONITORING WELL BY TRC EASTERN BOUNDARY
- MW-22-07 MONITORING WELL BY TRC SOUTHERN AREA
- MW-101 MONITORING WELL BY ATC
- MW-13 MONITORING WELL BY OTHERS
- MW-122 MONITORING WELL BY ATC - REMOVED/DESTROYED
- MW-C TEMPORARY FORMER WELLS BY OTHERS
- A1 SOIL-GAS MONITORING WELL BY ATC
- 18VP-3 SOIL-GAS MONITORING WELL BY EGLE (DISTROYED)
- 18VP-1 SOIL-GAS MONITORING WELL BY EGLE (DISTROYED)
- SB-01 SB-01 SOIL BORING LOCATION BY TRC
- B-1 SOIL BORING
- VP-1 SOIL-GAS VAPOR POINT BY ATC 2022
- ACOC-01 ACOC10 TPI TEST PIT LOCATION BY TRC
- CATCH BASINS
- MANHOLE
- GATE WELL
- HYDRANT AND VALVE

NOTE: ALL LOCATIONS ARE APPROXIMATE



Analyte	Aluminum	Boron	Chromium	Cobalt	Iron	Manganese	Mercury	Selenium	Zinc
Non-Residential DWP Criteria	6.9E+06 ⁽⁴⁾	10,000	30,000 ⁽¹⁾	6,800 ⁽⁴⁾	1.2E+07 ⁽⁴⁾	4.4E+5 ⁽⁴⁾	1,700	4,000	5.0E+06
Generic GSI Protection Criteria	NA	1.4E+05 ⁽³⁾	3,300 ⁽¹⁾	6,800 ⁽⁴⁾	NA	4.4E+5 ⁽⁴⁾	130 ⁽¹⁾	410 ⁽⁴⁾	1.7E+05 ⁽²⁾
Non-Residential MIP Screening Level	NA	NA	NA	NA	NA	NA	390	NA	NA
Statewide Default Background Levels	6.9E+06 ⁽⁴⁾	NA	18,000 ⁽⁵⁾	6,800 ⁽⁴⁾	1.2E+07 ⁽⁴⁾	4.4E+5 ⁽⁴⁾	130 ⁽¹⁾	410 ⁽⁴⁾	47,000
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Notes:
 Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, and NR Soil Direct Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.
 Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).
 ug/kg = microgram per kilogram
 NA = Not Applicable; NC = No Criteria
Bold font denotes concentrations detected above laboratory reporting limits.
 Denotes concentrations above one or more criteria.

1) Criterion for chromium (VI).
 2) Criterion dependent on hardness (Footnote (G), Michigan Part 201 Criteria Tables). Criterion shown is based on an estimated hardness of 150 mg CaCO₃/L for the southern Lower Peninsula per the EGLE RRD GSI Pathway Compliance Options, April 2018.
 3) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).
 4) Background as defined in R299.5701(b) may be substituted if higher than the calculated clean up criterion (Footnote (B), Michigan Part 201 Criteria Tables).

Analyte	Benzo(a)pyrene ⁽¹⁾	Fluoranthene	Hexachlorobenzene	Naphthalene	Phenanthrene
Generic GSI Protection Criteria	NLL	5,500	350	730	2,100
Non-Residential MIP Screening Level	NA	NA	120	1,900	29,000
Non-Residential Direct Contact Criteria	8,000	1.3E+08	37,000	5.2E+07	5.2E+06
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg

Notes:
 Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, and NR Soil Direct Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.
 Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).
 ug/kg = microgram per kilogram
 NA = Not Applicable; NLL = Not Likely to Leach
Bold font denotes concentrations detected above laboratory reporting limits.
 Denotes concentrations above one or more criteria.

1) Criteria for carcinogenic polycyclic aromatic hydrocarbons were developed using relative potential potencies to benzo(a)pyrene (Footnote (Q), Michigan Part 201 Criteria Tables).

Analyte	Hexachloro-butadiene	Methanol	Naphthalene	Trichlorofluoromethane (Freon 11)
Non-Residential DWP Criteria	72,000	2.0E+05	1.0E+05	1.5E+05
Generic GSI Protection Criteria	91	3.1E+06	730	NA
Non-Residential MIP Screening Level	69	1.7E+07	1,900	340
Units	ug/kg	ug/kg	ug/kg	ug/kg

Notes:
 Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, and NR Soil Direct Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.
 Non-Residential (NR) Volatilization to Indoor Air Pathway (VIAP) Screening Levels from Appendix D.1 of the Addendum to the EGLE Guidance Document for the Vapor Intrusion Pathway (September 2020).
 ug/kg = microgram per kilogram
 NA = Not Applicable
Bold font denotes concentrations detected above laboratory reporting limits.
 Denotes concentrations above one or more criteria.

Analyte	Perfluorooctane sulfonic acid (PFOS)
Generic GSI Protection Criteria	240 ⁽¹⁾
Units	ng/kg

Notes:
 Non-Residential (NR) Drinking Water Protection (DWP) Criteria, Groundwater Surface Water Interface (GSI) Protection Criteria, NR Groundwater Contact Protection Criteria, and NR Soil Direct Contact Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 28, 2012.
 ng/kg = nanogram per kilogram
Bold font denotes concentrations detected above laboratory reporting limits.
 Denotes concentrations above one or more criteria.

1) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).

PROJECT: FORMER HAYES LEMMERZ SITE SOUTHERN AREA WEST EIGHT MILE ROAD FERNDAL, MI

TITLE: SOIL PART 201 CLEANUP CRITERIA EXCEEDANCES

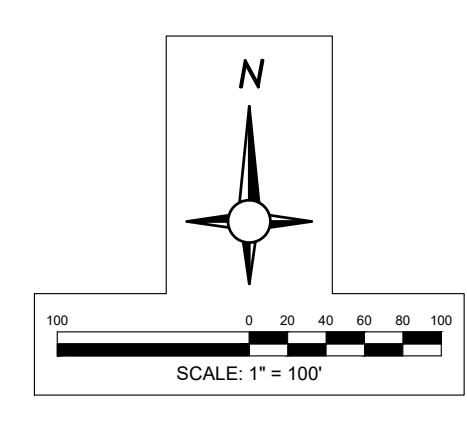
DRAWN BY: E.ALEXANDER
 CHECKED BY: B.YELEN
 APPROVED BY: ---
 DATE: MAY 2023

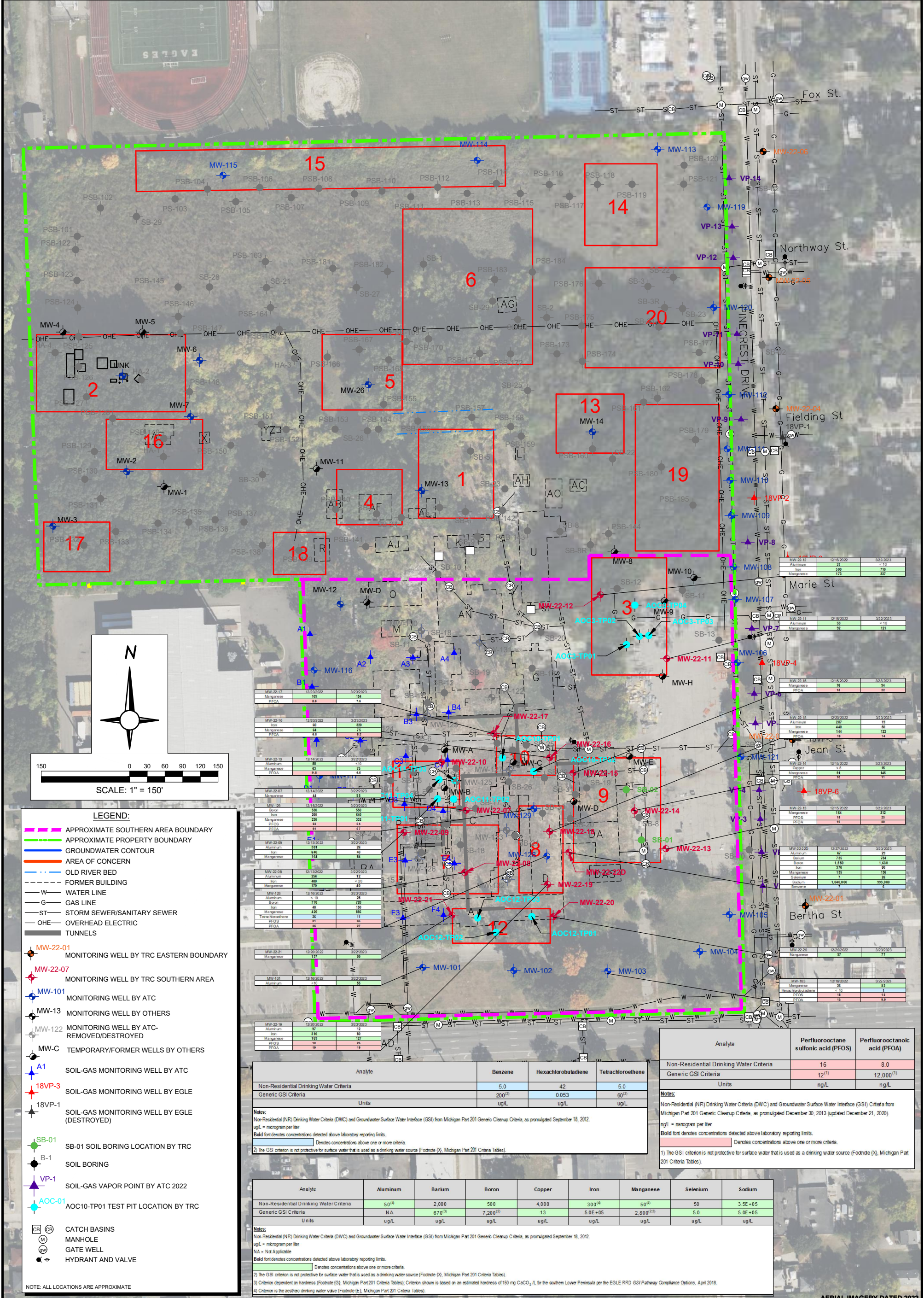
PROJ. NO.: 495430.0001

FIGURE 6

650 Suffolk Street
 Suite 200
 Lowell, MA 01854
 Phone: 978.970.5600

FILE NO.: 495430.0001 FIG6 SP 201 CCE.dwg





LEGEND:

- APPROXIMATE SOUTHERN AREA BOUNDARY
- APPROXIMATE PROPERTY BOUNDARY
- GROUNDWATER CONTOUR
- AREA OF CONCERN
- OLD RIVER BED
- FORMER BUILDING
- WATER LINE
- GAS LINE
- STORM SEWER/SANITARY SEWER
- OVERHEAD ELECTRIC
- TUNNELS

MONITORING WELLS:

- MW-22-01: MONITORING WELL BY TRC EASTERN BOUNDARY
- MW-22-07: MONITORING WELL BY TRC SOUTHERN AREA
- MW-101: MONITORING WELL BY ATC
- MW-13: MONITORING WELL BY OTHERS
- MW-122: MONITORING WELL BY ATC-REMOVED/DESTROYED
- MW-C: TEMPORARY/FORMER WELLS BY OTHERS

SOIL-GAS MONITORING WELLS:

- A1: SOIL-GAS MONITORING WELL BY ATC
- 18VP-3: SOIL-GAS MONITORING WELL BY EGLE
- 18VP-1: SOIL-GAS MONITORING WELL BY EGLE (DESTROYED)

SOIL BORINGS:

- SB-01: SB-01 SOIL BORING LOCATION BY TRC
- B-1: SOIL BORING

SOIL-GAS VAPOR POINTS:

- VP-1: SOIL-GAS VAPOR POINT BY ATC 2022

TEST PIT LOCATIONS:

- AOC-01: AOC10-TP01 TEST PIT LOCATION BY TRC

OTHER FEATURES:

- CB: CATCH BASINS
- M: MANHOLE
- GW: GATE WELL
- H: HYDRANT AND VALVE

NOTE: ALL LOCATIONS ARE APPROXIMATE

Well ID	Date	Manganese	Iron	PFOA
MW-22-17	10/20/2022	322	203	
MW-22-18	10/20/2022	322	203	
MW-22-19	10/20/2022	322	203	
MW-22-20	10/20/2022	322	203	
MW-22-21	10/20/2022	322	203	
MW-22-22	10/20/2022	322	203	
MW-22-23	10/20/2022	322	203	
MW-22-24	10/20/2022	322	203	
MW-22-25	10/20/2022	322	203	

Analyte	Benzene	Hexachlorobutadiene	Tetrachloroethene
Non-Residential Drinking Water Criteria	5.0	42	5.0
Generic GSI Criteria	200 ⁽³⁾	0.053	60 ⁽²⁾
Units	ug/L	ug/L	ug/L

Notes:
 1) Non-Residential (NR) Drinking Water Criteria (DWC) and Groundwater Surface Water Interface (GSI) Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 18, 2012.
 ug/L = microgram per liter
 Bold font denotes concentrations detected above laboratory reporting limits.
 Denotes concentrations above one or more criteria.
 2) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).

Analyte	Perfluorooctane sulfonic acid (PFOS)	Perfluorooctanoic acid (PFOA)
Non-Residential Drinking Water Criteria	16	8.0
Generic GSI Criteria	12 ⁽¹⁾	12,000 ⁽¹⁾
Units	ng/L	ng/L

Notes:
 Non-Residential (NR) Drinking Water Criteria (DWC) and Groundwater Surface Water Interface (GSI) Criteria from Michigan Part 201 Generic Cleanup Criteria, as promulgated December 30, 2013 (updated December 21, 2020).
 ng/L = nanogram per liter
 Bold font denotes concentrations detected above laboratory reporting limits.
 Denotes concentrations above one or more criteria.
 1) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).

Analyte	Aluminum	Barium	Boron	Copper	Iron	Manganese	Selenium	Sodium
Non-Residential Drinking Water Criteria	50 ⁽⁴⁾	2,000	500	4,000	300 ⁽⁴⁾	50 ⁽⁴⁾	50	3.5E+05
Generic GSI Criteria	N/A	670 ⁽³⁾	7,200 ⁽²⁾	13	5.0E+05	2,800 ^(2,3)	5.0	5.0E+05
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L

Notes:
 Non-Residential (NR) Drinking Water Criteria (DWC) and Groundwater Surface Water Interface (GSI) from Michigan Part 201 Generic Cleanup Criteria, as promulgated September 18, 2012.
 ug/L = microgram per liter
 NA = Not Applicable
 Bold font denotes concentrations detected above laboratory reporting limits.
 Denotes concentrations above one or more criteria.
 2) The GSI criterion is not protective for surface water that is used as a drinking water source (Footnote (X), Michigan Part 201 Criteria Tables).
 3) Criterion dependent on hardness (Footnote (G), Michigan Part 201 Criteria Tables). Criterion shown is based on an estimated hardness of 150 mg CaCO₃/L for the southern Lower Peninsula per the EGLE RRD GSI/Pathway Compliance Options, April 2018.
 4) Criterion is the aesthetic drinking water value (Footnote (E), Michigan Part 201 Criteria Tables).

AERIAL IMAGERY DATED 2022

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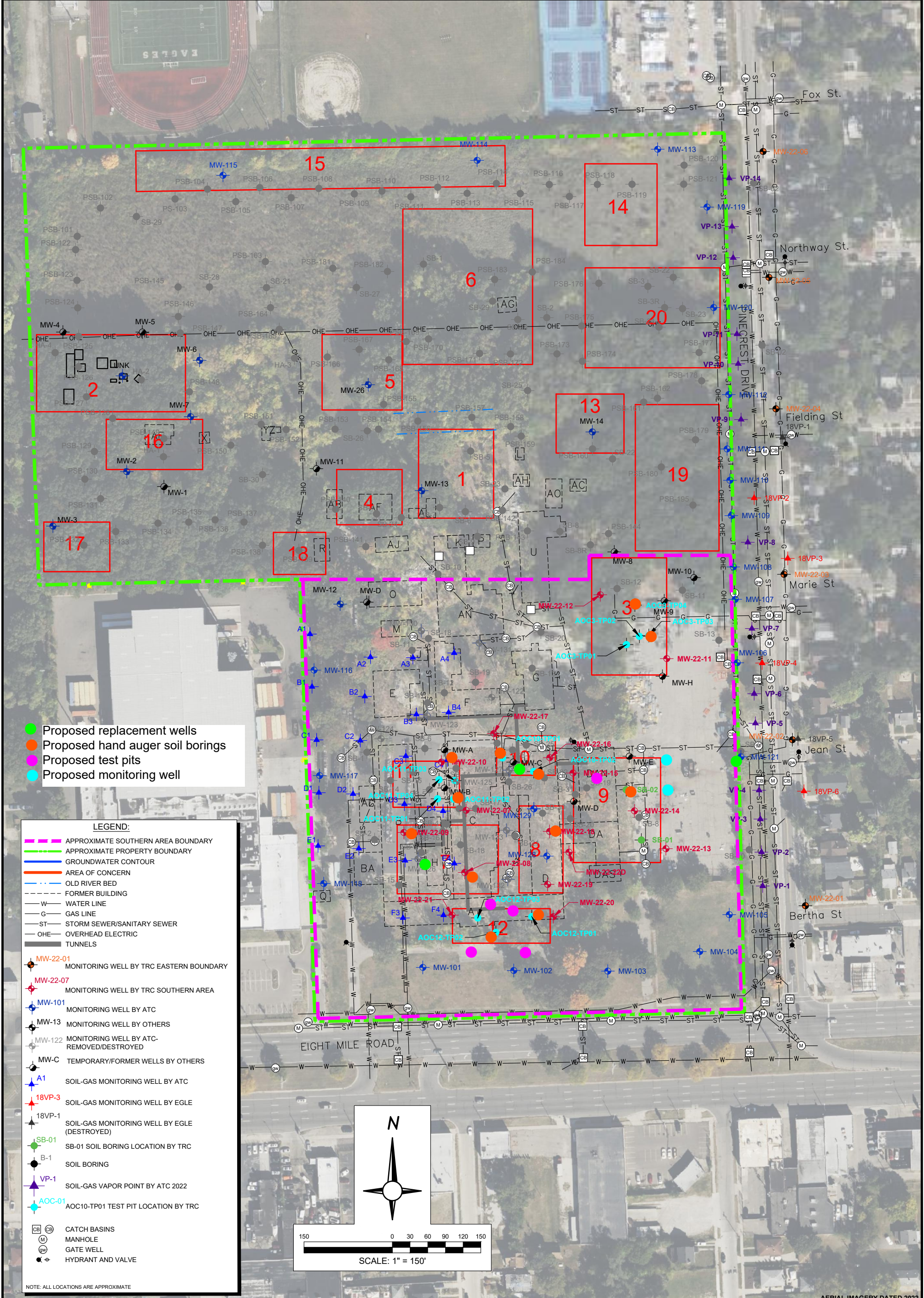
PROJECT: **FORMER HAYES LEMMERZ SITE SOUTHERN AREA WEST EIGHT MILE ROAD FERNDAL, MI**

TITLE: **GROUNDWATER PART 201 CLEANUP CRITERIA EXCEEDANCES**

DRAWN BY: E.ALEXANDER
 CHECKED BY: B.YELEN
 APPROVED BY:
 DATE: MAY 2023
 PROJ. NO.: 495430.0001
 FILE: 495430.0001 FIG7 GWP 201 CCE.dwg

FIGURE 7

Version: 2017-10-21



- Proposed replacement wells
- Proposed hand auger soil borings
- Proposed test pits
- Proposed monitoring well

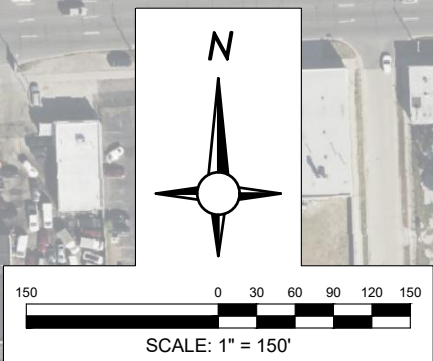
LEGEND:

- APPROXIMATE SOUTHERN AREA BOUNDARY
- APPROXIMATE PROPERTY BOUNDARY
- GROUNDWATER CONTOUR
- AREA OF CONCERN
- OLD RIVER BED
- FORMER BUILDING
- WATER LINE
- GAS LINE
- STORM SEWER/SANITARY SEWER
- OVERHEAD ELECTRIC
- TUNNELS

- MW-22-01 MONITORING WELL BY TRC EASTERN BOUNDARY
- MW-22-07 MONITORING WELL BY TRC SOUTHERN AREA
- MW-101 MONITORING WELL BY ATC
- MW-13 MONITORING WELL BY OTHERS
- MW-122 MONITORING WELL BY ATC-REMOVED/DESTROYED
- MW-C TEMPORARY/FORMER WELLS BY OTHERS
- ▲ A1 SOIL-GAS MONITORING WELL BY ATC
- ▲ 18VP-3 SOIL-GAS MONITORING WELL BY EGLE
- ▲ 18VP-1 SOIL-GAS MONITORING WELL BY EGLE (DESTROYED)
- SB-01 SB-01 SOIL BORING LOCATION BY TRC
- B-1 SOIL BORING
- ▲ VP-1 SOIL-GAS VAPOR POINT BY ATC 2022
- AOC-01 AOC10-TP01 TEST PIT LOCATION BY TRC

- CB CATCH BASINS
- M MANHOLE
- GW GATE WELL
- HYDRANT AND VALVE

NOTE: ALL LOCATIONS ARE APPROXIMATE



AERIAL IMAGERY DATED 2022

1540 Eisenhower Place
 Ann Arbor, MI 48108
 Phone: 734.971.7080
 www.trcsolutions.com

PROJECT: **FORMER HAYES LEMMERZ SITE SOUTHERN AREA WEST EIGHT MILE ROAD FERNDALE, MI**

TITLE: **PROPOSED LOCATION MAP**

DRAWN BY:	E.ALEXANDER
CHECKED BY:	B.YELEN
APPROVED BY:	
DATE:	MAY 2023
PROJ. NO.:	495430.0001
FILE:	495430.0001 FIG2 SFM.dwg
FIGURE 8	

Appendix A

Soil Boring Logs and Monitoring Well Installation Diagrams



WELL CONSTRUCTION LOG

WELL NO. MW-22-07

Facility/Project Name: FORMER HAYES LEMMERZ SITE: SOUTHERN AREA		Date Drilling Started: 12/12/22	Date Drilling Completed: 12/13/22	Project Number: 495430.0001
Drilling Firm: Job Site Services	Drilling Method: Direct Push	Surface Elev. (ft) 667.4	TOC Elevation (ft) 670.62	Total Depth (ft bgs) 20.0
Boring Location: AOC 11 N: 347597.3 E: 13451909.7		Personnel Logged By - Brian Yelen Driller - Bob Miller		Drilling Equipment: Geoprobe 7822
Civil Town/City/or Village: Ferndale	County: Oakland	State: MI	Water Level Observations: While Drilling: Date/Time After Drilling: Date/Time	
			▽ Depth (ft bgs) <u>10.0</u>	Depth (ft bgs)

SAMPLE NUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
1 HA			2	SAND mostly fine to medium sand, trace to few gravel, trace concrete and brick, brown (10YR 4/3), no odor, dry to moist, loose.	SP			Sample collected between 2.0 and 4.0 feet below ground surface on 12-13-2022 at 1020.
			4					
2 GP	80		6	CLAY mostly clay, few to little concrete, wood, gravel, brick, low to medium plasticity, black (10YR 2/1), no odor, moist, stiff.	CL			Sample collected between 8.0 and 10.0 feet below ground surface on 12-13-2022 at 1040.
			8	SAND mostly fine to medium sand, brown (10YR 4/3), no odor, moist, loose.	SP			
			10	CONCRETE SAND mostly fine to medium sand, brown (10YR 4/3), no odor, moist, loose. Changes to grayish brown (10YR 5/2), wet at 10.0 feet below ground surface.				
3 GP	90		12		SP			
			14					
			16					
4 GP	100		18		SP			
			20	SAND mostly coarse sand, trace to few fine to medium sand, trace gravel, gray (10YR 5/1), no odor, wet, dense. CLAY mostly clay, trace to few fine to medium sand, silt, low plasticity, dark gray (10YR 4/1), no odor, moist, very stiff. End of boring at 20.0 feet below ground surface.	CL			

SOIL BORING LOG WITH PHOTO 495430.1 BORING LOGS 12.2022.GPJ 495430.0001 5/25/23

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WELL CONSTRUCTION LOG

WELL NO. MW-22-08

Facility/Project Name: FORMER HAYES LEMMERZ SITE: SOUTHERN AREA		Date Drilling Started: 12/12/22	Date Drilling Completed: 12/13/22	Project Number: 495430.0001
Drilling Firm: Job Site Services	Drilling Method: Direct Push	Surface Elev. (ft) 667.7	TOC Elevation (ft) 670.96	Total Depth (ft bgs) 25.0
Boring Location: AOC 7 N: 347491.8 E: 13451907.4		Personnel Logged By - Brian Yelen Driller - Bob Miller		Drilling Equipment: Geoprobe 7822
Civil Town/City/or Village: Ferndale	County: Oakland	State: MI	Water Level Observations: While Drilling: Date/Time After Drilling: Date/Time	
				▽ Depth (ft bgs) <u>10.0</u> Depth (ft bgs)

SAMPLE NUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
				TOPSOIL				
1 HA				SAND mostly fine to medium sand, trace gravel, trace brick, trace concrete, brown (10YR 4/3), no odor, dry, loose.				Sample collected between 2.0 and 3.0 feet below ground surface on 12-12-2022 at 1155.
2 GP	50		5	Changes to no trace gravel, brick, concrete at 5.0 feet below ground surface.				
3 GP	90		10	Changes to grayish brown (10YR 5/2), wet at 10.0 feet below ground surface.	SP			Sample collected between 8.0 and 10.0 feet below ground surface on 12-13-2022 at 0850.
4 GP	100		15					
5 GP	100		20	SAND mostly coarse sand, trace to few fine to medium sand, trace gravel, gray (10YR 5/1), no odor, wet, medium dense.	SP			
				CLAY mostly clay, trace to few fine to medium sand, trace to few silt, dark gray (10YR 4/1), no odor, moist, very stiff.	CL			
			25	End of boring at 25.0 feet below ground surface.				

SOIL BORING LOG WITH PHOTO 495430.1 BORING LOGS 12.2022.GPJ 495430.0001 5/25/23

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WELL CONSTRUCTION LOG

WELL NO. MW-22-09

Facility/Project Name: FORMER HAYES LEMMERZ SITE: SOUTHERN AREA		Date Drilling Started: 12/12/22	Date Drilling Completed: 12/13/22	Project Number: 495430.0001	
Drilling Firm: Job Site Services	Drilling Method: Direct Push	Surface Elev. (ft) 669.3	TOC Elevation (ft) 668.93	Total Depth (ft bgs) 25.0	Borehole Dia. (in) 3
Boring Location: AOC 7		Personnel Logged By - Brian Yelen Driller - Bob Miller		Drilling Equipment: Geoprobe 7822	
N: 347559.7 E: 13451804.0		Water Level Observations: While Drilling: _____ Date/Time _____ After Drilling: _____ Date/Time _____			
Civil Town/City/or Village: Ferndale	County: Oakland	State: MI	<input type="checkbox"/> Depth (ft bgs) <u>10.0</u> <input type="checkbox"/> Depth (ft bgs) _____		

SAMPLE NUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
1 HA				ASPHALT				
				SAND mostly fine to medium sand, trace to few gravel, trace to few brick, no odor, brown (10YR 4/3), no odor, dry to moist, loose.				Sample collected between 2.0 and 4.0 feet below ground surface at 1230.
			5	Changes to no gravel, no brick, yellowish brown (10YR 5/4) at 3.0 feet below ground surface.				
2 GP	60			Changes to little to some asphalt, brick, and concrete at 7.5 feet below ground surface.				Sample collected between 8.0 and 10.0 feet below ground surface at 1300.
			10	Changes to no asphalt, no brick, no concrete, brown (10YR 4/3), wet at 10.0 feet below ground surface.	SP			
3 GP	80			Changes to grayish brown (10YR 5/2) at 12.5 feet below ground surface.				
			15					
4 GP	90							
			20	SAND mostly coarse sand, few gravel, grayish brown (10YR 5/2), no odor, wet, medium dense.	SP			
5 GP	100			CLAY mostly clay, few silt, few fine sand, low plasticity, gray (10YR 5/1), no odor, moist, very stiff.	CL			
			25	End of boring at 25.0 feet below ground surface.				

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WELL CONSTRUCTION LOG

WELL NO. MW-22-10

Facility/Project Name: FORMER HAYES LEMMERZ SITE: SOUTHERN AREA		Date Drilling Started: 12/13/22	Date Drilling Completed: 12/13/22	Project Number: 495430.0001	
Drilling Firm: Job Site Services	Drilling Method: Direct Push	Surface Elev. (ft) 668.7	TOC Elevation (ft) 671.77	Total Depth (ft bgs) 20.0	Borehole Dia. (in) 3
Boring Location: AOC 11 N: 347679.1 E: 13451867.8		Personnel Logged By - Brian Yelen Driller - Bob Miller		Drilling Equipment: Geoprobe 7822	
Civil Town/City/or Village: Ferndale	County: Oakland	State: MI	Water Level Observations: While Drilling: Date/Time After Drilling: Date/Time		
			▽ Depth (ft bgs) <u>10.0</u> Depth (ft bgs)		

SAMPLE	NUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
	1	75		2	SAND mostly fine to medium sand, trace gravel, trace brick, grayish brown (10YR 5/2), no odor, moist, loose.				Sample collected between 2.0 and 4.0 feet below ground surface at 1245.
				4	Changes to no gravel, no brick, yellowish brown (10YR 5/6) at 2.5 feet below ground surface.	SP			
	2	75		8					Sample collected between 8.0 and 10.0 feet below ground surface at 1300.
				10	SAND mostly coarse sand, trace to few fine to medium sand, dark grayish brown (10YR 4/2), no odor, wet, loose.	SP			
	3	75		12					
				14	SAND mostly fine to medium sand, dark grayish brown (10YR 4/2), no odor, wet loose.				
	4	100		16					
				18		SP			
				20	End of boring at 20.0 feet below ground surface.				

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WELL CONSTRUCTION LOG

WELL NO. MW-22-11

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Facility/Project Name: FORMER HAYES LEMMERZ SITE: SOUTHERN AREA		Date Drilling Started: 12/13/22	Date Drilling Completed: 12/13/22	Project Number: 495430.0001
Drilling Firm: Job Site Services	Drilling Method: Direct Push	Surface Elev. (ft) 665.1	TOC Elevation (ft) 664.68	Total Depth (ft bgs) 20.0
Boring Location: AOC 3 N: 347854.6 E: 13452250.0		Personnel Logged By - Brian Yelen Driller - Bob Miller		Drilling Equipment: Geoprobe 7822
Civil Town/City/or Village: Ferndale	County: Oakland	State: MI	Water Level Observations: While Drilling: Date/Time After Drilling: Date/Time ▽ Depth (ft bgs) <u>10.0</u> Depth (ft bgs)	

SAMPLE	NUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
				2	ASPHALT				
	1 GP	60		2 - 4	SAND mostly fine to medium sand, dark yellowish brown (10YR 4/6), no odor, moist, loose.				Sample collected between 2.0 and 4.0 feet below ground surface at 1350.
	2 GP	80		6 - 8	Changes to light gray (10YR 7/1) at 6.0 feet below ground surface.				
	3 GP	95		9.5 - 10	▽ Changes to gray (10YR 5/1) at 9.5 feet below ground surface. Changes to wet at 10.0 feet below ground surface.	SP			Sample collected between 8.0 and 10.0 feet below ground surface at 1400.
	4 GP	100		18 - 20	CLAY mostly clay, trace to few fine to medium sand, trace to few silt, dark gray (10YR 4/1), no odor, moist, very stiff.	CL			
				20	End of boring at 20.0 feet below ground surface.				

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WELL CONSTRUCTION LOG

WELL NO. MW-22-12

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Facility/Project Name: FORMER HAYES LEMMERZ SITE: SOUTHERN AREA		Date Drilling Started: 12/13/22	Date Drilling Completed: 12/13/22	Project Number: 495430.0001	
Drilling Firm: Job Site Services	Drilling Method: Direct Push	Surface Elev. (ft) 666.9	TOC Elevation (ft) 670.02	Total Depth (ft bgs) 20.0	Borehole Dia. (in) 3
Boring Location: AOC 3 N: 347962.8 E: 13452137.3		Personnel Logged By - Brian Yelen Driller - Bob Miller		Drilling Equipment: Geoprobe 7822	
Civil Town/City/or Village: Ferndale	County: Oakland	State: MI	Water Level Observations: While Drilling: Date/Time After Drilling: Date/Time		
			▽ Depth (ft bgs) <u>10.0</u> Depth (ft bgs)		

SAMPLE	RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
				TOPSOIL				
1 GP	80		2	SAND mostly fine to medium sand, dark yellowish brown (10YR 4/6), no odor, moist, loose.		[Pattern]	[Pattern]	Sample collected between 2.0 and 4.0 feet below ground surface at 1600.
			4					
			6	Changes to light gray (10YR 7/1) at 6.0 feet below ground surface.				
2 GP	85		8					
			10	▽ Changes to gray (10YR 5/1) at 9.5 feet below ground surface. Changes to wet at 10.0 feet below ground surface.	SP			Sample collected between 8.0 and 10.0 feet below ground surface at 1610.
			12					
3 GP	75		14					
			16					
			18					
4 GP	100		20	CLAY mostly clay, trace to few fine to medium sand, trace to few silt, dark gray (10YR 4/1), no odor, moist, very stiff. End of boring at 20.0 feet below ground surface.	CL	[Pattern]	[Pattern]	

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WELL CONSTRUCTION LOG

WELL NO. MW-22-13

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Facility/Project Name: FORMER HAYES LEMMERZ SITE: SOUTHERN AREA		Date Drilling Started: 12/14/22	Date Drilling Completed: 12/14/22	Project Number: 495430.0001
Drilling Firm: Job Site Services	Drilling Method: Direct Push	Surface Elev. (ft) 664.9	TOC Elevation (ft) 664.35	Total Depth (ft bgs) 20.0
Boring Location: AOC 9 N: 347532.3 E: 13452248.6		Personnel Logged By - Brian Yelen Driller - Bob Miller		Drilling Equipment: Geoprobe 7822
Civil Town/City/or Village: Ferndale	County: Oakland	State: MI	Water Level Observations: While Drilling: Date/Time After Drilling: Date/Time ▽ Depth (ft bgs) <u>10.0</u> Depth (ft bgs)	

SAMPLE	RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
1	60		2	ASPHALT		//		
			4	SAND mostly fine to medium sand, brownish yellow (10YR 6/8), no odor, moist, loose.		••••		Sample collected between 2.0 and 4.0 feet below ground surface at 0930.
			6	Changes to grayish brown (10YR 5/2) at 5.0 feet below ground surface.		••••		
2	80		8			••••		
			10	Changes to wet at 10.0 feet below ground surface.		••••		Sample collected between 8.0 and 10.0 feet below ground surface at 0940.
			12		SP	••••		
3	90		14			••••		
			16			••••		
4	100		18	Changes to mostly coarse sand at 17.5 feet below ground surface.		••••		
			20	CLAY mostly clay, trace to few fine to medium sand, trace to few silt, dark gray (10YR 4/1), no odor, moist, very stiff.	CL	//		
			20	End of boring at 20.0 feet below ground surface.		//		

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WELL CONSTRUCTION LOG

WELL NO. MW-22-14

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Facility/Project Name: FORMER HAYES LEMMERZ SITE: SOUTHERN AREA		Date Drilling Started: 12/14/22	Date Drilling Completed: 12/14/22	Project Number: 495430.0001
Drilling Firm: Job Site Services	Drilling Method: Direct Push	Surface Elev. (ft) 665.5	TOC Elevation (ft) 668.33	Total Depth (ft bgs) 20.0
Boring Location: AOC 9 N: 347596.3 E: 13452195.3		Personnel Logged By - Brian Yelen Driller - Bob Miller		Drilling Equipment: Geoprobe 7822
Civil Town/City/or Village: Ferndale	County: Oakland	State: MI	Water Level Observations: While Drilling: Date/Time After Drilling: Date/Time	
			▽ Depth (ft bgs) <u>10.0</u>	Depth (ft bgs)

SAMPLE NUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
			0	TOPSOIL				
1 GP	80		2	SAND mostly fine to medium sand, yellowish brown (10YR 5/8), no odor, moist, loose.				Sample collected between 2.0 and 4.0 feet below ground surface at 1130.
			4					
			6	Changes to yellowish brown (10YR 5/4) at 5.0 feet below ground surface.				
2 GP	80		8					
			10	Changes to dark gray (10YR 4/1), wet at 10.0 feet below ground surface.				
			12					
3 GP	90		14					
			16					
4 GP	100		18	CLAY mostly clay, trace to few fine to medium sand, trace to few silt, dark gray (10YR 4/1), no odor, moist, very stiff.	CL			
			20	End of boring at 20.0 feet below ground surface.				

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WELL CONSTRUCTION LOG

WELL NO. MW-22-15

Facility/Project Name: FORMER HAYES LEMMERZ SITE: SOUTHERN AREA		Date Drilling Started: 12/14/22	Date Drilling Completed: 12/14/22	Project Number: 495430.0001
Drilling Firm: Job Site Services	Drilling Method: Direct Push	Surface Elev. (ft) 667.8	TOC Elevation (ft) 670.86	Total Depth (ft bgs) 20.0
Boring Location: AOC 9 N: 347660.6 E: 13452090.9		Personnel Logged By - Brian Yelen Driller - Bob Miller		Drilling Equipment: Geoprobe 7822
Civil Town/City/or Village: Ferndale	County: Oakland	State: MI	Water Level Observations: While Drilling: Date/Time After Drilling: Date/Time	
			▽ Depth (ft bgs) <u>10.0</u>	Depth (ft bgs)

SAMPLE	NUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
					TOPSOIL				
	1 GP	75		2	SAND mostly fine to medium sand, trace to few concrete, trace to few brick, dark brown (10YR 3/3), no odor, dry to moist, loose.				Sample collected between 2.0 and 4.0 feet below ground surface at 1330.
				4	Changes to no concrete, no brick, yellowish brown (10YR 5/4) at 3.0 feet below ground surface.				
	2 GP	80		8					
				10	Changes to gray (10YR 5/1) at 9.0 feet below ground surface.				
				10	Changes to wet at 10.0 feet below ground surface.	SP			Sample collected between 8.0 and 10.0 feet below ground surface at 1340.
	3 GP	90		12					
				14					
	4 GP	90		18					
				20	CLAY mostly clay, trace to few fine to medium sand, trace to few silt, dark gray (10YR 4/1), no odor, moist, very stiff.	CL			
				20	End of boring at 20.0 feet below ground surface.				

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WELL CONSTRUCTION LOG

WELL NO. MW-22-16

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Facility/Project Name: FORMER HAYES LEMMERZ SITE: SOUTHERN AREA		Date Drilling Started: 12/14/22	Date Drilling Completed: 12/14/22	Project Number: 495430.0001
Drilling Firm: Job Site Services	Drilling Method: Direct Push	Surface Elev. (ft) 668.2	TOC Elevation (ft) 671.16	Total Depth (ft bgs) 20.0
Boring Location: AOC 10 N: 347686.6 E: 13452051.5		Personnel Logged By - Brian Yelen Driller - Bob Miller		Drilling Equipment: Geoprobe 7822
Civil Town/City/or Village: Ferndale	County: Oakland	State: MI	Water Level Observations: While Drilling: Date/Time After Drilling: Date/Time ▽ Depth (ft bgs) <u>10.0</u> Depth (ft bgs)	

SAMPLE	NUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
					TOPSOIL				
	1 GP	75		2	SAND mostly fine to medium sand, trace to few gravel, trace to few concrete, dark brown (10YR 3/3), no odor, dry, loose.				Sample collected between 2.0 and 4.0 feet below ground surface at 1550.
				4	Changes to no gravel, no concrete, brownish yellow (10YR 6/8), moist at 3.0 feet below ground surface.				
	2 GP	80		8	Changes to grayish brown (10YR 5/2) at 7.5 feet below ground surface.				Sample collected between 8.0 and 10.0 feet below ground surface at 1600.
				10	Changes to wet at 10.0 feet below ground surface.	SP			
				12	Changes to gray (10YR 5/1) at 11.0 feet below ground surface.				
	3 GP	90		12					
				14					
	4 GP	100		16					
				18					
				20	CLAY mostly clay, trace to few fine to medium sand, trace to few silt, dark gray (10YR 4/1), no odor, moist, very stiff. End of boring at 20.0 feet below ground surface.	CL			

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WELL CONSTRUCTION LOG

WELL NO. MW-22-17

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Facility/Project Name: FORMER HAYES LEMMERZ SITE: SOUTHERN AREA		Date Drilling Started: 12/15/22	Date Drilling Completed: 12/15/22	Project Number: 495430.0001
Drilling Firm: Job Site Services	Drilling Method: Direct Push	Surface Elev. (ft) 667.3	TOC Elevation (ft) 670.69	Total Depth (ft bgs) 20.0
Boring Location: AOC 10 N: 347727.4 E: 13451956.5		Personnel Logged By - Brian Yelen Driller - Bob Miller		Drilling Equipment: Geoprobe 7822
Civil Town/City/or Village: Ferndale	County: Oakland	State: MI	Water Level Observations: While Drilling: Date/Time After Drilling: Date/Time	
			▽ Depth (ft bgs) <u>10.0</u> Depth (ft bgs)	

SAMPLE	RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
				TOPSOIL		[Pattern]	[Pattern]	
1 GP	60		2	SAND mostly fine to medium sand, dark yellowish brown (10YR 4/6), no odor, moist, loose.		[Pattern]	[Pattern]	Sample collected between 2.0 and 4.0 feet below ground surface at 0910.
2 GP	60		8			[Pattern]	[Pattern]	Sample collected between 8.0 and 10.0 feet below ground surface at 0920.
			10	▽ Changes to grayish brown (10YR 5/2), wet at 10.0 feet below ground surface.	SP	[Pattern]	[Pattern]	
3 GP	75		12			[Pattern]	[Pattern]	
4 GP	100		18	Changes to little to some coarse sand at 18.5 feet below ground surface.		[Pattern]	[Pattern]	
			20	CLAY mostly clay, trace to few fine to medium sand, trace to few silt, dark gray (10YR 4/1), no odor, moist, very stiff. End of boring at 20.0 feet below ground surface.	CL	[Pattern]	[Pattern]	

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WELL CONSTRUCTION LOG

WELL NO. MW-22-18

Facility/Project Name: FORMER HAYES LEMMERZ SITE: SOUTHERN AREA		Date Drilling Started: 12/15/22	Date Drilling Completed: 12/15/22	Project Number: 495430.0001
Drilling Firm: Job Site Services	Drilling Method: Direct Push	Surface Elev. (ft) 668.3	TOC Elevation (ft) 671.05	Total Depth (ft bgs) 25.0
Boring Location: AOC 8		Personnel Logged By - Brian Yelen Driller - Bob Miller		Drilling Equipment: Geoprobe 7822
N: 347561.4 E: 13452051.3		Water Level Observations: While Drilling: Date/Time After Drilling: Date/Time		
Civil Town/City/or Village: Ferndale	County: Oakland	State: MI	<input checked="" type="checkbox"/> Depth (ft bgs) <u>10.0</u> <input type="checkbox"/> Depth (ft bgs)	

SAMPLE NUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
				TOPSOIL				
1 GP	75		0 - 5	<p>SAND mostly fine to medium sand, yellowish brown (10YR 5/6), no odor, moist, loose.</p> <p>Changes to trace gravel, trace concrete, trace clay, very dark brown (10YR 3/2) at 2.0 feet below ground surface.</p> <p>Changes to no trace gravel, no trace concrete, no trace clay, reddish brown (5YR 4/3) at 4.0 feet below ground surface.</p> <p>Changes to brown (10YR 5/3) at 5.0 feet below ground surface.</p>				<p>Sample collected between 2.0 and 4.0 feet below ground surface at 1040.</p>
2 GP	80		5 - 10	<p>Changes to wet at 10.0 feet below ground surface.</p>	SP			<p>Sample collected between 8.0 and 10.0 feet below ground surface at 1050.</p>
3 GP	100		10 - 13	<p>Changes to very dark gray (10YR 3/1) at 11.5 feet below ground surface.</p> <p>Changes to gray (10YR 5/1) at 13.0 feet below ground surface.</p>				
4 GP	100		13 - 20	<p>SAND mostly coarse sand, trace fine to medium sand, gray (10YR 5/1), no odor, wet, loose.</p> <p>CLAY mostly clay, trace to few fine to medium sand, trace to few silt, dark gray (10YR 4/1), no odor, moist, very stiff.</p>	SP			
5 GP	100		20 - 25	<p>CLAY mostly clay, trace to few fine to medium sand, trace to few silt, dark gray (10YR 4/1), no odor, moist, very stiff.</p>	CL			
			25	End of boring at 25.0 feet below ground surface.				

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WELL CONSTRUCTION LOG

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Facility/Project Name: FORMER HAYES LEMMERZ SITE: SOUTHERN AREA		Date Drilling Started: 12/15/22	Date Drilling Completed: 12/15/22	Project Number: 495430.0001
Drilling Firm: Job Site Services	Drilling Method: Direct Push	Surface Elev. (ft) 668.3	TOC Elevation (ft) 671.30	Total Depth (ft bgs) 25.0
Boring Location: AOC 8 N: 347471.6 E: 13452047.9		Personnel Logged By - Brian Yelen Driller - Bob Miller		Drilling Equipment: Geoprobe 7822
Civil Town/City/or Village: Ferndale	County: Oakland	State: MI	Water Level Observations: While Drilling: Date/Time After Drilling: Date/Time	
			▽ Depth (ft bgs) <u>10.0</u> Depth (ft bgs)	

SAMPLE	NUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
	1 GP	75		0	TOPSOIL				
	2 GP	60		5	SAND mostly fine to medium sand, brown (10YR 5/3), no odor, moist, loose.				Sample collected between 2.0 and 4.0 feet below ground surface at 1250.
	3 GP	75		10	Changes to wet at 10.0 feet below ground surface.				
	4 GP	80		15	Changes to dark brown (10YR 4/1) at 13.0 feet below ground surface.	SP			Sample collected between 8.0 and 10.0 feet below ground surface at 1300.
	5 GP	100		20	Changes to grayish brown (10YR 5/2) at 17.0 feet below ground surface.				
				22	SAND mostly coarse sand, trace to few fine to medium sand, grayish brown (10YR 5/2), no odor, wet, loose.	SP			
				23	CLAY mostly clay, trace to few fine to medium sand, trace to few silt, dark gray (10YR 4/1), no odor, moist, very stiff.	CL			
				25	End of boring at 25.0 feet below ground surface.				

SOIL BORING LOG WITH PHOTO 495430.1 BORING LOGS 12.2022.GPJ 495430.0001 5/25/23

Signature: _____	Firm: TRC 1540 Eisenhower Place Ann Arbor, Michigan	734-971-7080 Fax
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Checked By: _____



WELL CONSTRUCTION LOG

WELL NO. MW-22-20

Page 1 of 1

Facility/Project Name: FORMER HAYES LEMMERZ SITE: SOUTHERN AREA		Date Drilling Started: 12/15/22	Date Drilling Completed: 12/15/22	Project Number: 495430.0001
Drilling Firm: Job Site Services	Drilling Method: Direct Push	Surface Elev. (ft) 668.2	TOC Elevation (ft) 670.98	Total Depth (ft bgs) 25.0
Boring Location: AOC 12 N: 347416.8 E: 13452057.7		Personnel Logged By - Brian Yelen Driller - Bob Miller		Drilling Equipment: Geoprobe 7822
Civil Town/City/or Village: Ferndale	County: Oakland	State: MI	Water Level Observations: While Drilling: Date/Time After Drilling: Date/Time	
			▽ Depth (ft bgs) <u>10.0</u> Depth (ft bgs)	

SAMPLE NUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
				TOPSOIL				
1 GP	70		5	SAND mostly fine to mediums sand, brown (10YR 5/3), no odor, moist, loose.	SP			Sample collected between 2.0 and 4.0 feet below ground surface at 1430.
2 GP	80		10	SAND mostly fine to medium sand, few gravel, brick, concrete, wood, trace clay, dark brown (10YR 3/3) no odor, moist, dense.	SP			Sample collected between 10.0 and 12.0 feet below ground surface at 1510.
3 GP	90		12.5	SAND mostly fine to medium sand, trace to few concrete, black (10YR 2/1), no odor, moist to wet, dense. Changes to no concrete, grayish brown (10YR 4/2) at 12.5 feet below ground surface.	SP			
4 GP	100		22.5	SAND mostly coarse sand, trace to few fine to medium sand, grayish brown (10YR 5/2), no odor, wet, loose.	SP			
5 GP	100		24	CLAY mostly clay, trace to few fine to medium sand, trace to few silt, dark gray (10YR 4/1), no odor, moist, very stiff.	CL			
			25	End of broing at 25.0 feet below ground surface.				

SOIL BORING LOG WITH PHOTO 495430.1 BORING LOGS 12.2022.GPJ 495430.0001 5/25/23

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WELL CONSTRUCTION LOG

WELL NO. MW-22-21

Facility/Project Name: FORMER HAYES LEMMERZ SITE: SOUTHERN AREA		Date Drilling Started: 12/16/22	Date Drilling Completed: 12/16/22	Project Number: 495430.0001	
Drilling Firm: Job Site Services	Drilling Method: Direct Push	Surface Elev. (ft) 668.5	TOC Elevation (ft) 671.79	Total Depth (ft bgs) 25.0	Borehole Dia. (in) 3
Boring Location: AOC 12 N: 347419.6 E: 13451885.7		Personnel Logged By - Brian Yelen Driller - Bob Miller		Drilling Equipment: Geoprobe 7822	
Civil Town/City/or Village: Ferndale	County: Oakland	State: MI	Water Level Observations: While Drilling: Date/Time After Drilling: Date/Time		
			▽ Depth (ft bgs) <u>10.0</u> Depth (ft bgs)		

SAMPLE NUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
				TOPSOIL				
1 GP	75		5	SAND mostly fine to medium sand, yellowish brown (10YR 5/6), no odor, moist, loose.	SP			Sample collected between 2.0 and 4.0 feet below ground surface at 0810.
2 GP	60		10	SAND mostly fine to medium sand, few to little gravel, concrete, brick, trace wood, dark grayish brown (10YR 4/2), no odor, moist, dense.	SP			Sample collected between 8.0 and 10.0 feet below ground surface at 0820.
3 GP	80		10	▽ SAND mostly fine to medium sand, brown, (10YR 5/3), no odor, wet, medium dense.				Possible concrete slab encountered at 10.0 feet below ground surface
4 GP	90		15		SP			
5 GP	100		25	CLAY mostly clay, trace to few fine to medium sand, trace to few silt, dark gray (10YR 4/1), no odor, moist, very stiff.	CL			
			25	End of boring at 25.0 feet below ground surface.				

SOIL BORING LOG WITH PHOTO 495430.1 BORING LOGS 12.2022.GPJ 495430.0001 5/25/23

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WELL CONSTRUCTION LOG

WELL NO. MW-22-22D

Facility/Project Name: FORMER HAYES LEMMERZ SITE: SOUTHERN AREA		Date Drilling Started: 12/19/22	Date Drilling Completed: 12/21/22	Project Number: 495430.0001	
Drilling Firm: Stock	Drilling Method: Sonic Rotary	Surface Elev. (ft) 668.2	TOC Elevation (ft) 670.89	Total Depth (ft bgs) 150.0	Borehole Dia. (in) 8
Boring Location: Between AOC 8 and AOC 9		Personnel Logged By - Brian Yelen Driller - Ryan		Drilling Equipment: Terra Sonic 150cc	
N: 347526.2 E: 13452084.2		Water Level Observations: While Drilling: Date/Time After Drilling: Date/Time		Depth (ft bgs) Depth (ft bgs)	
Civil Town/City/or Village: Ferndale	County: Oakland	State: MI			

SAMPLE		BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
NUMBER AND TYPE	RECOVERY (%)							
1 ST	80		5	TOPSOIL SAND mostly fine to medium sand, brown (10YR 5/3), no odor, dry to moist, loose.				
2 ST	75		10	Changes to grayish brown (10YR 5/2), moist at 10.0 feet below ground surface.	SP			
3 ST	100		20	CLAY mostly clay, trace to few fine sand, trace gravel, low plasticity, dark gray (10YR 4/1), no odor, dry to moist, hard.				
4 ST	100		25	Changes to trace to few silt, no gravel, medium to high plasticity, very stiff at 25.0 feet below ground surface.	CL			
			30					

Shelby Tube (ST-01) collected between 30.0 and 32.5 feet below ground surface at 1000.

SOIL BORING LOG WITH PHOTO 495430.1 BORING LOGS 12.2022.GPJ 495430.0001 5/25/23

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Checked By: _____



WELL CONSTRUCTION LOG

WELL NO. MW-22-22D

SAMPLE		BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
NUMBER AND TYPE	RECOVERY (%)							
5 ST	100		35					
6 ST	100		40					
7 ST	100		45					
8 ST	100		50					
			55					
			60		CL			
			65					
			70					
				CLAY mostly clay, trace silt, trace fine sand, high plasticity, dark gray (10YR 4/1), no odor, dry to moist, stiff.	CH			

SOIL BORING LOG WITH PHOTO_495430_1_BORINGLOGS 12.2022.GPJ_495430.0001_5/25/23



WELL CONSTRUCTION LOG

WELL NO. MW-22-22D

SAMPLE		BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
NUMBER AND TYPE	RECOVERY (%)							
9 ST	100		75					
10 ST	100		85					
11 ST	100		95	Changes to no fine sand, no silt at 90.0 feet below ground surface.	CH			
12 ST	50		105					
			110	SAND mostly fine to medium sand, dark gray (10YR 4/1), no odor, wet, medium dense.	SP			
13 ST	80		115	CLAY mostly clay, high plasticity, dark gray (10YR 4/1), no odor, dry to moist, stiff.	CH			

SOIL BORING LOG WITH PHOTO 495430_1 BORING LOGS 12.2022.GPJ 495430.0001 5/25/23



SAMPLE		BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	WELL DIAGRAM	COMMENTS
NUMBER AND TYPE	RECOVERY (%)							
14 ST	100		120	CLAY mostly clay, trace to few fine sand, trace to few silt, low plasticity, dark gray (10YR 4/1), no odor, dry to moist, hard.	CH			
15 ST	100		125	Changes to few fractured shale cobble at 125.0 feet below ground surface.	CL			
15 ST	100		135	Shale, granite cobble present at 135.0 feet below ground surface.				
16 ST	25		140	Changes to no cobble at 140.0 feet below ground surface.				
			150	End of boring at 150.0 feet below ground surface.				
			155					

SOIL BORING LOG WITH PHOTO_495430_1_BORINGLOGS 12.2022.GPJ_495430.0001_5/25/23



SOIL BORING LOG

BORING NO. SB-01

Page 1 of 1

Facility/Project Name: FORMER HAYES LEMMERZ SITE: SOUTHERN AREA		Date Drilling Started: 12/14/22	Date Drilling Completed: 12/14/22	Project Number: 495430.0001
Drilling Firm: Job Site Services	Drilling Method: Direct Push	Surface Elev. (ft) 665.4	TOC Elevation (ft) ---	Total Depth (ft bgs) 20.0
Boring Location: AOC 9 N: 347547.0 E: 13452207.1		Personnel Logged By - Brian Yelen Driller - Bob Miller		Drilling Equipment: Geoprobe 7822
Civil Town/City/or Village: Ferndale	County: Oakland	State: MI	Water Level Observations: While Drilling: Date/Time After Drilling: Date/Time ▽ Depth (ft bgs) <u>10.0</u> Depth (ft bgs)	

SAMPLE	RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	COMMENTS
1 GP	60		2	ASPHALT		///	
			4				
			6	Changes to yellowish brown (10YR 5/4) at 5.0 feet below ground surface.			
2 GP	80		8				Sample collected between 2.0 and 4.0 feet below ground surface at 1040.
			10	▽ Changes to dark gray (10YR 4/1), wet at 10.0 feet below ground surface.			
			12				
3 GP	90		14				
			16				
4 GP	80		18	CLAY mostly clay, trace to few fine to medium sand, trace to few silt, dark gray (10YR 4/1), no odor, moist, very stiff.	CL	//	Sample collected between 8.0 and 10.0 feet below ground surface at 1100.
			20	End of boring at 20.0 feet below ground surface.			

SOIL BORING LOG WITH PHOTO 495430.1 BORING LOGS 12.2022.GPJ 495430.0001 5/25/23

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Checked By: _____



SOIL BORING LOG

BORING NO. SB-02

Page 1 of 1

Facility/Project Name: FORMER HAYES LEMMERZ SITE: SOUTHERN AREA		Date Drilling Started: 12/14/22	Date Drilling Completed: 12/14/22	Project Number: 495430.0001
Drilling Firm: Job Site Services	Drilling Method: Direct Push	Surface Elev. (ft) 665.7	TOC Elevation (ft) ---	Total Depth (ft bgs) 20.0
Boring Location: AOC 9 N: 347632.2 E: 13452181.3		Personnel Logged By - Brian Yelen Driller - Bob Miller		Drilling Equipment: Geoprobe 7822
Civil Town/City/or Village: Ferndale	County: Oakland	State: MI	Water Level Observations: While Drilling: Date/Time After Drilling: Date/Time ▽ Depth (ft bgs) <u>10.0</u> Depth (ft bgs)	

SAMPLE NUMBER AND TYPE	RECOVERY (%)	BLOW COUNTS	DEPTH IN FEET	LITHOLOGIC DESCRIPTION	USCS	GRAPHIC LOG	COMMENTS
1 GP	75		2	TOPSOIL			
			2	SAND mostly fine to medium sand, yellowish brown (10YR 5/8), no odor, moist, loose.			Sample collected between 2.0 and 4.0 feet below ground surface at 1250.
			4				
			6	Changes to yellowish brown (10YR 5/4) at 5.0 feet below ground surface.			
2 GP	80		8				
			8				Sample collected between 8.0 and 10.0 feet below ground surface at 1300.
			10	▽ Changes to dark gray (10YR 4/1), wet at 10.0 feet below ground surface.			
			12				
3 GP	75		12				
			14				
			16				
4 GP	75		18	CLAY mostly clay, trace to few fine to medium sand, trace to few silt, dark gray (10YR 4/1), no odor, moist, very stiff.	CL		
			20	End of boring at 20.0 feet below ground surface.			

SOIL BORING LOG WITH PHOTO 495430.1 BORING LOGS 12.2022.GPJ 495430.0001 5/25/23

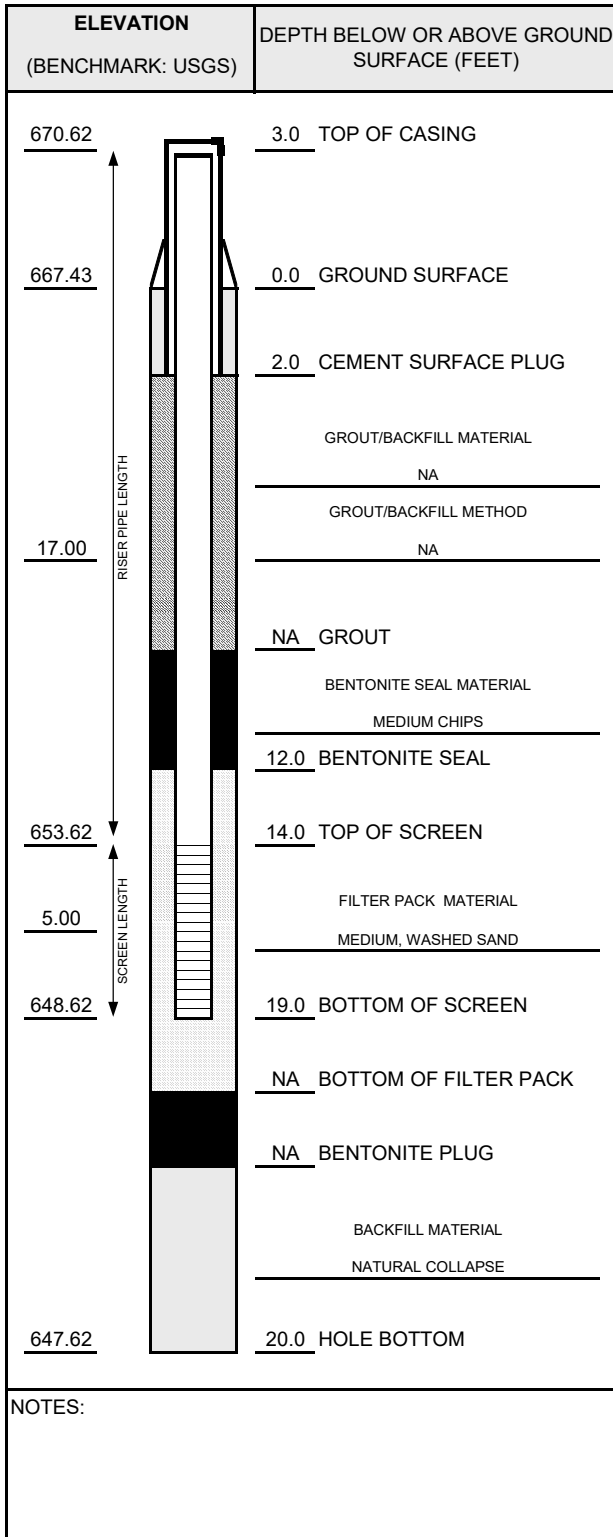
Signature:	Firm: TRC 1540 Eisenhower Place Ann Arbor, Michigan	734-971-7080 Fax
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Checked By: _____



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Former Hayes Lemmerz Southern Area RCRA Assessment	WELL ID: MW-22-07
PROJ. NO: 495430.0001	DATE INSTALLED: 12/13/2022 INSTALLED BY: Brian Yelen
CHECKED BY: Andrew Whaley	



NOTES:

CASING AND SCREEN DETAILS	
TYPE OF RISER:	<u>2-INCH PVC</u>
PIPE SCHEDULE:	<u>40</u>
PIPE JOINTS:	<u>THREADED O-RINGS</u>
SOLVENT USED?	<u>NO</u>
SCREEN TYPE:	<u>2-INCH PVC</u>
SCR. SLOT SIZE:	<u>0.01-INCH</u>
BOREHOLE DIAMETER:	<u>9</u> IN. FROM <u>0</u> TO <u>20</u> FT.
	<u> </u> IN. FROM <u> </u> TO <u> </u> FT.
SURF. CASING DIAMETER:	<u> </u> IN. FROM <u> </u> TO <u> </u> FT.
	<u> </u> IN. FROM <u> </u> TO <u> </u> FT.

WELL DEVELOPMENT	
DEVELOPMENT METHOD:	<u>PUMP</u>
TIME DEVELOPING:	<u>1.5</u> HOURS
WATER REMOVED:	<u>15</u> GALLONS
WATER ADDED:	<u>10</u> GALLONS
WATER CLARITY BEFORE / AFTER DEVELOPMENT	
CLARITY BEFORE:	<u>Very Turbid</u>
COLOR BEFORE:	<u>Dark Brown</u>
CLARITY AFTER:	<u>Clear</u>
COLOR AFTER:	<u>Clear</u>
ODOR (IF PRESENT):	<u>None</u>

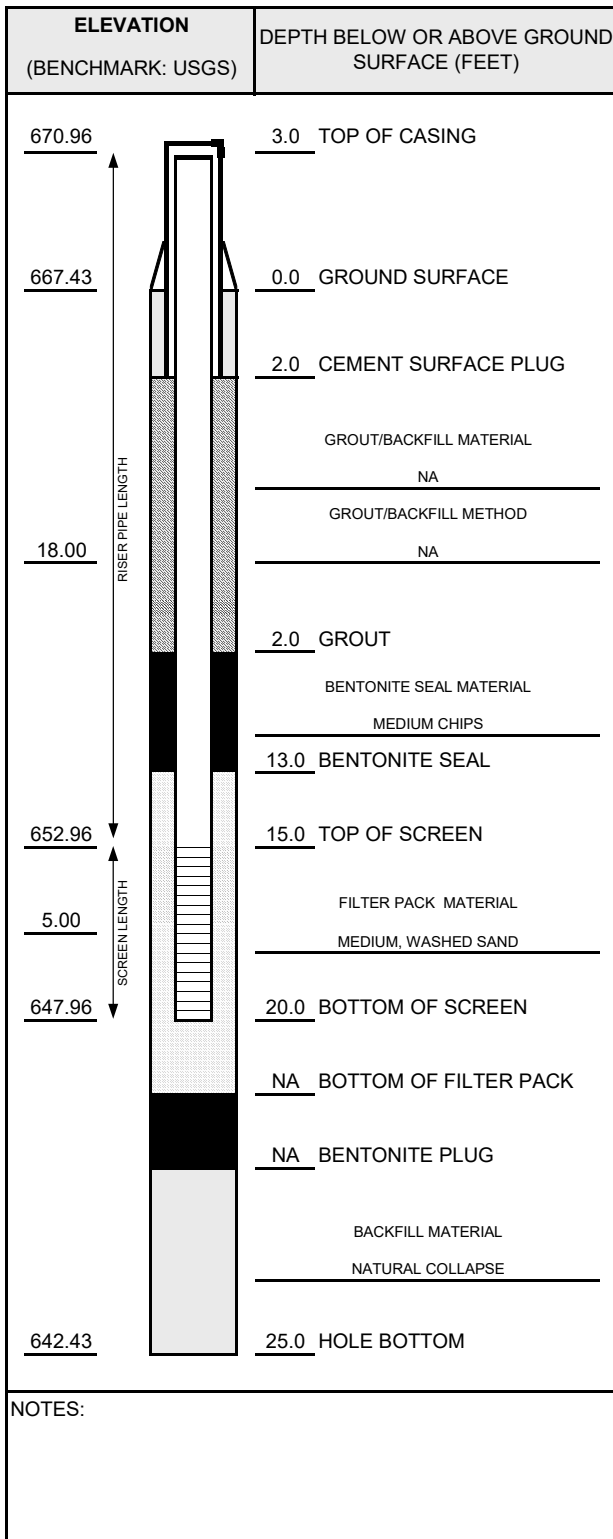
WATER LEVEL SUMMARY				
MEASUREMENT (FEET)		DATE	TIME	
DTB BEFORE DEVELOPING:	22.15	T/PVC	12/13/2022	1355
DTB AFTER DEVELOPING:	22.20	T/PVC	12/13/2022	1540
SWE BEFORE DEVELOPING:	12.71	T/PVC	12/13/2022	1355
SWE AFTER DEVELOPING:	12.88	T/PVC	12/13/2022	1540
OTHER SWE:		T/PVC		
OTHER SWE:		T/PVC		

PROTECTIVE CASING DETAILS	
PERMANENT, LEGIBLE WELL LABEL ADDED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
PROTECTIVE COVER AND LOCK INSTALLED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
LOCK KEY NUMBER:	<u>3120</u>



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Former Hayes Lemmerz Southern Area RCRA Assessment	WELL ID: MW-22-08
PROJ. NO: 495430.0001	DATE INSTALLED: 12/13/2022 INSTALLED BY: Brian Yelen
CHECKED BY: Andrew Whaley	



NOTES:

CASING AND SCREEN DETAILS	
TYPE OF RISER:	<u>2-INCH PVC</u>
PIPE SCHEDULE:	<u>40</u>
PIPE JOINTS:	<u>THREADED O-RINGS</u>
SOLVENT USED?	<u>NO</u>
SCREEN TYPE:	<u>2-INCH PVC</u>
SCR. SLOT SIZE:	<u>0.01-INCH</u>
BOREHOLE DIAMETER:	<u>9</u> IN. FROM <u>0</u> TO <u>20</u> FT.
	<u> </u> IN. FROM <u> </u> TO <u> </u> FT.
SURF. CASING DIAMETER:	<u> </u> IN. FROM <u> </u> TO <u> </u> FT.
	<u> </u> IN. FROM <u> </u> TO <u> </u> FT.

WELL DEVELOPMENT	
DEVELOPMENT METHOD:	<u>PUMP</u>
TIME DEVELOPING:	<u>1.5</u> HOURS
WATER REMOVED:	<u>13</u> GALLONS
WATER ADDED:	<u>0</u> GALLONS
WATER CLARITY BEFORE / AFTER DEVELOPMENT	
CLARITY BEFORE:	<u>Very Turbid</u>
COLOR BEFORE:	<u>Dark Brown</u>
CLARITY AFTER:	<u>Clear</u>
COLOR AFTER:	<u>Clear</u>
ODOR (IF PRESENT):	<u>None</u>

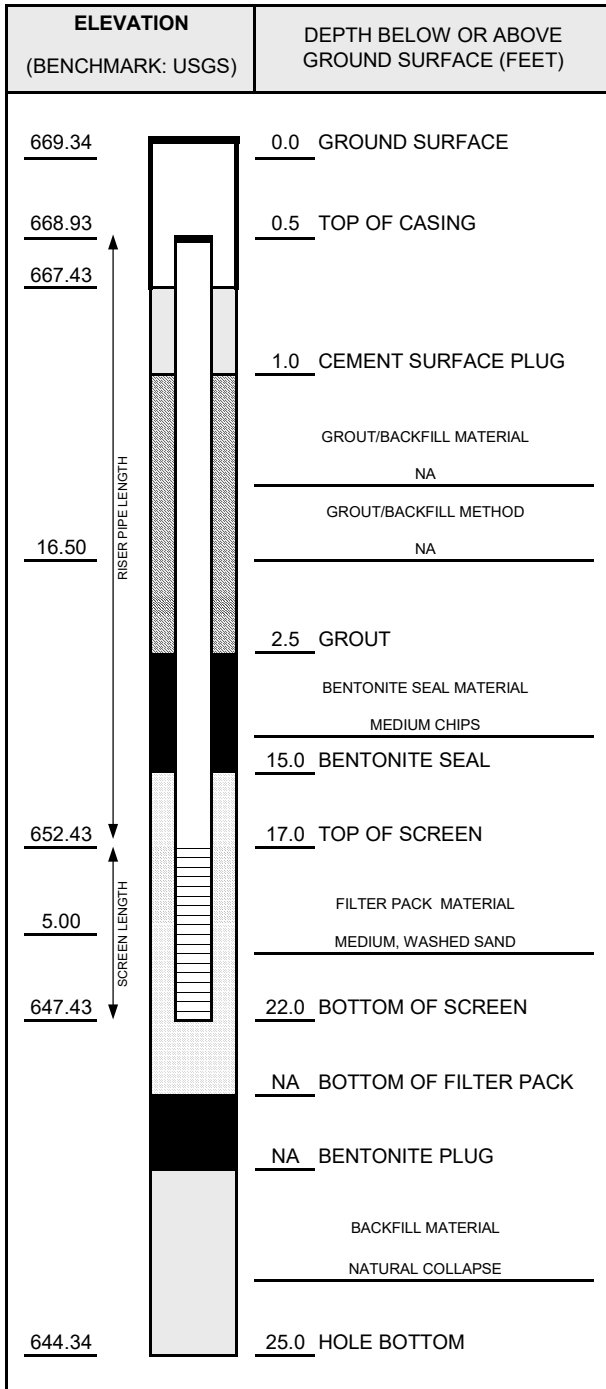
WATER LEVEL SUMMARY				
	MEASUREMENT (FEET)		DATE	TIME
DTB BEFORE DEVELOPING:	22.38	T/PVC	12/13/2022	1052
DTB AFTER DEVELOPING:	22.46	T/PVC	12/13/2022	1240
SWE BEFORE DEVELOPING:	13.20	T/PVC	12/13/2022	1052
SWE AFTER DEVELOPING:	13.20	T/PVC	12/13/2022	1240
OTHER SWE:		T/PVC		
OTHER SWE:		T/PVC		

PROTECTIVE CASING DETAILS	
PERMANENT, LEGIBLE WELL LABEL ADDED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
PROTECTIVE COVER AND LOCK INSTALLED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
LOCK KEY NUMBER:	<u>3120</u>



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Former Hayes Lemmerz Southern Area RCRA Assessment	WELL ID: MW-22-09
PROJ. NO: 495430.0001	DATE INSTALLED: 12/13/2022 INSTALLED BY: Brian Yelen
CHECKED BY: Andrew Whaley	



CASING AND SCREEN DETAILS	
TYPE OF RISER:	<u>2-INCH PVC</u>
PIPE SCHEDULE:	<u>40</u>
PIPE JOINTS:	<u>THREADED O-RINGS</u>
SOLVENT USED?	<u>NO</u>
SCREEN TYPE:	<u>2-INCH PVC</u>
SCR. SLOT SIZE:	<u>0.01-INCH</u>
BOREHOLE DIAMETER:	<u>9</u> IN. FROM <u>0</u> TO <u>22</u> FT.
	_____ IN. FROM _____ TO _____ FT.
SURF. CASING DIAMETER:	_____ IN. FROM _____ TO _____ FT.
	_____ IN. FROM _____ TO _____ FT.

WELL DEVELOPMENT	
DEVELOPMENT METHOD:	<u>PUMP</u>
TIME DEVELOPING:	<u>1</u> HOUR
WATER REMOVED:	<u>12</u> GALLONS
WATER ADDED:	<u>0</u> GALLONS
WATER CLARITY BEFORE / AFTER DEVELOPMENT	
CLARITY BEFORE:	<u>Very Turbid</u>
COLOR BEFORE:	<u>Gray</u>
CLARITY AFTER:	<u>Slightly Gray</u>
COLOR AFTER:	<u>Light Gray - Clear</u>
ODOR (IF PRESENT):	<u>None</u>

WATER LEVEL SUMMARY				
	MEASUREMENT (FEET)		DATE	TIME
DTB BEFORE DEVELOPING:	21.30	T/PVC	12/13/2022	7:50
DTB AFTER DEVELOPING:	21.35	T/PVC	12/13/2022	8:50
SWE BEFORE DEVELOPING:	10.30	T/PVC	12/13/2022	7:50
SWE AFTER DEVELOPING:	10.30	T/PVC	12/13/2022	8:50
OTHER SWE:		T/PVC		
OTHER SWE:		T/PVC		

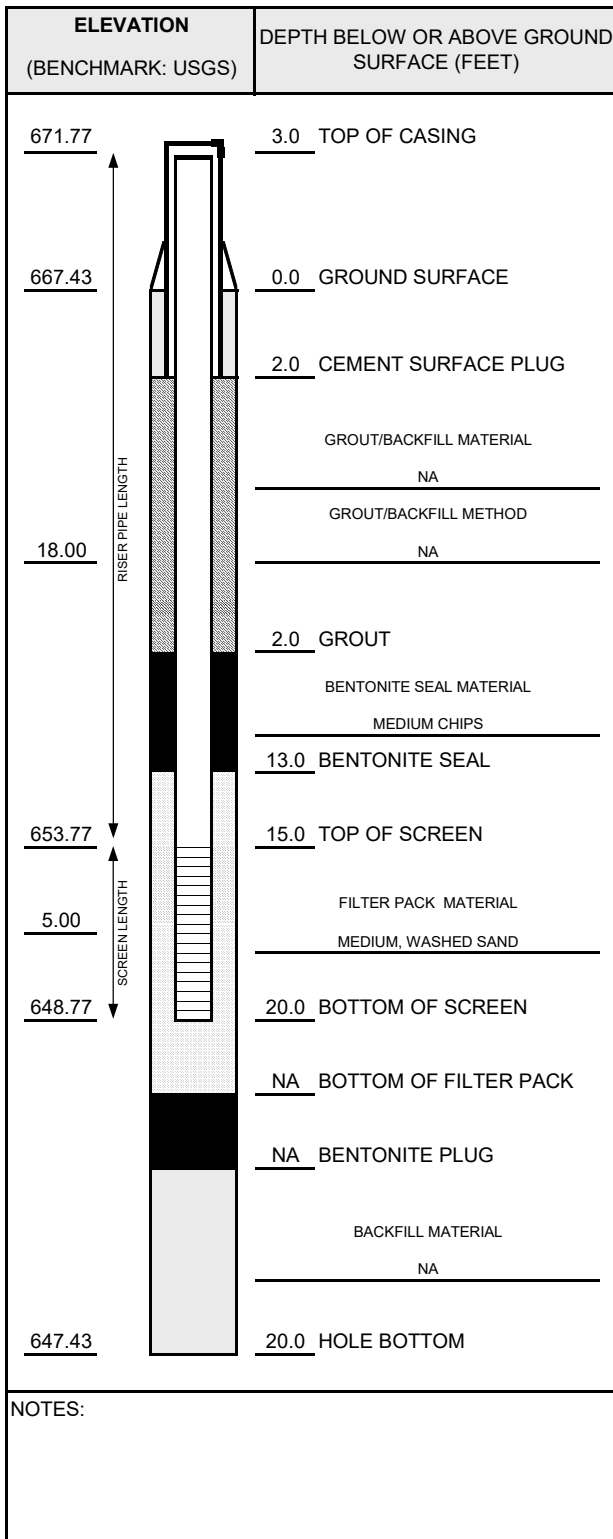
PROTECTIVE CASING DETAILS	
PERMANENT, LEGIBLE WELL LABEL ADDED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
PROTECTIVE COVER AND LOCK INSTALLED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
LOCK KEY NUMBER:	<u>3120</u>

NOTES:



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Former Hayes Lemmerz Southern Area RCRA Assessment	WELL ID: MW-22-10
PROJ. NO: 495430.0001	DATE INSTALLED: 12/13/2022 INSTALLED BY: Brian Yelen
CHECKED BY: Andrew Whaley	



CASING AND SCREEN DETAILS	
TYPE OF RISER:	<u>2-INCH PVC</u>
PIPE SCHEDULE:	<u>40</u>
PIPE JOINTS:	<u>THREADED O-RINGS</u>
SOLVENT USED?	<u>NO</u>
SCREEN TYPE:	<u>2-INCH PVC</u>
SCR. SLOT SIZE:	<u>0.01-INCH</u>
BOREHOLE DIAMETER:	<u>9</u> IN. FROM <u>0</u> TO <u>20</u> FT.
	_____ IN. FROM _____ TO _____ FT.
SURF. CASING DIAMETER:	_____ IN. FROM _____ TO _____ FT.
	_____ IN. FROM _____ TO _____ FT.

WELL DEVELOPMENT	
DEVELOPMENT METHOD:	<u>SURGE AND PUMP</u>
TIME DEVELOPING:	<u>1</u> HOURS
WATER REMOVED:	<u>11</u> GALLONS
WATER ADDED:	<u>10</u> GALLONS
WATER CLARITY BEFORE / AFTER DEVELOPMENT	
CLARITY BEFORE:	<u>Very Turbid</u>
COLOR BEFORE:	<u>Brown</u>
CLARITY AFTER:	<u>Clear</u>
COLOR AFTER:	<u>Clear</u>
ODOR (IF PRESENT):	<u>None</u>

WATER LEVEL SUMMARY				
	MEASUREMENT (FEET)		DATE	TIME
DTB BEFORE DEVELOPING:	22.99	T/PVC	12/13/2022	1535
DTB AFTER DEVELOPING:	23.10	T/PVC	12/13/2022	1630
SWE BEFORE DEVELOPING:	13.44	T/PVC	12/13/2022	1535
SWE AFTER DEVELOPING:	13.44	T/PVC	12/13/2022	1630
OTHER SWE:		T/PVC		
OTHER SWE:		T/PVC		

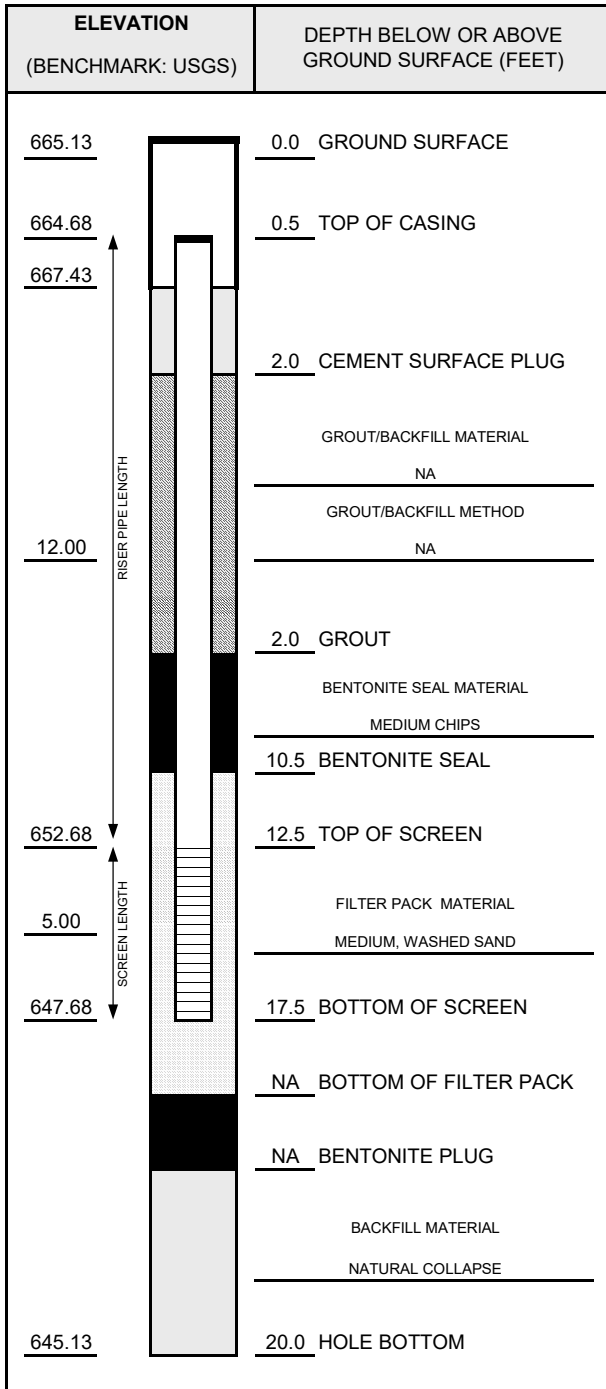
PROTECTIVE CASING DETAILS	
PERMANENT, LEGIBLE WELL LABEL ADDED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
PROTECTIVE COVER AND LOCK INSTALLED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
LOCK KEY NUMBER:	<u>3120</u>

NOTES:



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Former Hayes Lemmerz Southern Area RCRA Assessment	WELL ID: MW-22-11
PROJ. NO: 495430.0001	DATE INSTALLED: 12/13/2022 INSTALLED BY: Brian Yelen
CHECKED BY: Andrew Whaley	



CASING AND SCREEN DETAILS	
TYPE OF RISER:	<u>2-INCH PVC</u>
PIPE SCHEDULE:	<u>40</u>
PIPE JOINTS:	<u>THREADED O-RINGS</u>
SOLVENT USED?	<u>NO</u>
SCREEN TYPE:	<u>2-INCH PVC</u>
SCR. SLOT SIZE:	<u>0.01-INCH</u>
BOREHOLE DIAMETER:	<u>9</u> IN. FROM <u>0</u> TO <u>17.5</u> FT.
	_____ IN. FROM _____ TO _____ FT.
SURF. CASING DIAMETER:	_____ IN. FROM _____ TO _____ FT.
	_____ IN. FROM _____ TO _____ FT.

WELL DEVELOPMENT	
DEVELOPMENT METHOD:	<u>PUMP</u>
TIME DEVELOPING:	<u>2</u> HOURS
WATER REMOVED:	<u>15</u> GALLONS
WATER ADDED:	<u>10</u> GALLONS
WATER CLARITY BEFORE / AFTER DEVELOPMENT	
CLARITY BEFORE:	<u>Very Turbid</u>
COLOR BEFORE:	<u>Brown</u>
CLARITY AFTER:	<u>Clear</u>
COLOR AFTER:	<u>Clear</u>
ODOR (IF PRESENT):	<u>None</u>

WATER LEVEL SUMMARY				
	MEASUREMENT (FEET)		DATE	TIME
DTB BEFORE DEVELOPING:	16.70	T/PVC	12/14/2022	12:10
DTB AFTER DEVELOPING:	16.70	T/PVC	12/14/2022	14:00
SWE BEFORE DEVELOPING:	9.90	T/PVC	12/14/2022	12:10
SWE AFTER DEVELOPING:	10.00	T/PVC	12/14/2022	14:00
OTHER SWE:		T/PVC		
OTHER SWE:		T/PVC		

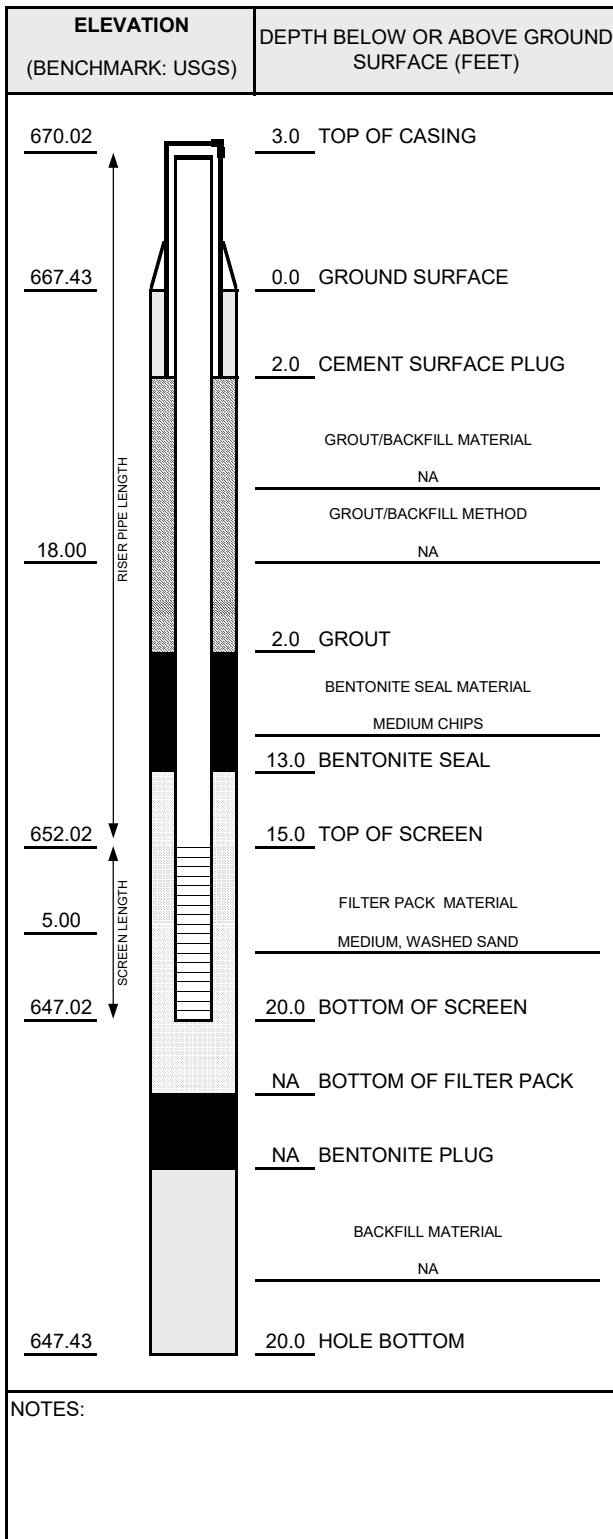
NOTES:

PROTECTIVE CASING DETAILS	
PERMANENT, LEGIBLE WELL LABEL ADDED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
PROTECTIVE COVER AND LOCK INSTALLED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
LOCK KEY NUMBER:	<u>3120</u>



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Former Hayes Lemmerz Southern Area RCRA Assessment	WELL ID: MW-22-12
PROJ. NO: 495430.0001	DATE INSTALLED: 12/13/2022 INSTALLED BY: Brian Yelen
CHECKED BY: Andrew Whaley	



NOTES:

CASING AND SCREEN DETAILS	
TYPE OF RISER:	<u>2-INCH PVC</u>
PIPE SCHEDULE:	<u>40</u>
PIPE JOINTS:	<u>THREADED O-RINGS</u>
SOLVENT USED?	<u>NO</u>
SCREEN TYPE:	<u>2-INCH PVC</u>
SCR. SLOT SIZE:	<u>0.01-INCH</u>
BOREHOLE DIAMETER:	<u>9</u> IN. FROM <u>0</u> TO <u>20</u> FT.
	<u> </u> IN. FROM <u> </u> TO <u> </u> FT.
SURF. CASING DIAMETER:	<u> </u> IN. FROM <u> </u> TO <u> </u> FT.
	<u> </u> IN. FROM <u> </u> TO <u> </u> FT.

WELL DEVELOPMENT	
DEVELOPMENT METHOD:	<u>SURGE AND PUMP</u>
TIME DEVELOPING:	<u>2.5</u> HOURS
WATER REMOVED:	<u>15</u> GALLONS
WATER ADDED:	<u>10</u> GALLONS
WATER CLARITY BEFORE / AFTER DEVELOPMENT	
CLARITY BEFORE:	<u>Very Turbid</u>
COLOR BEFORE:	<u>Gray</u>
CLARITY AFTER:	<u>Clear</u>
COLOR AFTER:	<u>Clear</u>
ODOR (IF PRESENT):	<u>None</u>

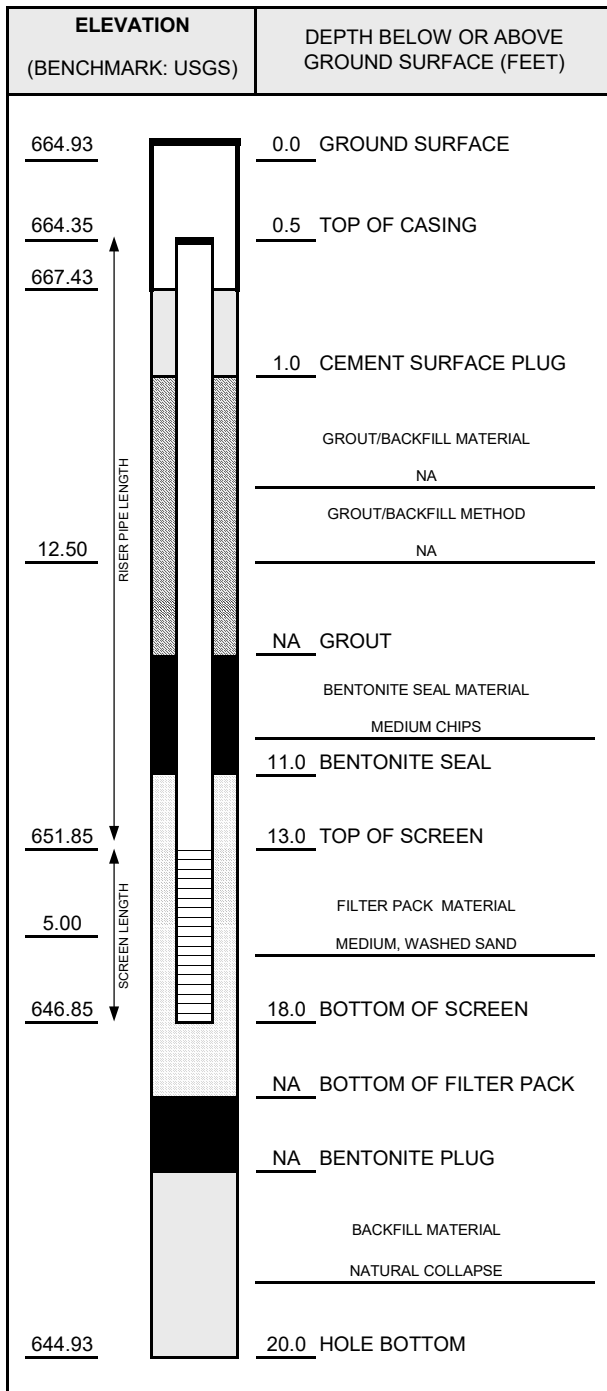
WATER LEVEL SUMMARY				
MEASUREMENT (FEET)			DATE	TIME
DTB BEFORE DEVELOPING:	NA	T/PVC	NA	NA
DTB AFTER DEVELOPING:	NA	T/PVC	NA	NA
SWE BEFORE DEVELOPING:	13.80	T/PVC	12/15/2022	14:27
SWE AFTER DEVELOPING:	13.82	T/PVC	12/15/2022	17:00
OTHER SWE:		T/PVC		
OTHER SWE:		T/PVC		

PROTECTIVE CASING DETAILS	
PERMANENT, LEGIBLE WELL LABEL ADDED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
PROTECTIVE COVER AND LOCK INSTALLED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
LOCK KEY NUMBER:	<u>3120</u>



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Former Hayes Lemmerz Southern Area RCRA Assessment	WELL ID: MW-22-13
PROJ. NO: 4995430.0001	DATE INSTALLED: 12/14/2022 INSTALLED BY: Brian Yelen
CHECKED BY: Andrew Whaley	



CASING AND SCREEN DETAILS	
TYPE OF RISER:	<u>2-INCH PVC</u>
PIPE SCHEDULE:	<u>40</u>
PIPE JOINTS:	<u>THREADED O-RINGS</u>
SOLVENT USED?	<u>NO</u>
SCREEN TYPE:	<u>2-INCH PVC</u>
SCR. SLOT SIZE:	<u>0.01-INCH</u>
BOREHOLE DIAMETER:	<u>9</u> IN. FROM <u>0</u> TO <u>20</u> FT.
	_____ IN. FROM _____ TO _____ FT.
SURF. CASING DIAMETER:	_____ IN. FROM _____ TO _____ FT.
	_____ IN. FROM _____ TO _____ FT.

WELL DEVELOPMENT	
DEVELOPMENT METHOD:	<u>SURGE AND PUMP</u>
TIME DEVELOPING:	<u>1.5</u> HOURS
WATER REMOVED:	<u>15</u> GALLONS
WATER ADDED:	<u>0</u> GALLONS
WATER CLARITY BEFORE / AFTER DEVELOPMENT	
CLARITY BEFORE:	<u>Very Turbid</u>
COLOR BEFORE:	<u>Brown</u>
CLARITY AFTER:	<u>Clear</u>
COLOR AFTER:	<u>Clear</u>
ODOR (IF PRESENT):	<u>None</u>

WATER LEVEL SUMMARY				
	MEASUREMENT (FEET)		DATE	TIME
DTB BEFORE DEVELOPING:	18.05	T/PVC	12/14/2022	14:10
DTB AFTER DEVELOPING:	18.10	T/PVC	12/14/2022	15:40
SWE BEFORE DEVELOPING:	10.60	T/PVC	12/14/2022	14:10
SWE AFTER DEVELOPING:	10.70	T/PVC	12/14/2022	15:40
OTHER SWE:		T/PVC		
OTHER SWE:		T/PVC		

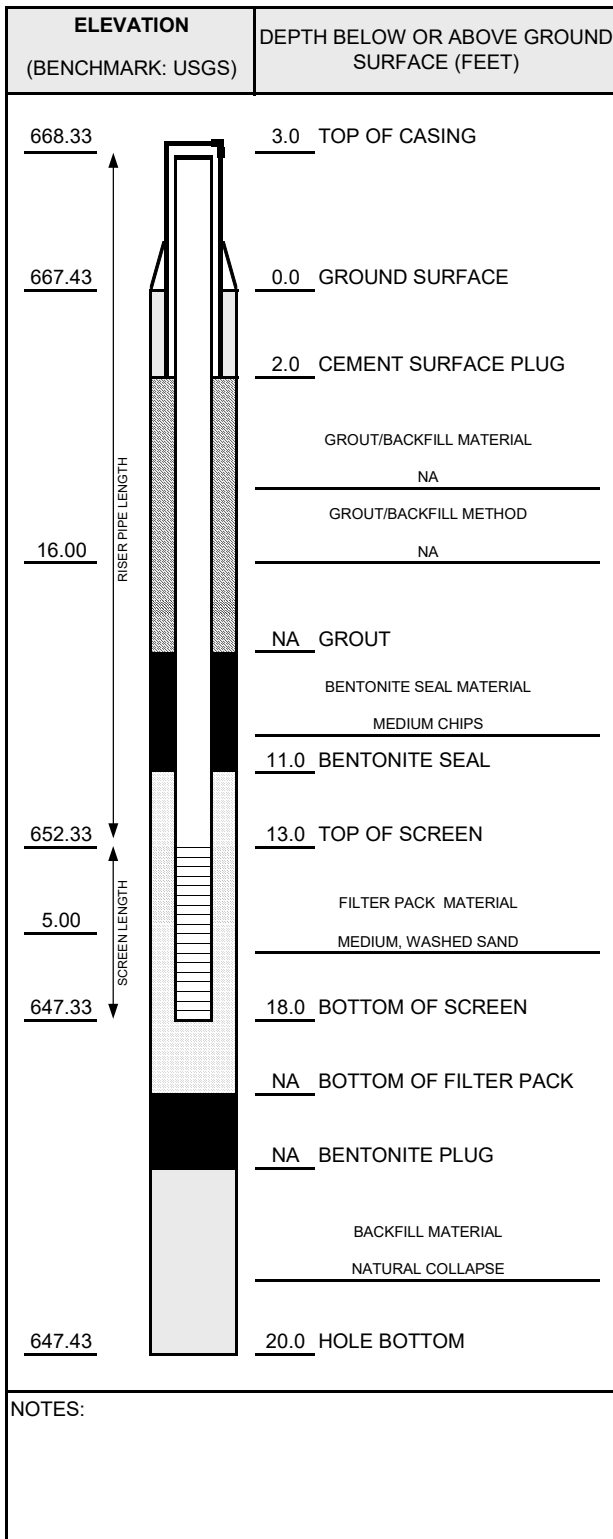
NOTES:

PROTECTIVE CASING DETAILS	
PERMANENT, LEGIBLE WELL LABEL ADDED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
PROTECTIVE COVER AND LOCK INSTALLED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
LOCK KEY NUMBER:	<u>3120</u>



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Former Hayes Lemmerz Southern Area RCRA Assessment	WELL ID: MW-22-14
PROJ. NO: 495430.0001	DATE INSTALLED: 12/14/2022 INSTALLED BY: Brian Yelen
CHECKED BY: Andrew Whaley	



NOTES:

CASING AND SCREEN DETAILS	
TYPE OF RISER:	<u>2-INCH PVC</u>
PIPE SCHEDULE:	<u>40</u>
PIPE JOINTS:	<u>THREADED O-RINGS</u>
SOLVENT USED?	<u>NO</u>
SCREEN TYPE:	<u>2-INCH PVC</u>
SCR. SLOT SIZE:	<u>0.01-INCH</u>
BOREHOLE DIAMETER:	<u>9</u> IN. FROM <u>0</u> TO <u>20</u> FT.
	<u> </u> IN. FROM <u> </u> TO <u> </u> FT.
SURF. CASING DIAMETER:	<u> </u> IN. FROM <u> </u> TO <u> </u> FT.
	<u> </u> IN. FROM <u> </u> TO <u> </u> FT.

WELL DEVELOPMENT	
DEVELOPMENT METHOD:	<u>SURGE AND PUMP</u>
TIME DEVELOPING:	<u>1.5</u> HOURS
WATER REMOVED:	<u>12</u> GALLONS
WATER ADDED:	<u>0</u> GALLONS
WATER CLARITY BEFORE / AFTER DEVELOPMENT	
CLARITY BEFORE:	<u>Very Turbid</u>
COLOR BEFORE:	<u>Brown</u>
CLARITY AFTER:	<u>Clear</u>
COLOR AFTER:	<u>Clear</u>
ODOR (IF PRESENT):	<u>None</u>

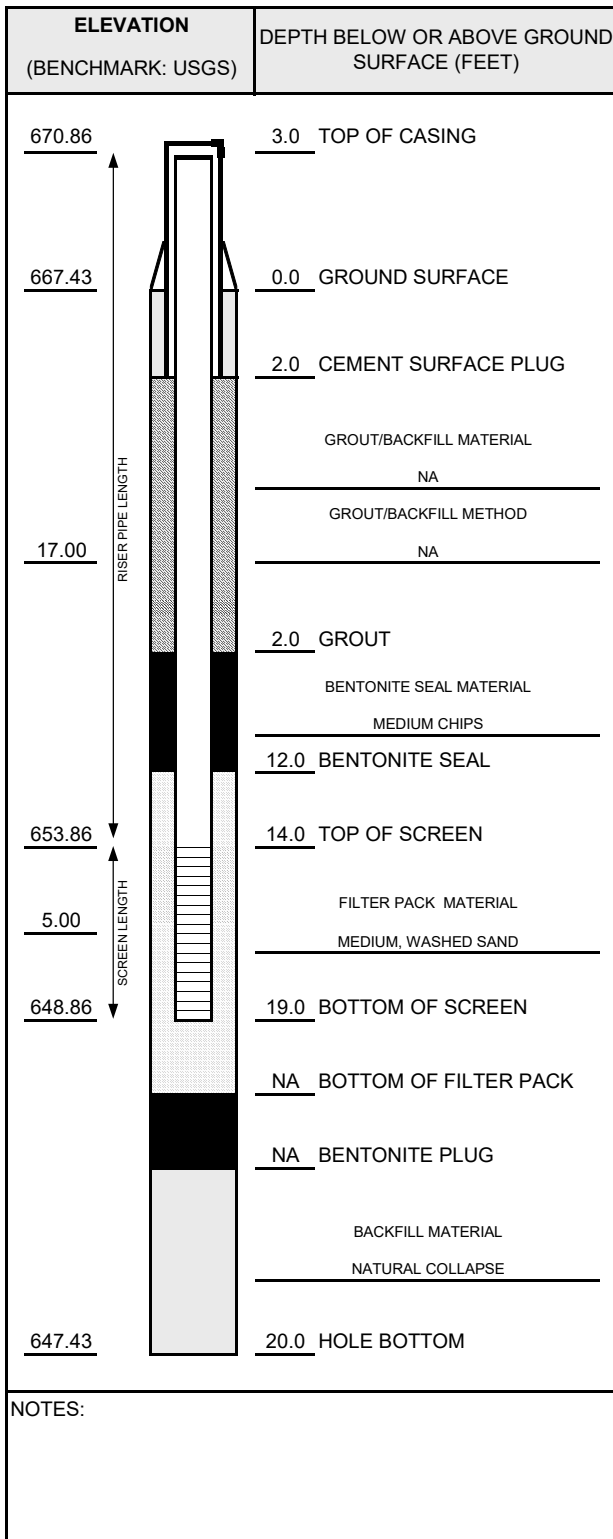
WATER LEVEL SUMMARY				
MEASUREMENT (FEET)		DATE	TIME	
DTB BEFORE DEVELOPING:	21.20	T/PVC	12/14/2022	15:45
DTB AFTER DEVELOPING:	21.20	T/PVC	12/14/2022	16:50
SWE BEFORE DEVELOPING:	13.45	T/PVC	12/14/2022	15:45
SWE AFTER DEVELOPING:	13.50	T/PVC	12/14/2022	16:50
OTHER SWE:		T/PVC		
OTHER SWE:		T/PVC		

PROTECTIVE CASING DETAILS	
PERMANENT, LEGIBLE WELL LABEL ADDED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
PROTECTIVE COVER AND LOCK INSTALLED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
LOCK KEY NUMBER:	<u>3120</u>



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Former Hayes Lemmerz Southern Area RCRA Assessment	WELL ID: MW-22-15
PROJ. NO: 495430.0001	DATE INSTALLED: 12/14/2022 INSTALLED BY: Brian Yelen
CHECKED BY: Andrew Whaley	



NOTES:

CASING AND SCREEN DETAILS	
TYPE OF RISER:	<u>2-INCH PVC</u>
PIPE SCHEDULE:	<u>40</u>
PIPE JOINTS:	<u>THREADED O-RINGS</u>
SOLVENT USED?	<u>NO</u>
SCREEN TYPE:	<u>2-INCH PVC</u>
SCR. SLOT SIZE:	<u>0.01-INCH</u>
BOREHOLE DIAMETER:	<u>9</u> IN. FROM <u>0</u> TO <u>20</u> FT.
	<u> </u> IN. FROM <u> </u> TO <u> </u> FT.
SURF. CASING DIAMETER:	<u> </u> IN. FROM <u> </u> TO <u> </u> FT.
	<u> </u> IN. FROM <u> </u> TO <u> </u> FT.

WELL DEVELOPMENT	
DEVELOPMENT METHOD:	<u>SURGE AND PUMP</u>
TIME DEVELOPING:	<u>1.5</u> HOURS
WATER REMOVED:	<u>15</u> GALLONS
WATER ADDED:	<u>0</u> GALLONS
WATER CLARITY BEFORE / AFTER DEVELOPMENT	
CLARITY BEFORE:	<u>Very Turbid</u>
COLOR BEFORE:	<u>Brown</u>
CLARITY AFTER:	<u>Clear</u>
COLOR AFTER:	<u>Clear</u>
ODOR (IF PRESENT):	<u>None</u>

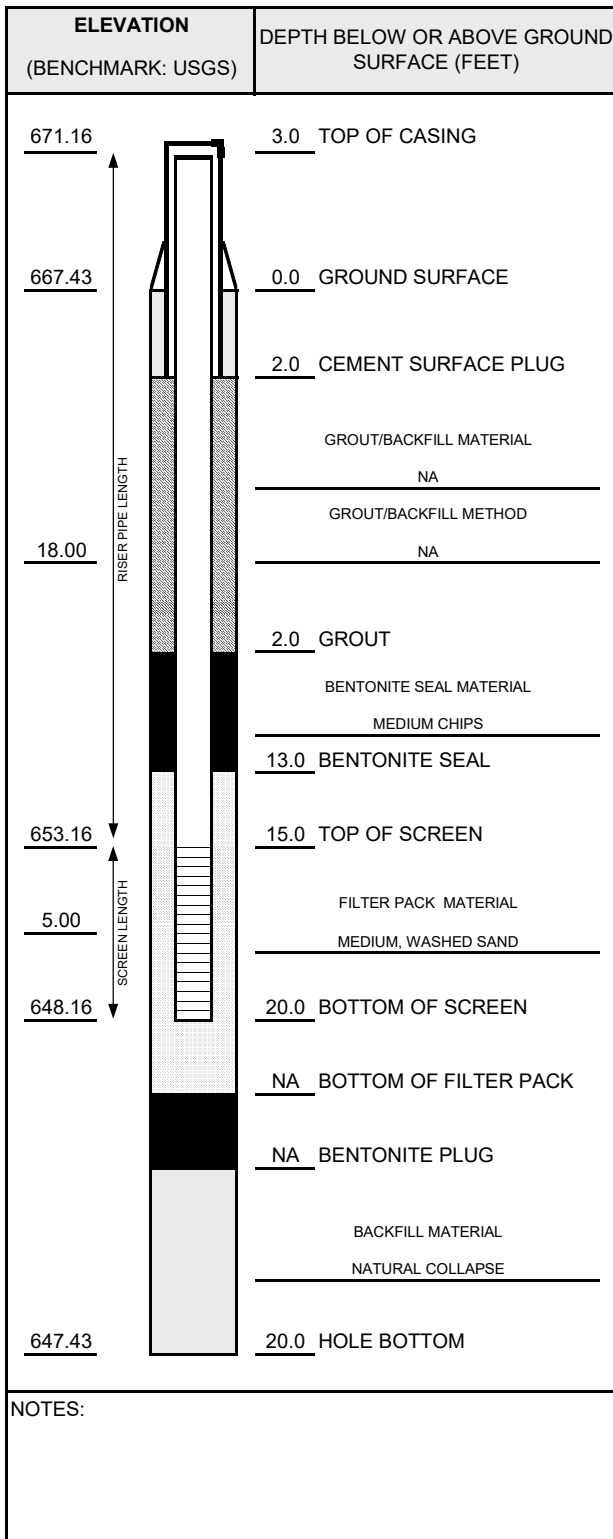
WATER LEVEL SUMMARY				
MEASUREMENT (FEET)		DATE		TIME
DTB BEFORE DEVELOPING:	22.20	T/PVC	12/15/2022	7:30
DTB AFTER DEVELOPING:	22.20	T/PVC	12/15/2022	9:00
SWE BEFORE DEVELOPING:	14.72	T/PVC	12/15/2022	7:30
SWE AFTER DEVELOPING:	14.70	T/PVC	12/15/2022	9:00
OTHER SWE:		T/PVC		
OTHER SWE:		T/PVC		

PROTECTIVE CASING DETAILS	
PERMANENT, LEGIBLE WELL LABEL ADDED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
PROTECTIVE COVER AND LOCK INSTALLED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
LOCK KEY NUMBER:	<u>3120</u>



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Former Hayes Lemmerz Southern Area RCRA Assessment	WELL ID: MW-22-16
PROJ. NO: 495430.0001	DATE INSTALLED: 12/15/2022 INSTALLED BY: Brian Yelen
CHECKED BY: Andrew Whaley	



NOTES:

CASING AND SCREEN DETAILS	
TYPE OF RISER:	<u>2-INCH PVC</u>
PIPE SCHEDULE:	<u>40</u>
PIPE JOINTS:	<u>THREADED O-RINGS</u>
SOLVENT USED?	<u>NO</u>
SCREEN TYPE:	<u>2-INCH PVC</u>
SCR. SLOT SIZE:	<u>0.01-INCH</u>
BOREHOLE DIAMETER:	<u>9</u> IN. FROM <u>0</u> TO <u>20</u> FT.
	_____ IN. FROM _____ TO _____ FT.
SURF. CASING DIAMETER:	_____ IN. FROM _____ TO _____ FT.
	_____ IN. FROM _____ TO _____ FT.

WELL DEVELOPMENT	
DEVELOPMENT METHOD:	<u>SURGE AND PUMP</u>
TIME DEVELOPING:	<u>3</u> HOURS
WATER REMOVED:	<u>15</u> GALLONS
WATER ADDED:	<u>10</u> GALLONS
WATER CLARITY BEFORE / AFTER DEVELOPMENT	
CLARITY BEFORE:	<u>Very Turbid</u>
COLOR BEFORE:	<u>Gray</u>
CLARITY AFTER:	<u>Clear</u>
COLOR AFTER:	<u>Clear</u>
ODOR (IF PRESENT):	<u>None</u>

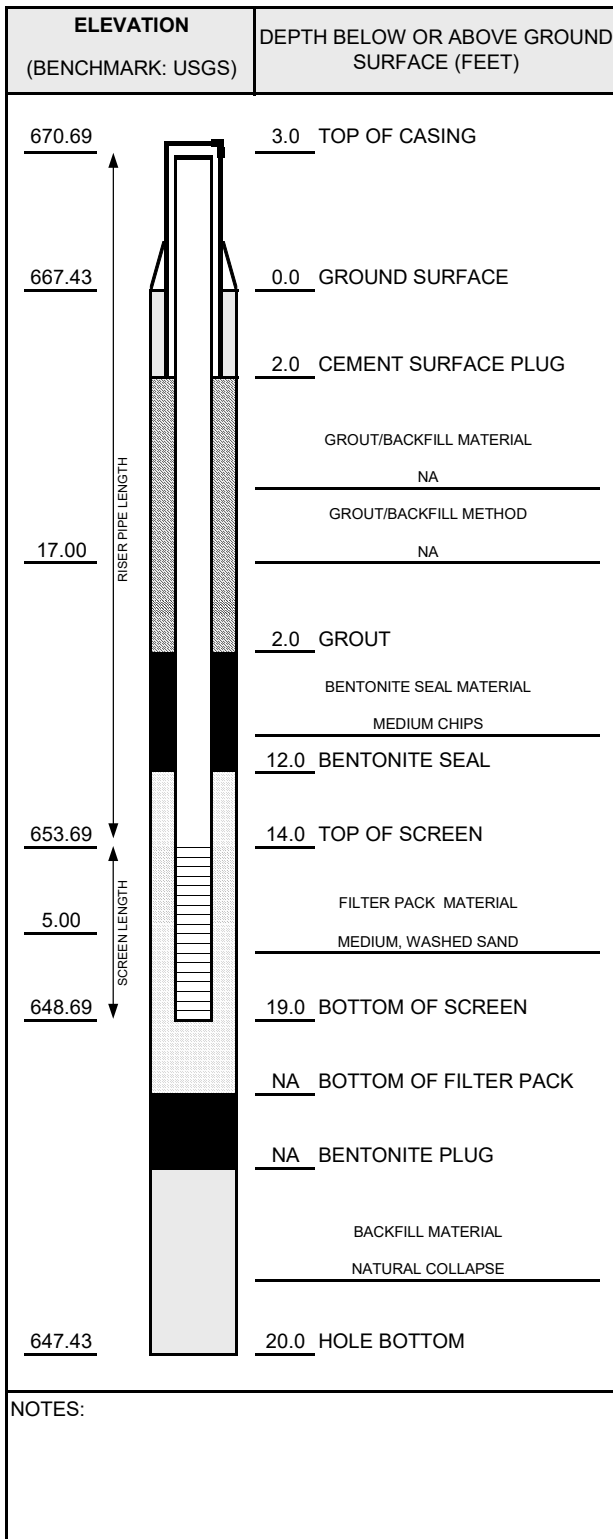
WATER LEVEL SUMMARY				
MEASUREMENT (FEET)			DATE	TIME
DTB BEFORE DEVELOPING:	NM	T/PVC	NA	NA
DTB AFTER DEVELOPING:	NM	T/PVC	NA	NA
SWE BEFORE DEVELOPING:	14.66	T/PVC	12/16/2022	8:50
SWE AFTER DEVELOPING:	14.64	T/PVC	12/16/2022	11:00
OTHER SWE:		T/PVC		
OTHER SWE:		T/PVC		

PROTECTIVE CASING DETAILS	
PERMANENT, LEGIBLE WELL LABEL ADDED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
PROTECTIVE COVER AND LOCK INSTALLED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
LOCK KEY NUMBER:	<u>3120</u>



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Former Hayes Lemmerz Southern Area RCRA Assessment	WELL ID: MW-22-17
PROJ. NO: 495430.0001	DATE INSTALLED: 12/15/2022 INSTALLED BY: Brian Yelen
CHECKED BY: Andrew Whaley	



NOTES:

CASING AND SCREEN DETAILS	
TYPE OF RISER:	<u>2-INCH PVC</u>
PIPE SCHEDULE:	<u>40</u>
PIPE JOINTS:	<u>THREADED O-RINGS</u>
SOLVENT USED?	<u>NO</u>
SCREEN TYPE:	<u>2-INCH PVC</u>
SCR. SLOT SIZE:	<u>0.01-INCH</u>
BOREHOLE DIAMETER:	<u>9</u> IN. FROM <u>0</u> TO <u>20</u> FT.
	<u> </u> IN. FROM <u> </u> TO <u> </u> FT.
SURF. CASING DIAMETER:	<u> </u> IN. FROM <u> </u> TO <u> </u> FT.
	<u> </u> IN. FROM <u> </u> TO <u> </u> FT.

WELL DEVELOPMENT	
DEVELOPMENT METHOD:	<u>SURGE AND PUMP</u>
TIME DEVELOPING:	<u>1.5</u> HOURS
WATER REMOVED:	<u>13</u> GALLONS
WATER ADDED:	<u>10</u> GALLONS
WATER CLARITY BEFORE / AFTER DEVELOPMENT	
CLARITY BEFORE:	<u>Very Turbid</u>
COLOR BEFORE:	<u>Brown</u>
CLARITY AFTER:	<u>Clear</u>
COLOR AFTER:	<u>Clear</u>
ODOR (IF PRESENT):	<u>None</u>

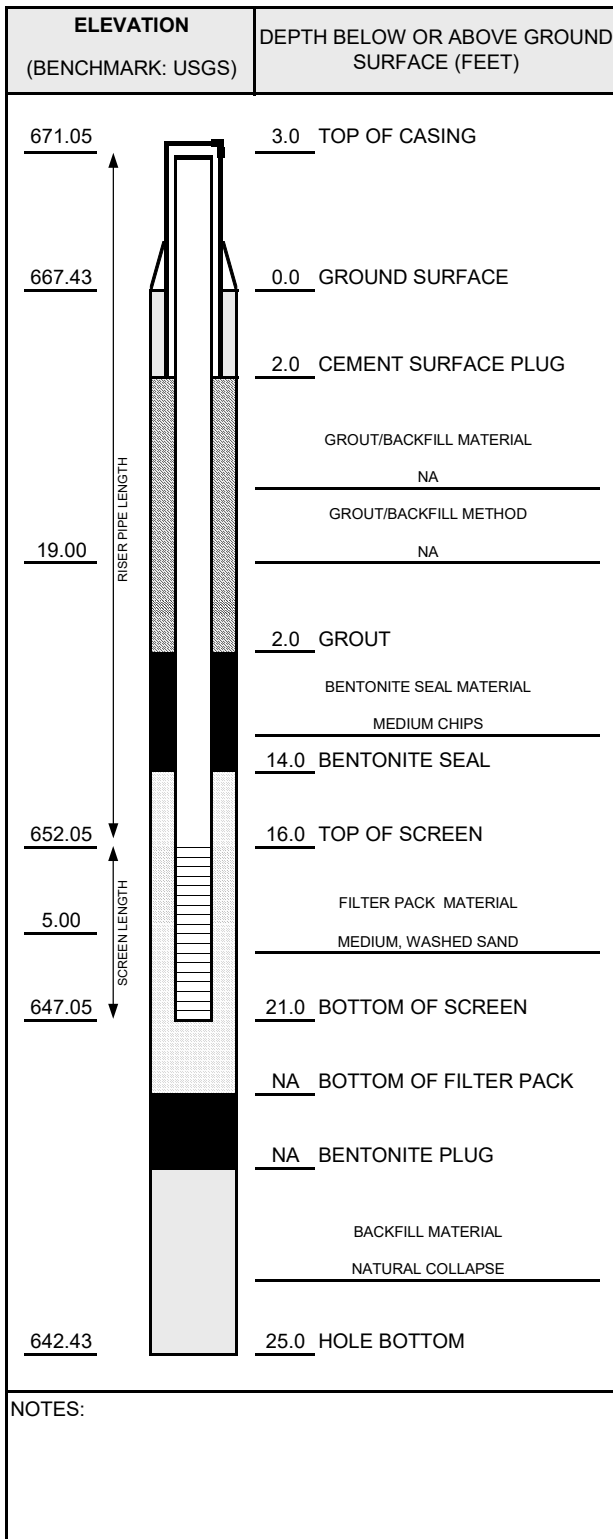
WATER LEVEL SUMMARY				
MEASUREMENT (FEET)		DATE		TIME
DTB BEFORE DEVELOPING:	22.20	T/PVC	12/16/2022	10:05
DTB AFTER DEVELOPING:	22.30	T/PVC	12/16/2022	11:40
SWE BEFORE DEVELOPING:	13.02	T/PVC	12/16/2022	10:05
SWE AFTER DEVELOPING:	13.05	T/PVC	12/16/2022	11:40
OTHER SWE:		T/PVC		
OTHER SWE:		T/PVC		

PROTECTIVE CASING DETAILS	
PERMANENT, LEGIBLE WELL LABEL ADDED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
PROTECTIVE COVER AND LOCK INSTALLED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
LOCK KEY NUMBER:	<u>3120</u>



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Former Hayes Lemmerz Southern Area RCRA Assessment	WELL ID: MW-22-18
PROJ. NO: 495430.0001	DATE INSTALLED: 12/15/2022 INSTALLED BY: Brian Yelen
CHECKED BY: Andrew Whaley	



NOTES:

CASING AND SCREEN DETAILS	
TYPE OF RISER:	<u>2-INCH PVC</u>
PIPE SCHEDULE:	<u>40</u>
PIPE JOINTS:	<u>THREADED O-RINGS</u>
SOLVENT USED?	<u>NO</u>
SCREEN TYPE:	<u>2-INCH PVC</u>
SCR. SLOT SIZE:	<u>0.01-INCH</u>
BOREHOLE DIAMETER:	<u>9</u> IN. FROM <u>0</u> TO <u>21</u> FT.
	_____ IN. FROM _____ TO _____ FT.
SURF. CASING DIAMETER:	_____ IN. FROM _____ TO _____ FT.
	_____ IN. FROM _____ TO _____ FT.

WELL DEVELOPMENT	
DEVELOPMENT METHOD:	<u>SURGE AND PUMP</u>
TIME DEVELOPING:	<u>1</u> HOURS
WATER REMOVED:	<u>10</u> GALLONS
WATER ADDED:	<u>0</u> GALLONS
WATER CLARITY BEFORE / AFTER DEVELOPMENT	
CLARITY BEFORE:	<u>Very Turbid</u>
COLOR BEFORE:	<u>Gray</u>
CLARITY AFTER:	<u>Clear</u>
COLOR AFTER:	<u>Clear</u>
ODOR (IF PRESENT):	<u>None</u>

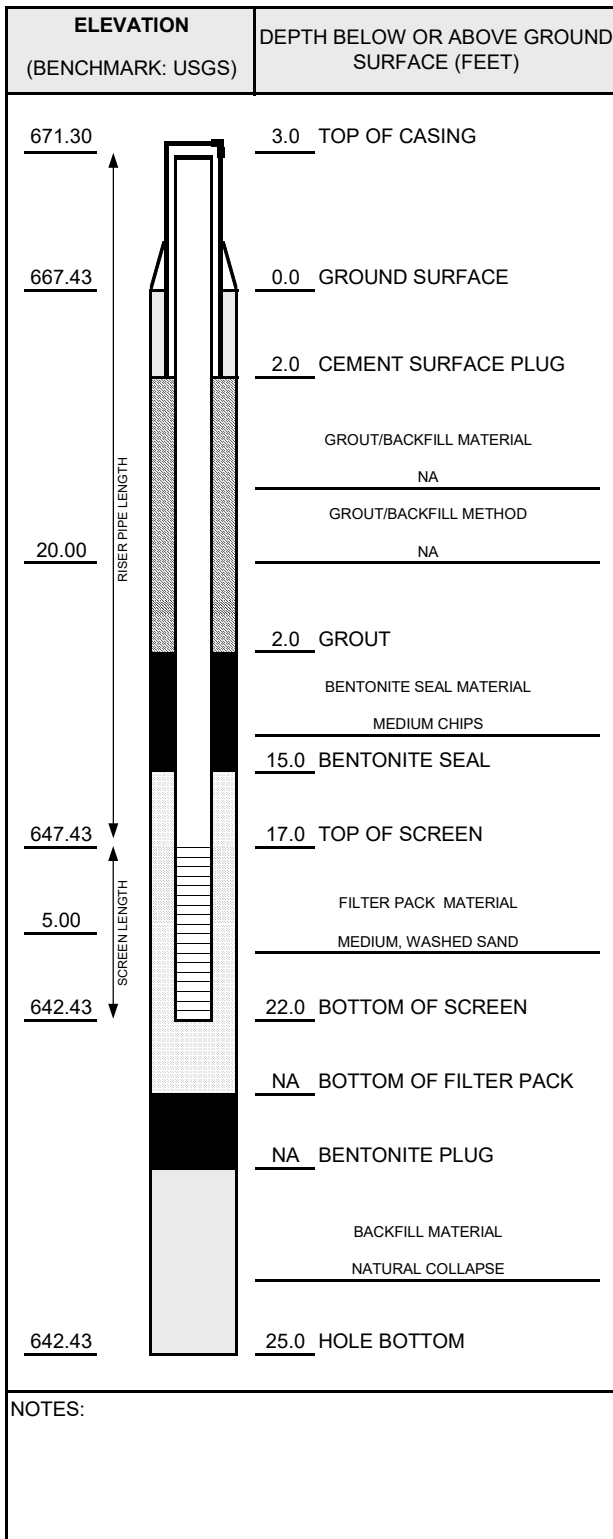
WATER LEVEL SUMMARY				
MEASUREMENT (FEET)			DATE	TIME
DTB BEFORE DEVELOPING:	NM	T/PVC	NA	NA
DTB AFTER DEVELOPING:	NM	T/PVC	NA	NA
SWE BEFORE DEVELOPING:	14.59	T/PVC	12/16/2022	11:32
SWE AFTER DEVELOPING:	15.61	T/PVC	12/16/2022	12:36
OTHER SWE:		T/PVC		
OTHER SWE:		T/PVC		

PROTECTIVE CASING DETAILS	
PERMANENT, LEGIBLE WELL LABEL ADDED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
PROTECTIVE COVER AND LOCK INSTALLED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
LOCK KEY NUMBER:	<u>3120</u>



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Former Hayes Lemmerz Southern Area RCRA Assessment	WELL ID: MW-22-19
PROJ. NO: 495430.0001	DATE INSTALLED: 12/15/2022 INSTALLED BY: Brian Yelen
CHECKED BY: Andrew Whaley	



NOTES:

CASING AND SCREEN DETAILS	
TYPE OF RISER:	<u>2-INCH PVC</u>
PIPE SCHEDULE:	<u>40</u>
PIPE JOINTS:	<u>THREADED O-RINGS</u>
SOLVENT USED?	<u>NO</u>
SCREEN TYPE:	<u>2-INCH PVC</u>
SCR. SLOT SIZE:	<u>0.01-INCH</u>
BOREHOLE DIAMETER:	<u>9</u> IN. FROM <u>0</u> TO <u>25</u> FT.
	_____ IN. FROM _____ TO _____ FT.
SURF. CASING DIAMETER:	_____ IN. FROM _____ TO _____ FT.
	_____ IN. FROM _____ TO _____ FT.

WELL DEVELOPMENT	
DEVELOPMENT METHOD:	<u>SURGE AND PUMP</u>
TIME DEVELOPING:	<u>1</u> HOURS
WATER REMOVED:	<u>10</u> GALLONS
WATER ADDED:	<u>0</u> GALLONS
WATER CLARITY BEFORE / AFTER DEVELOPMENT	
CLARITY BEFORE:	<u>Very Turbid</u>
COLOR BEFORE:	<u>Brown</u>
CLARITY AFTER:	<u>Clear</u>
COLOR AFTER:	<u>Clear</u>
ODOR (IF PRESENT):	<u>None</u>

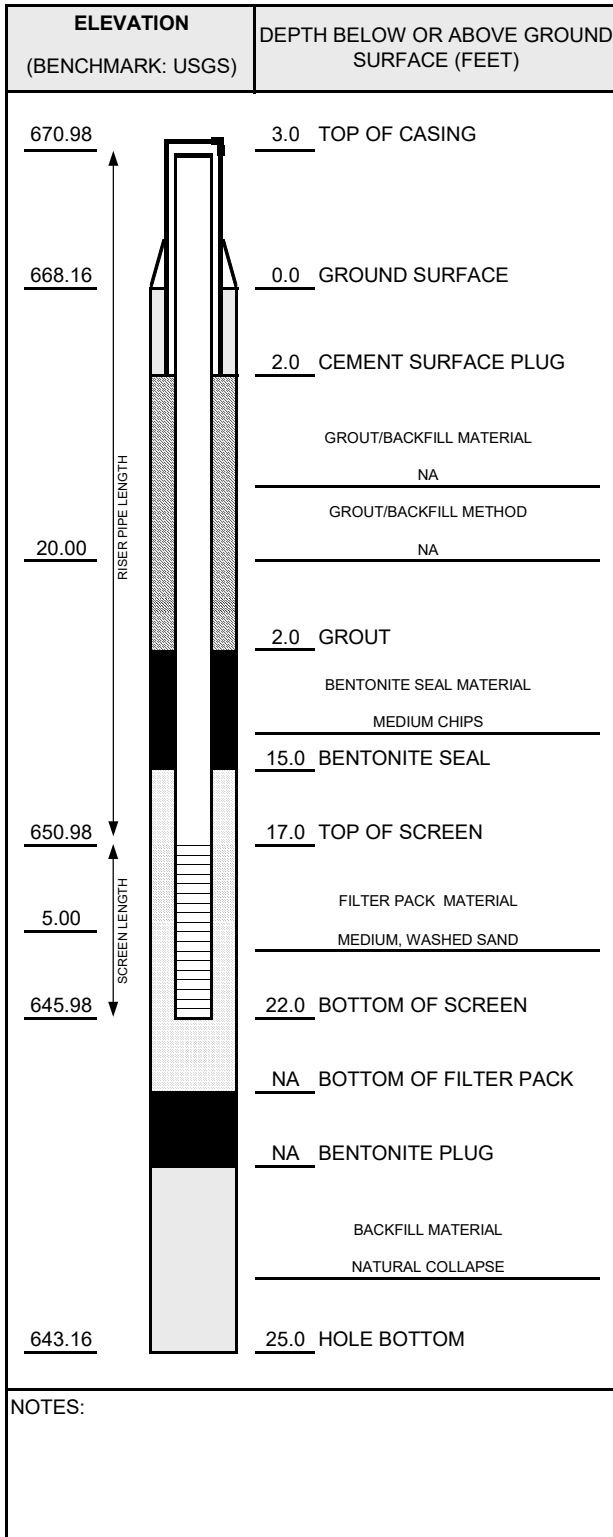
WATER LEVEL SUMMARY				
MEASUREMENT (FEET)			DATE	TIME
DTB BEFORE DEVELOPING:	NM	T/PVC	NA	NA
DTB AFTER DEVELOPING:	NM	T/PVC	NA	NA
SWE BEFORE DEVELOPING:	NM	T/PVC	NA	NA
SWE AFTER DEVELOPING:	NM	T/PVC	NA	NA
OTHER SWE:		T/PVC		
OTHER SWE:		T/PVC		

PROTECTIVE CASING DETAILS	
PERMANENT, LEGIBLE WELL LABEL ADDED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
PROTECTIVE COVER AND LOCK INSTALLED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
LOCK KEY NUMBER:	<u>3120</u>



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Former Hayes Lemmerz Southern Area RCRA Assessment	WELL ID: MW-22-20
PROJ. NO: 495430.0001	DATE INSTALLED: 12/15/2022 INSTALLED BY: Brian Yelen
CHECKED BY: Andrew Whaley	



NOTES:

CASING AND SCREEN DETAILS	
TYPE OF RISER:	<u>2-INCH PVC</u>
PIPE SCHEDULE:	<u>40</u>
PIPE JOINTS:	<u>THREADED O-RINGS</u>
SOLVENT USED?	<u>NO</u>
SCREEN TYPE:	<u>2-INCH PVC</u>
SCR. SLOT SIZE:	<u>0.01-INCH</u>
BOREHOLE DIAMETER:	<u>9</u> IN. FROM <u>0</u> TO <u>22</u> FT. <u>3</u> IN. FROM <u>22</u> TO <u>25</u> FT.
SURF. CASING DIAMETER:	____ IN. FROM ____ TO ____ FT. ____ IN. FROM ____ TO ____ FT.

WELL DEVELOPMENT	
DEVELOPMENT METHOD:	<u>SURGE AND PUMP</u>
TIME DEVELOPING:	<u>1</u> HOURS
WATER REMOVED:	<u>10</u> GALLONS
WATER ADDED:	<u>10</u> GALLONS
WATER CLARITY BEFORE / AFTER DEVELOPMENT	
CLARITY BEFORE:	<u>Very Turbid</u>
COLOR BEFORE:	<u>Gray</u>
CLARITY AFTER:	<u>Clear</u>
COLOR AFTER:	<u>Clear</u>
ODOR (IF PRESENT):	<u>None</u>

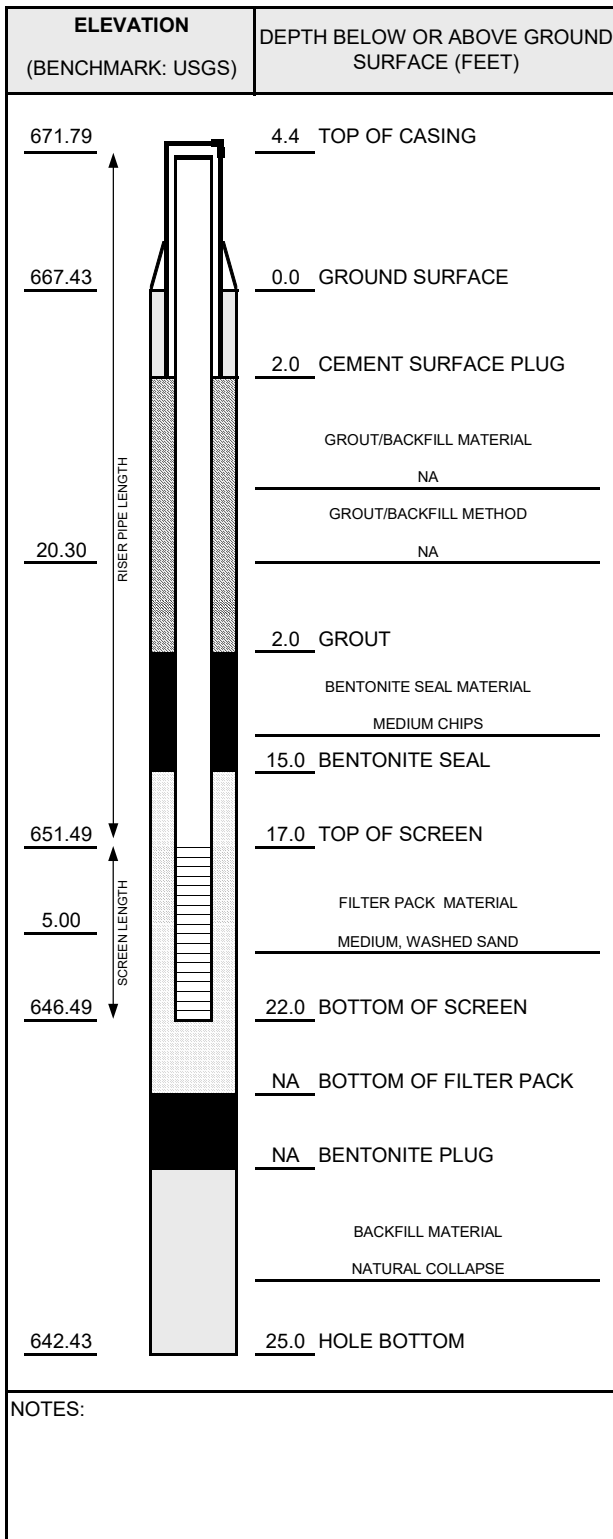
WATER LEVEL SUMMARY				
MEASUREMENT (FEET)			DATE	TIME
DTB BEFORE DEVELOPING:	NM	T/PVC	NA	NA
DTB AFTER DEVELOPING:	NM	T/PVC	NA	NA
SWE BEFORE DEVELOPING:	14.82	T/PVC	12/16/2022	12:45
SWE AFTER DEVELOPING:	14.83	T/PVC	12/16/2022	13:30
OTHER SWE:		T/PVC		
OTHER SWE:		T/PVC		

PROTECTIVE CASING DETAILS	
PERMANENT, LEGIBLE WELL LABEL ADDED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
PROTECTIVE COVER AND LOCK INSTALLED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
LOCK KEY NUMBER:	<u>3120</u>



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Former Hayes Lemmerz Southern Area RCRA Assessment	WELL ID: MW-22-21
PROJ. NO: 495430.0001	DATE INSTALLED: 12/16/2022 INSTALLED BY: Brian Yelen
CHECKED BY: Andrew Whaley	



NOTES:

CASING AND SCREEN DETAILS	
TYPE OF RISER:	<u>2-INCH PVC</u>
PIPE SCHEDULE:	<u>40</u>
PIPE JOINTS:	<u>THREADED O-RINGS</u>
SOLVENT USED?	<u>NO</u>
SCREEN TYPE:	<u>2-INCH PVC</u>
SCR. SLOT SIZE:	<u>0.01-INCH</u>
BOREHOLE DIAMETER:	<u>9</u> IN. FROM <u>0</u> TO <u>25</u> FT. <u>3</u> IN. FROM <u>22</u> TO <u>25</u> FT.
SURF. CASING DIAMETER:	<u> </u> IN. FROM <u> </u> TO <u> </u> FT. <u> </u> IN. FROM <u> </u> TO <u> </u> FT.

WELL DEVELOPMENT	
DEVELOPMENT METHOD:	<u>SURGE AND PUMP</u>
TIME DEVELOPING:	<u>1.5</u> HOURS
WATER REMOVED:	<u>12</u> GALLONS
WATER ADDED:	<u>10</u> GALLONS
WATER CLARITY BEFORE / AFTER DEVELOPMENT	
CLARITY BEFORE:	<u>Very Turbid</u>
COLOR BEFORE:	<u>Brown</u>
CLARITY AFTER:	<u>Clear</u>
COLOR AFTER:	<u>Clear</u>
ODOR (IF PRESENT):	<u>None</u>

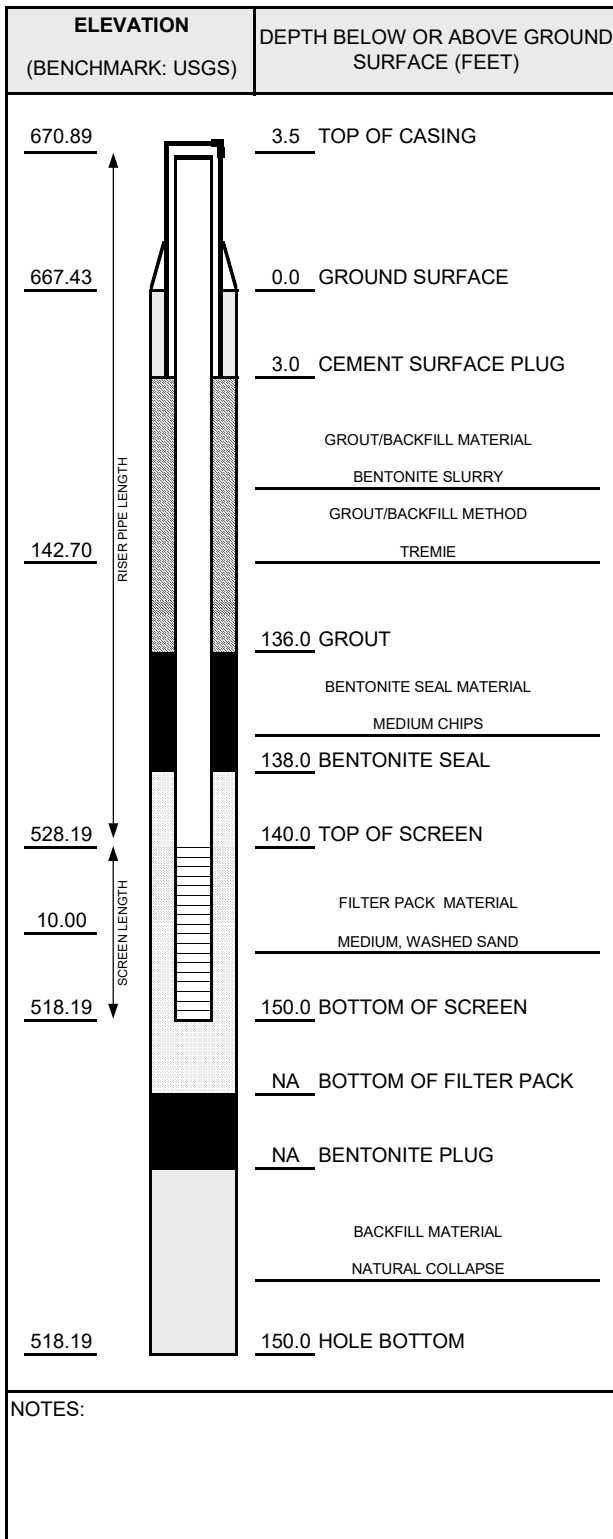
WATER LEVEL SUMMARY				
	MEASUREMENT (FEET)		DATE	TIME
DTB BEFORE DEVELOPING:	25.20	T/PVC	12/16/2022	11:40
DTB AFTER DEVELOPING:	25.25	T/PVC	12/16/2022	13:10
SWE BEFORE DEVELOPING:	14.14	T/PVC	12/16/2022	11:40
SWE AFTER DEVELOPING:	14.20	T/PVC	12/16/2022	13:10
OTHER SWE:		T/PVC		
OTHER SWE:		T/PVC		

PROTECTIVE CASING DETAILS	
PERMANENT, LEGIBLE WELL LABEL ADDED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
PROTECTIVE COVER AND LOCK INSTALLED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
LOCK KEY NUMBER:	<u>3120</u>



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Former Hayes Lemmerz Southern Area RCRA Assessment	WELL ID: MW-22-22D
PROJ. NO: 495430.0001	DATE INSTALLED: 12/21/2022 INSTALLED BY: Brian Yelen
CHECKED BY: Andrew Whaley	



NOTES:

CASING AND SCREEN DETAILS	
TYPE OF RISER:	<u>2-INCH PVC</u>
PIPE SCHEDULE:	<u>40</u>
PIPE JOINTS:	<u>THREADED O-RINGS</u>
SOLVENT USED?	<u>NO</u>
SCREEN TYPE:	<u>2-INCH PVC</u>
SCR. SLOT SIZE:	<u>0.01-INCH</u>
BOREHOLE DIAMETER:	<u>12</u> IN. FROM <u>0</u> TO <u>25</u> FT. <u>8</u> IN. FROM <u>25</u> TO <u>150</u> FT.
SURF. CASING DIAMETER:	____ IN. FROM ____ TO ____ FT. ____ IN. FROM ____ TO ____ FT.

WELL DEVELOPMENT	
DEVELOPMENT METHOD:	<u>SURGE AND PUMP</u>
TIME DEVELOPING:	<u>1.25</u> HOURS
WATER REMOVED:	<u>50</u> GALLONS
WATER ADDED:	<u>0</u> GALLONS
WATER CLARITY BEFORE / AFTER DEVELOPMENT	
CLARITY BEFORE:	<u>Very Turbid</u>
COLOR BEFORE:	<u>Brown</u>
CLARITY AFTER:	<u>Medium Turbidity</u>
COLOR AFTER:	<u>Tan-Clear</u>
ODOR (IF PRESENT):	<u>None</u>

WATER LEVEL SUMMARY				
MEASUREMENT (FEET)			DATE	TIME
DTB BEFORE DEVELOPING:	NM	T/PVC	NA	NA
DTB AFTER DEVELOPING:	NM	T/PVC	NA	NA
SWE BEFORE DEVELOPING:	NM	T/PVC	NA	NA
SWE AFTER DEVELOPING:	30.03	T/PVC	12/22/2022	11:17
OTHER SWE:		T/PVC		
OTHER SWE:		T/PVC		

PROTECTIVE CASING DETAILS	
PERMANENT, LEGIBLE WELL LABEL ADDED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
PROTECTIVE COVER AND LOCK INSTALLED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
LOCK KEY NUMBER:	<u>3120</u>

Appendix B Field Notes

Summary of Test Pit Excavation Data
 Former Hayes Lemmerz Site
 2000 West 8 Mile Road
 Ferndale, MI

Test Pit	Area of Concern	Date Excavated	Dimensions N/S (ft) x W/E (ft)	Total Depth (ft BGS)	Northing (ft)	Easting (ft)	Ground Surface Elevation (ft)	Soil Description	Excavation Floor Material	PID (PPM)
Southern Area										
AOC3-TP01	AOC-3	12/14/2022	2.5 x 8	10	347878.37	13452181.76	665.87	SAND, mostly fine to coarse sand, brownish yellow (10YR 6/6), no odor, moist, loose.	Sand	0.0
AOC3-TP02		12/14/2022	8 x 2.5	10	347892.40	13452203.63	665.75	SAND, mostly fine to coarse sand, brownish yellow (10YR 6/6), no odor, moist, loose.	Sand	0.0
AOC3-TP03		12/14/2022	8 x 2.5	10	347893.87	13452219.68	665.54	SAND, mostly fine to coarse sand, brownish yellow (10YR 6/6), no odor, moist, loose.	Sand	0.0
AOC3-TP04		12/14/2022	2.5 x 8	10	347945.28	13452196.05	665.89	SAND, mostly fine to coarse sand, brownish yellow (10YR 6/6), no odor, moist, loose.	Sand	0.0
AOC10-TP01	AOC-10	12/12/2022	6 x 2.5	10	347663.09	13452024.30	668.01	SAND, mostly fine to coarse sand, yellowish brown (10YR 5/4), no odor, moist, loose.	Sand	0.0
AOC10-TP02		12/12/2022	2.5 x 6	10	347686.15	13451971.39	668.31	SAND, mostly fine to coarse sand, pale brown (10YR 6/3), no odor, moist, loose.	Sand	0.0
AOC11-TP01	AOC-11	12/13/2022	6 x 2.5	9.3	347616.88	13451861.20	669.01	SAND, mostly fine to coarse sand, brown (10YR 5/3), no odor, moist, loose.	Concrete Pad	0.0
AOC11-TP02		12/13/2022	6 x 2.5	8.4	347616.30	13451888.59	668.16	SAND, mostly fine to coarse sand, brown (10YR 5/3), no odor, moist, loose.	Concrete Pad	0.0
AOC11-TP03		12/13/2022	6 x 2.5	10	347647.91	13451890.16	668.44	SAND, mostly fine to coarse sand, brown (10YR 5/3), no odor, moist, loose.	Sand	0.0
AOC11-TP04		12/13/2022	6 x 2.5	10	347649.38	13451863.72	668.84	SAND, mostly fine to coarse sand, brown (10YR 5/3), no odor, moist, loose.	Sand	0.0
AOC12-TP01	AOC-12	12/15/2022	2.5 x 8	10	347417.12	13452021.12	668.20	SAND, mostly fine to coarse sand, few brick/rock/gravel debris, brown (10YR 5/3), strong odor at 10 ft BGS, moist, loose.	Sand and Concrete Debris	0.8
AOC12-TP02		12/15/2022	2.5 x 8	10	347390.29	13451960.21	668.51	SAND, mostly fine to coarse sand, brownish yellow (10YR 6/6), no odor, moist, loose.	Sand	0.0
AOC12-TP03		12/15/2022	2.5 x 8	10	347414.83	13451929.43	668.98	SAND, mostly fine to coarse sand, few construction debris at 10 ft BGS, brownish yellow (10YR 6/6), no odor, moist, loose.	Sand	0.0

Notes:

Survey conducted by BMJ Engineers & Surveyors on December 21, 2022.
 Elevation in feet relative to North American Vertical Datum 1988 (NAVD 88).
 ft = feet; ft BGS = feet below ground surface; PPM = parts per million



PROJECT NAME:	<u>Detroit Axle Southern IA RCRA Assessment</u>
PROJECT NUMBER:	<u>495430.0001.0000</u>
PROJECT MANAGER:	<u>Kelly Cratsenburg</u>
SITE LOCATION:	<u>2000 Eight Mile Road</u> <u>Ferndale, MI 48220</u>
DATES OF FIELDWORK:	<u>12/12/2022 TO 12/16/2022</u>
PURPOSE OF FIELDWORK:	<u>Soil sampling, test pitting, and well installs</u> <u> </u> <u> </u> <u> </u>
WORK PERFORMED BY:	<u>Henry Schnaidt, Brian Yelen</u> <u> </u> <u> </u> <u> </u>

Henry Schnaidt
SIGNED

12/19/22
DATE

BY
CHECKED BY

3.21.23
DATE



GENERAL NOTES

PROJECT NAME: Detroit Axle Southern IA RCRA	DATE: 12/12/22	TIME ARRIVED: 800
PROJECT NUMBER: 495430.0001.0000	AUTHOR: HS BY	TIME LEFT: 1430

WEATHER		
TEMPERATURE: 57 °F	WIND: S MPH	VISIBILITY: Cloudy

WORK / SAMPLING PERFORMED
Dug TP AOC 10 - TPO1 and AOC 10 - TPO2
took Dup-01s w/ AOC 10 - TPO1 - N
took Dup-02s w/ AOC 10 - TPO2 - E
Area to digging fast pits mobilized to site and onsite, hands cleared TP locations

PROBLEMS ENCOUNTERED	CORRECTIVE ACTION TAKEN
/	/

COMMUNICATION		
NAME	REPRESENTING	SUBJECT / COMMENTS
K Krutzenburg	TRC	project updates, questions

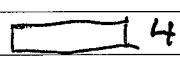
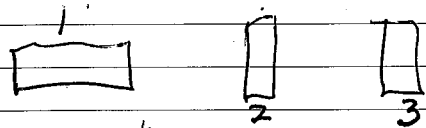
INVESTIGATION DERIVED WASTE SUMMARY		
WASTE MATRIX	QUANTITY	COMMENTS
S	NM	returned to test pits

HS 12/12/22 BY 3.21.23
 SIGNED DATE CHECKED BY DATE



GENERAL NOTES

PROJECT NAME: Detroit Axle Southern IA RCRA	DATE: 12/14/22	TIME ARRIVED: 800
PROJECT NUMBER: 495430.0001.0000	AUTHOR: HS, BY	TIME LEFT: 1545

WEATHER		
TEMPERATURE: <u>35</u> °F	WIND: <u>5-10</u> MPH	VISIBILITY: <u>cloudy</u>
WORK / SAMPLING PERFORMED		
↑ N. dug test pits AOC3 - TPO1 to TPO4  4 Add on Asphalt 		
No waste found in pits, just clean sand		

PROBLEMS ENCOUNTERED	CORRECTIVE ACTION TAKEN
—	/

COMMUNICATION		
NAME	REPRESENTING	SUBJECT / COMMENTS
B. Yelen	TRC	Project updates
K. Crabsenbury	TRC	Project updates

INVESTIGATION DERIVED WASTE SUMMARY		
WASTE MATRIX	QUANTITY	COMMENTS
<u>S</u>	<u>NM</u>	<u>Returned to HO/E</u> <u>(last pit)</u>

SIGNED HS 12/14/22 DATE _____ CHECKED BY BY 3.21.23 DATE _____



GENERAL NOTES

PROJECT NAME: Detroit Axle Southern IA RCRA	DATE: 12/16/22	TIME ARRIVED: 830
PROJECT NUMBER: 495430.0001.0000	AUTHOR: HS BY	TIME LEFT: 1430

WEATHER		
TEMPERATURE: <u>30</u> °F	WIND: <u>5-10</u> MPH	VISIBILITY: <u>cloudy</u>
WORK / SAMPLING PERFORMED		
Developed wells: MW-22-16		
MW-22-18		
MW-22-20		

PROBLEMS ENCOUNTERED	CORRECTIVE ACTION TAKEN
/	/

COMMUNICATION		
NAME	REPRESENTING	SUBJECT / COMMENTS
B. Yelen	TRC	Project updates

INVESTIGATION DERIVED WASTE SUMMARY		
WASTE MATRIX	QUANTITY	COMMENTS
GW	drummed ~30 gallons	drummed

HS 12/02/22 BY 3.21.23
 SIGNED DATE CHECKED BY DATE



PID FIELD CALIBRATION LOG

PROJECT NAME:	Detroit Axle Southern IA RCRA	MODEL:	RAE Mini RAE 3000
PROJECT NUMBER.:	495430.0001.0000	LAMP VOLTAGE:	10.6
SAMPLER NAME:	Henry Schnaidt, Brian Yelen	SERIAL NO.:	Rental (GeoTech)

PID CALIBRATION CHECK

	DATE: 12/12/22 TIME: 830 INITIALS: HS	DATE: 12/13/22 TIME: 830 INITIALS: NJ	DATE: 12/14/22 TIME: 835 INITIALS: MS	DATE: 12/15/22 TIME: 840 INITIALS: MS	DATE: # (10) TIME: INITIALS:
BATTERY CHECK	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ZERO GAS	0.00 / 0.00	0.00 / 0.00	0.00 / 0.00	0.00 / 0.00	/
SPAN GAS	100.00 / 100.00	100.00 / 100.00	100.00 / 100.00	100.00 / 100.00	/
AUDIBLE FAN MOTOR CHECK	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
RESPONSE CHECK	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

NOTES

PROBLEMS ENCOUNTERED	CORRECTIVE ACTION

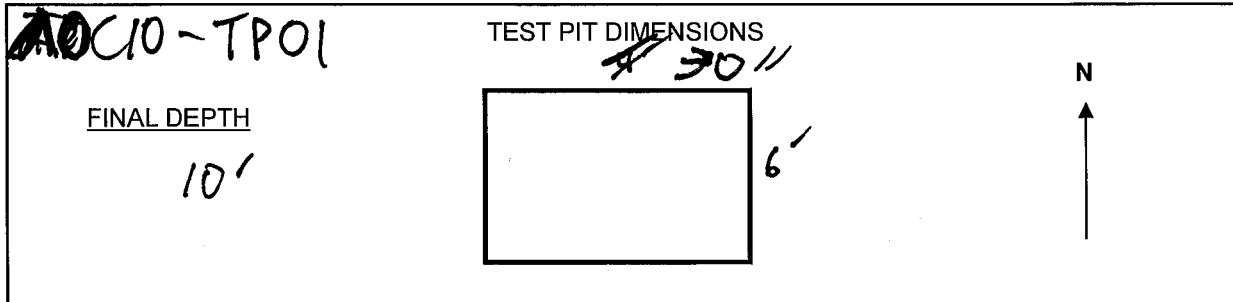
SIGNED MS 12/16/22 DATE

CHECKED BY 3.21.23 DATE



TEST PIT

PROJECT NAME: Detroit Axle Southern IA RCRA	DATE: 12/12/22	TIME STARTED: 1120
PROJECT NUMBER: 495430.0001.0000	AUTHOR: HS BY	



EXCAVATION EQUIPMENT: Excavator

SAMPLE ID	TIME	SOIL DESCRIPTION	PID
AOC10-TPO1-N	1135	Sand, no f-c sand, 5/4 10% FB, no dolls/ moist 100%	0
AOC10-TPO1-S	1154	" "	0
AOC10-TPO1-E	1202	" "	0
AOC10-TPO1-W	1202	" "	0
AOC10-TPO1-B	1230	" "	0

NOTES:

Dup-ols taken w/ AOC10-TPO1-N

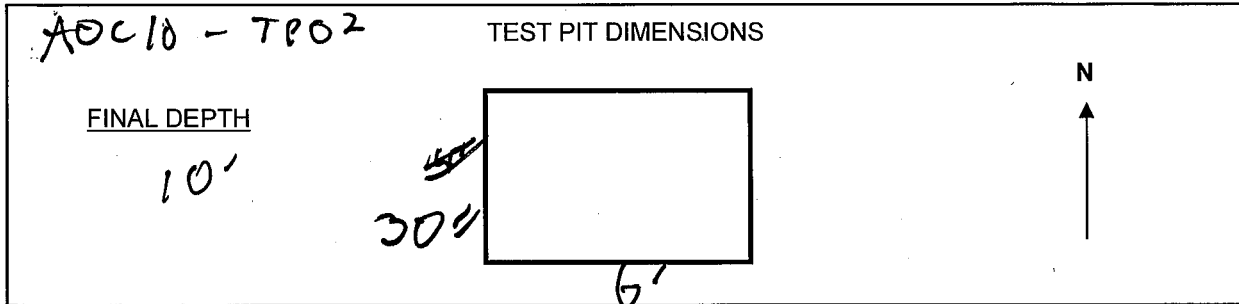
Soil returned to RPT

SIGNED: HS DATE: 12/12/22 CHECKED BY: BY DATE: 3.21.23



TEST PIT

PROJECT NAME: Detroit Axle Southern IA RCRA	DATE: 12/12/22	TIME STARTED: 1245
PROJECT NUMBER: 495430.0001.0000	AUTHOR: PS BY	



EXCAVATION EQUIPMENT: Excavator

SAMPLE ID	TIME	SOIL DESCRIPTION	PID
AOC10-TPO2-E	1335	Sand, no f.c sand, 10% G/S, no color, moist, loose	0
AOC10-TPO2-W	1400	" "	0
AOC10-TPO2-N	1406	" "	0
AOC10-TPO2-S	1406	" "	0
AOC10-TPO2-B	1428	" "	0

NOTES:

Dup-O2s taken w/ AOC-TPO2-E

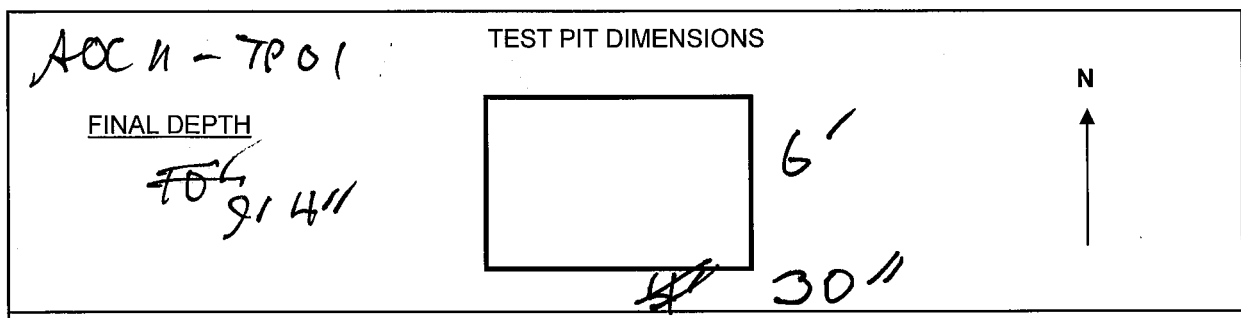
SO2 returned to pit

SIGNED: MS 12/12/22 DATE: 12/12/22 CHECKED BY: BY 3.21.23 DATE: 3.21.23



TEST PIT

PROJECT NAME: Detroit Axle Southern IA RCRA	DATE: 12/13/22	TIME STARTED: 800
PROJECT NUMBER: 495430.0001.0000	AUTHOR: MS BY	



EXCAVATION EQUIPMENT: Excavator

SAMPLE ID	TIME	SOIL DESCRIPTION	PID
AOC 11 - TP 01 - N	825	few gravel, pipe + brick debris Sand, no f-c sand, blown 10YR 5/3, no color, moist, loose	0
AOC 11 - TP 01 - S	836	" "	0
AOC 11 - TP 01 - E	856	" "	0
AOC 11 - TP 01 - W	856	" "	0
AOC 11 - TP 01 - R	935	" "	0

NOTES:

Dup - 035 taken w/ AOC 11 - TP 01 - S

Encountered concrete pad at a 6 out 9.5' feet, metal bands

Soil returned to hole

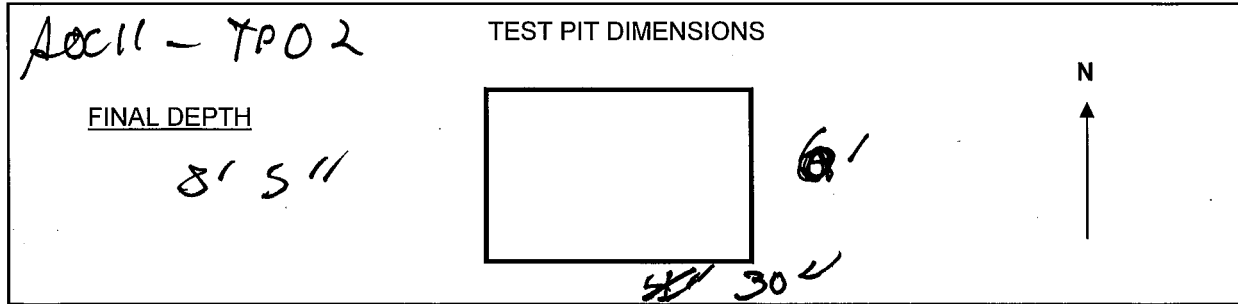
MS 12/13/22 BY 3.21.23

SIGNED DATE CHECKED BY DATE



TEST PIT

PROJECT NAME: Detroit Axle Southern IA RCRA	DATE: 12/13/21	TIME STARTED:
PROJECT NUMBER: 495430.0001.0000	AUTHOR: HS BY	945



EXCAVATION EQUIPMENT: Excavator

SAMPLE ID	TIME	SOIL DESCRIPTION	PID
AOC11-TPO2-N	1016	Same as AOC11-TPO1-N	0
AOC11-TPO2-S	1033	" "	0
AOC11-TPO2-E	1043	" "	0
AOC11-TPO2-W	1043	" "	0
AOC11-TPO2-B	1118	" "	0

NOTES:

One - 04s taken w/ AOC11-TPO1-N

Soil returned to hole

Concrete pad + tank studs at bottom of hole, some epoxy

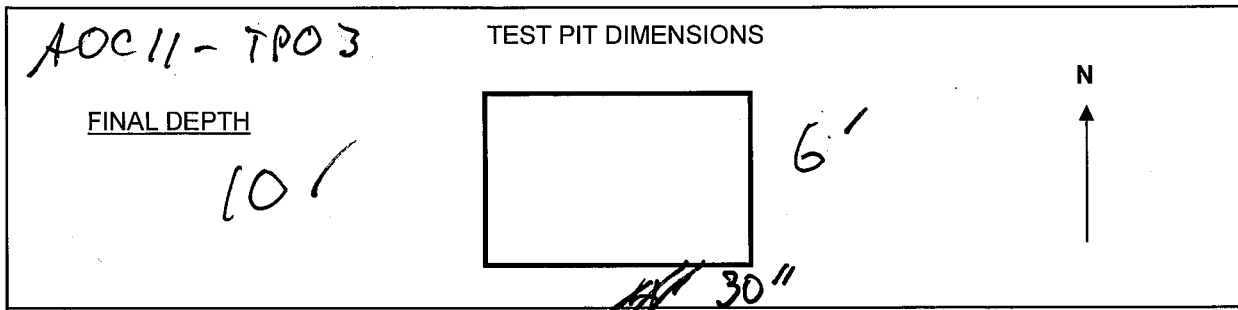
HS 12/13/22 BY 3.21.23

SIGNED DATE CHECKED BY DATE



TEST PIT

PROJECT NAME: Detroit Axle Southern IA RCRA	DATE: 12/13/22	TIME STARTED: 1215
PROJECT NUMBER: 495430.0001.0000	AUTHOR: HS BY	



EXCAVATION EQUIPMENT: Excavator

SAMPLE ID	TIME	SOIL DESCRIPTION	PID
AOC11-TP03-N	1230	Sample of AOC11-TP03-N	0
AOC11-TP03-S	1245	" "	0
AOC11-TP03-E	1300	" "	0
AOC11-TP03-W	1300	" "	0
AOC11-TP03-B	1330	" "	0

NOTES:

Dep - 05 5 taken w/ AOC11-TP03-N

SOIL Returned to hole

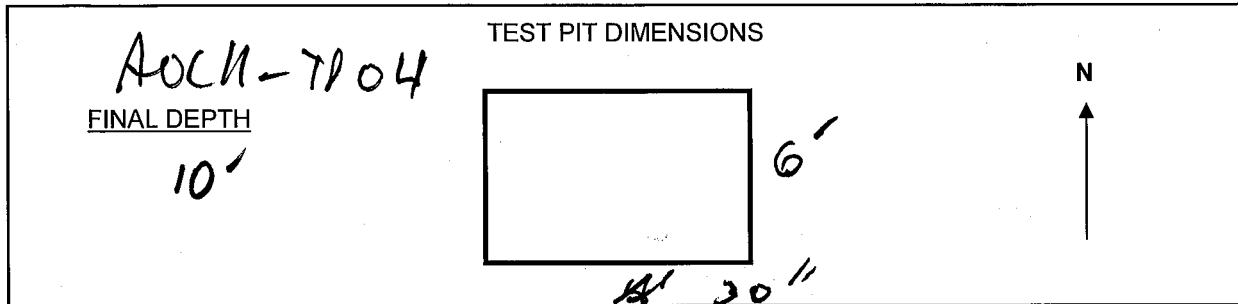
no pad encountered

_____ 12/13/22 _____ BY 3.21.23
 SIGNED DATE CHECKED BY DATE



TEST PIT

PROJECT NAME: Detroit Axle Southern IA RCRA	DATE: 12/10/22	TIME STARTED: 1345
PROJECT NUMBER: 495430.0001.0000	AUTHOR: HS BY	



EXCAVATION EQUIPMENT: Excavator

SAMPLE ID	TIME	SOIL DESCRIPTION	PID
AOC11-TP04-N	1410	same as AOC11-TP04-N	0
AOC11-TP04-S	1415	" "	0
AOC11-TP04-E	1435	" "	0
AOC11-TP04-W	1435	" "	0
AOC11-TP04-B	1503	" "	0

NOTES:

Dup-Obs taken same time as AOC11-TP04-N

Found a tank lid tank strap pipes concrete, and brick/tile debris in bottom of hole

SIGNED: HS DATE: 12/10/22 CHECKED BY: Soil returned to hole BY: 3.21.23 DATE:



TEST PIT

PROJECT NAME: Detroit Axle Southern IA RCRA	DATE: 12/14/22	TIME STARTED: 800
PROJECT NUMBER: 495430.0001.0000	AUTHOR: HS, BY	

AOC3-TP01

TEST PIT DIMENSIONS

8'

FINAL DEPTH 10'

30"

N ↑

EXCAVATION EQUIPMENT: Ex. crawler

SAMPLE ID	TIME	SOIL DESCRIPTION	PID
AOC3-TP01-W	937	Sand, med-f-c sand, brownish GR 6/b no color, moist, loose yellow	0
AOC3-TP01-E	947	" "	0
AOC3-TP01-N	955	" "	0
AOC3-TP01-S	955	" "	0
AOC3-TP01-B	1012	" "	0

NOTES:

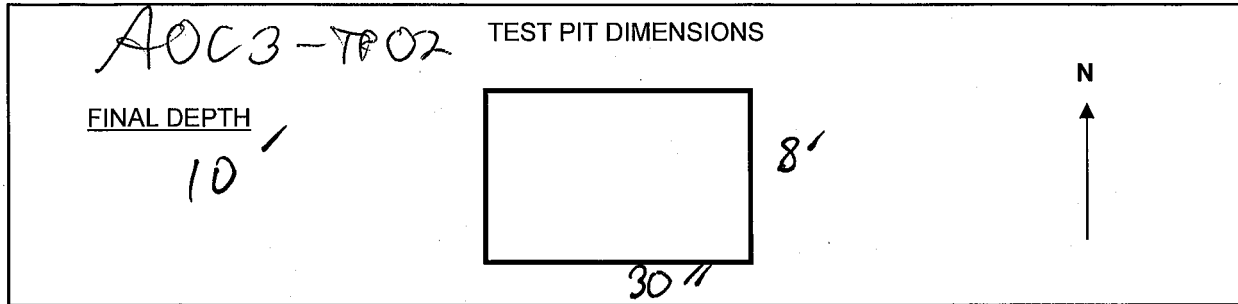
Up - 075 taken w/ AOC3-TP01-W
 On asphalt, about 4-6" thick
 No waste here, soil returned to bottom

HS 12/14/22 BY 3.21.23
 SIGNED DATE CHECKED BY DATE



TEST PIT

PROJECT NAME: Detroit Axle Southern IA RCRA	DATE: 12/14/22	TIME STARTED: 1035
PROJECT NUMBER: 495430.0001.0000	AUTHOR: HS, BY	



EXCAVATION EQUIPMENT: Excavator

SAMPLE ID	TIME	SOIL DESCRIPTION	PID
AOC3-TPO2-N	1055	5 amp as AOC3-TPO1-W	0
AOC3-TPO2-S	1108	" "	0
AOC3-TPO2-E	1115	" "	0
AOC3-TPO2-W	1115	" "	0
AOC3-TPO2-B	1136	" "	0

NOTES:

Dup-D8s taken w/ AOC3-TPO2-N

No water in hole, soil returned to bottom

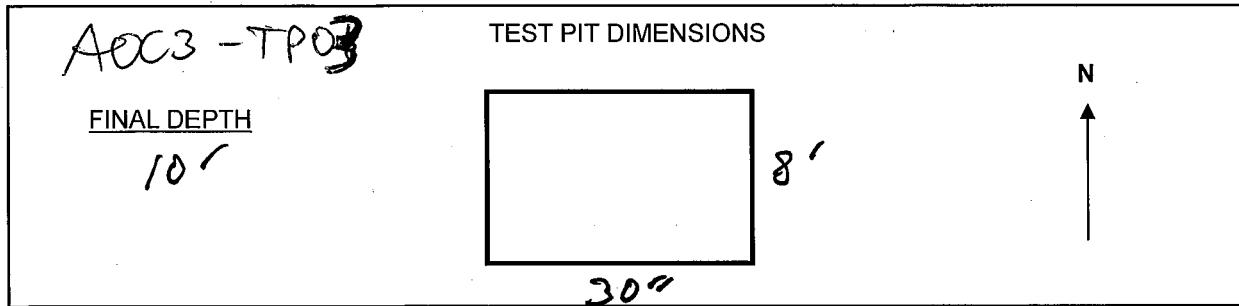
HS 12/14/22 BY 3.21.23

SIGNED DATE CHECKED BY DATE



TEST PIT

PROJECT NAME: Detroit Axle Southern IA RCRA	DATE: 12/14/22	TIME STARTED: 1230
PROJECT NUMBER: 495430.0001.0000	AUTHOR: HS BY	



EXCAVATION EQUIPMENT: Excavator

SAMPLE ID	TIME	SOIL DESCRIPTION	PID
AOC3-TPO3-N	1246	Same as AOC3-TPO3-W	0
AOC3-TPO3-S	1255	" "	0
AOC3-TPO3-E	1302	" "	0
AOC3-TPO3-W	1302	" "	0
AOC3-TPO3-B	1327	" "	0

NOTES:

Dup-O's taken w/ AOC3-TPO3-N

No water in hole, ~~sample~~ soil returned to bottom of hole

HS 12/14/22 BY 3,21,23

SIGNED DATE CHECKED BY DATE



TEST PIT

PROJECT NAME: Detroit Axle Southern IA RCRA	DATE: 12/14/22	TIME STARTED: 1400
PROJECT NUMBER: 495430.0001.0000	AUTHOR: HS BY	

AOC3-TP04 TEST PIT DIMENSIONS 8'

FINAL DEPTH 10' 30"

EXCAVATION EQUIPMENT: Excavator

SAMPLE ID	TIME	SOIL DESCRIPTION	PID
AOC3-TP04-W	1422	same as AOC3-TP01-W	0
AOC3-TP04-E	1435	" "	0
AOC3-TP04-N	1440	" "	0
AOC3-TP04-S	1446	" "	0
AOC3-TP04-B	1452	" "	0

NOTES:

Dap - 10s taken w/ AOC3-TP04-W

No waste found in pit,
soil/sand returned to pit

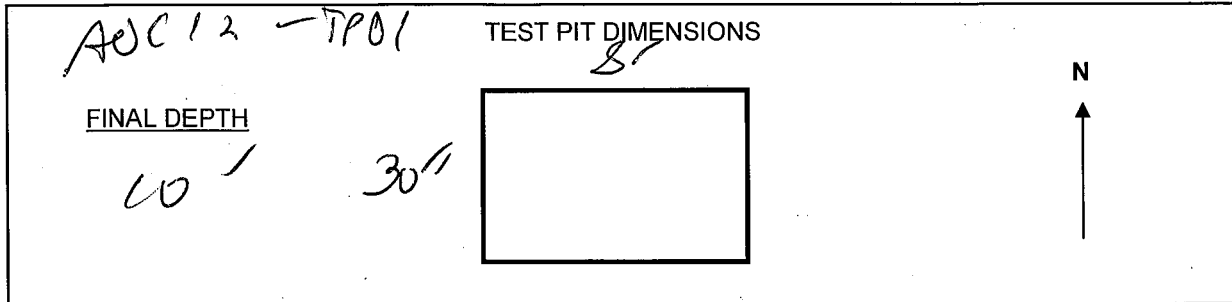
HS 12/14/22 BY 3.21.23

SIGNED DATE CHECKED BY DATE



TEST PIT

PROJECT NAME: Detroit Axle Southern IA RCRA	DATE: 12/15/22	TIME STARTED: 8:30
PROJECT NUMBER: 495430.0001.0000	AUTHOR: HS BY	



EXCAVATION EQUIPMENT: Excavator

SAMPLE ID	TIME	SOIL DESCRIPTION	PID
AOC12-TP01-E	901	SAND, med fine sand, few - 1/4" brick, rock, glass, debris, brown 10YR 5/3	0
AOC12-TP01-W	917	no odor, moist, 10YR 4/3 brown	0
AOC12-TP01-N	927	10YR 4/3	0
AOC12-TP01-S	927	10YR 4/3 brown	0
AOC12-TP01-B	1001	Strong odor 10YR 4/3 brown	0.8

NOTES:

Drop - 115 Job done w/ AOC12-TP01-E
 Full started about 5-6ft bgs, below that there is a basement / foundation.
 At about 6ft bgs, odor encountered
 Clean FM (hard) back in hole, checkered material w/ debris
 soil off bottom

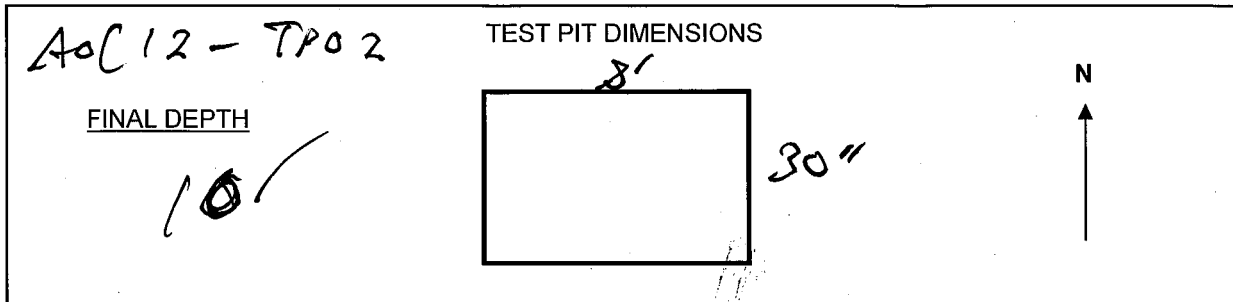
HS 12/15/22 BY 3.21.23

SIGNED DATE CHECKED BY DATE



TEST PIT

PROJECT NAME: Detroit Axle Southern IA RCRA	DATE: 12/15/22	TIME STARTED:
PROJECT NUMBER: 495430.0001.0000	AUTHOR: HS BY	



EXCAVATION EQUIPMENT: Excavator

SAMPLE ID	TIME	SOIL DESCRIPTION	PID
AOC12-TPO2-E	1042	sand, med f-c sands brownish yellow	0
AOC12-TPO2-W	1052	soil 6/6, no odd, moist, (002)	0
AOC12-TPO2-N	1100	" "	0
AOC12-TPO2-S	1100	" "	0
AOC12-TPO2-B	1116	" "	0

NOTES:

Dup-125 taken w/ AOC12-TPO2-E

Clean sand to bottom,
soil returned to bottom

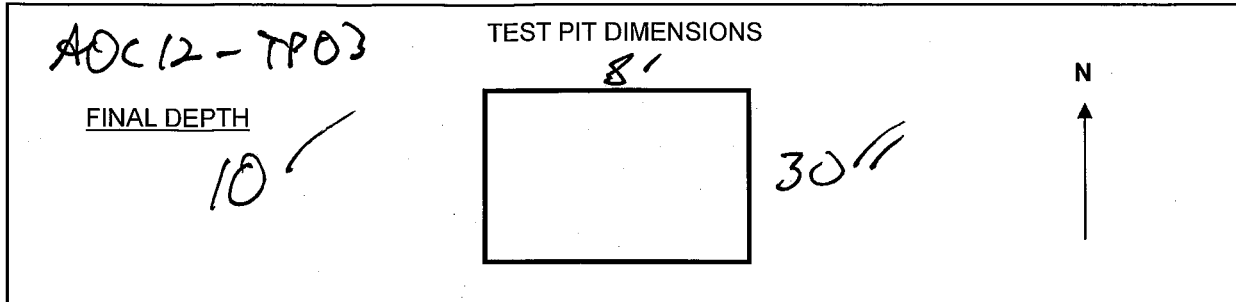
HS 12/15/22 BY 3/21/23

SIGNED DATE CHECKED BY DATE



TEST PIT

PROJECT NAME: Detroit Axle Southern IA RCRA	DATE: 12/15/22	TIME STARTED: 7:25
PROJECT NUMBER: 495430.0001.0000	AUTHOR: HS/BY	



EXCAVATION EQUIPMENT: Excavator

SAMPLE ID	TIME	SOIL DESCRIPTION	PID
AOC12-TPO3-E	1230	Same as AOC12-TPO2-E	0
AOC12-TPO3-W	1235	"	0
AOC12-TPO3-N	1245	"	0
AOC12-TPO3-S	1245	"	0
AOC12-TPO3-B	1305	" " few debris on bottom of hole	0

NOTES:

No duplicate cores collected

Soil returned to bottom of hole

SIGNED HS DATE 12/15/22

CHECKED BY BY DATE 3.21.23



PROJECT NAME:	Detroit Axle Southern IA RCRA Assessment
PROJECT NUMBER:	495430.0001.0000
PROJECT MANAGER:	Kelly Cratsenburg
SITE LOCATION:	2000 Eight Mile Road Ferndale, MI 48220
DATES OF FIELDWORK:	12/12/2022 TO 12/16/2022
PURPOSE OF FIELDWORK:	Soil sampling, test pitting, and well installs
WORK PERFORMED BY:	Henry Schnaidt, Brian Yelen

BY 3/21/23
SIGNED DATE

AW 3/21/23
CHECKED BY DATE



GENERAL NOTES

PROJECT NAME: Detroit Axle Southern IA RCRA	DATE: 12.12.22	TIME ARRIVED: 0730
PROJECT NUMBER: 495430.0001.0000	AUTHOR: HS, BY	TIME LEFT: 1630

WEATHER		
TEMPERATURE: <u>35</u> °F	WIND: <u>0-5</u> MPH	VISIBILITY: <u>OVERCAST</u>
WORK / SAMPLING PERFORMED		
<u>SB For MW-22-07, 22-08, 22-09</u>		
<u>MW INSTALL - NA</u>		

PROBLEMS ENCOUNTERED	CORRECTIVE ACTION TAKEN
<u>GPR NOT ONSITE</u>	<u>HA UNTIL GPR ARRIVES</u>

COMMUNICATION		
NAME	REPRESENTING	SUBJECT / COMMENTS
<u>KCC</u>	<u>TRC</u>	<u>UPDATES</u>

INVESTIGATION DERIVED WASTE SUMMARY		
WASTE MATRIX	QUANTITY	COMMENTS
<u>SOIL</u>	<u>NM</u>	<u>Roll-off</u>

BY 3.21.23 AW 3/21/23
 SIGNED DATE CHECKED BY DATE



GENERAL NOTES

PROJECT NAME: Detroit Axle Southern IA RCRA	DATE: 12.13.22	TIME ARRIVED: 0730
PROJECT NUMBER: 495430.0001.0000	AUTHOR: HS, BY	TIME LEFT: 1630

WEATHER		
TEMPERATURE: <u>30</u> °F	WIND: <u>5-10</u> MPH	VISIBILITY: <u>OVERCAST</u>
WORK / SAMPLING PERFORMED		
<u>SB</u>	<u>22-10, 22-11, 22-12</u>	
<u>MW</u>	<u>22-07, 22-08, 22-09, 22-10, 22-11, 22-12</u>	

PROBLEMS ENCOUNTERED	CORRECTIVE ACTION TAKEN
/	/

COMMUNICATION		
NAME	REPRESENTING	SUBJECT / COMMENTS
<u>KCC</u>	<u>TRC</u>	<u>UPDATES</u>

INVESTIGATION DERIVED WASTE SUMMARY		
WASTE MATRIX	QUANTITY	COMMENTS
<u>Soil</u>	<u>NM</u>	<u>Runoff</u>

SIGNED BY B. ZI. 23 DATE _____ CHECKED BY AW 3/21/23 DATE _____



GENERAL NOTES

PROJECT NAME: Detroit Axle Southern IA RCRA	DATE: 12.14.22	TIME ARRIVED: 0730
PROJECT NUMBER: 495430.0001.0000	AUTHOR: HS BY	TIME LEFT: 1630

WEATHER		
TEMPERATURE: <u>30-35</u> °F	WIND: <u>5-10</u> MPH	VISIBILITY: <u>OVERCAST</u>
WORK / SAMPLING PERFORMED		
MW SB	22-13	22-14, 22-15, 22-16
	+ SB-01	+ SB-02
MW	22-13	22-14, 22-15, 22-16

PROBLEMS ENCOUNTERED	CORRECTIVE ACTION TAKEN
/	/

COMMUNICATION		
NAME	REPRESENTING	SUBJECT / COMMENTS
KCC	TRC	UPDATES

INVESTIGATION DERIVED WASTE SUMMARY		
WASTE MATRIX	QUANTITY	COMMENTS
Soil	NM	Roll-off

 BY 3.21.23 AW 3/21/23
 SIGNED DATE CHECKED BY DATE



GENERAL NOTES

PROJECT NAME: Detroit Axle Southern IA RCRA	DATE: 12.15.22	TIME ARRIVED: 0730
PROJECT NUMBER: 495430.0001.0000	AUTHOR: HS, BY	TIME LEFT: 1730

WEATHER		
TEMPERATURE: 30-40 °F	WIND: 5-10 MPH	VISIBILITY: OVERCAST
WORK / SAMPLING PERFORMED		
INSTALLS		
SB	22-17	TO 22-20
MW	22-17	TO 22-20

PROBLEMS ENCOUNTERED	CORRECTIVE ACTION TAKEN
/	/

COMMUNICATION		
NAME	REPRESENTING	SUBJECT / COMMENTS
KCC	TRC	UPDATES

INVESTIGATION DERIVED WASTE SUMMARY		
WASTE MATRIX	QUANTITY	COMMENTS
SOIL	NM	flow of f

SIGNED BY 3.21.23 DATE _____ CHECKED BY AW 3/21/23 DATE _____



GENERAL NOTES

PROJECT NAME: Detroit Axle Southern IA RCRA	DATE: 3/21/23	TIME ARRIVED: 0730
PROJECT NUMBER: 495430.0001.0000	AUTHOR: HS, BY	TIME LEFT: 1700

WEATHER		
TEMPERATURE: 30-40°F	WIND: 5-10 MPH	VISIBILITY: OVERCAST
WORK / SAMPLING PERFORMED		
INSTALL MW-22-21 SB + MW		
CONCRETE / FINISH MW-22-07 TO MW-22-21		
SITE CLEANUP		
DEVELOP MW'S		

PROBLEMS ENCOUNTERED	CORRECTIVE ACTION TAKEN
/	/
/	/
/	/

COMMUNICATION		
NAME	REPRESENTING	SUBJECT / COMMENTS
KCC	TRC	UPDATES

INVESTIGATION DERIVED WASTE SUMMARY		
WASTE MATRIX	QUANTITY	COMMENTS
SOIL	NM	ROLLOFF

_____ BY 3/21/23 _____ AW 3/21/23
 SIGNED DATE CHECKED BY DATE



LOG OF SOIL BORING

PROJECT NAME: Detroit Axle Southern IA RCRA Assessment	SOIL BORING ID: MW-22-07	
PROJECT NUMBER: 495430.0001.0000	LOCATION: AOC 11	SHEET 1 OF 21
LOGGED BY: Henry Schnadt, Brian Yelen		SURFACE ELEV.: —
PROJECT LOCATION: 2000 Eight Mile Road	N: — E: —	DATE STARTED: 12.12.22
DRILLED BY: JSS TERRAPROBE, INC.	DRILLER NAME: Bob MILLER	DATE COMPLETED: 12.13.22

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
1	HA	HA	-	-	2.5	SAND, MO F-M SAND, TR-F GRV, BR 10 YR 4/3, NO COOR, PRY-MST, LOOSE CONC, BRK	12.13.22 2-4 1020
2	DP	DP	-	-	5.0	ML, MO CL, F-L CONC, WOOD, GRV, BRICK L-M PLAS, BRK 10 YR 2/1, NO COOR, MST STIFF	12.13.22
					7.5	SAND, MO F-M SAND, BR 10YR 4/3, NO COOR, MST, LOOSE CONC 3" 8.75-9.00 SAND, MO FM SAND (SAA)	8-10 1040
3	DP	DP	-	-	10.0	D WOT, GRAYISH BR 10YR 5/2 @ 10.0'	
4	DP	DP	-	-	17.5		WELL 14-19
					20.0	C. SAND SA MW-22-08 CLAY SA MW-22-08	EOB 20.0

DRILLING METHOD	DIRECT PUSH
DRILL RIG	GP 7822
BORING DIAMETER	3"

WATER LEVEL OBSERVATIONS			
FIRST OCCURRENCE: 10.0			
DATE	TIME	DEPTH TO WATER	DEPTH TO BOTTOM

SIGNED BY DATE 3.21.23

CHECKED AW DATE 3.21.23



LOG OF SOIL BORING

PROJECT NAME: Detroit Axle Southern IA RCRA Assessment	SOIL BORING ID: MW - 22 - 08	
PROJECT NUMBER: 495430.0001.0000	LOCATION: AOC 7	SHEET 1 OF 2
LOGGED BY: Henry Schnaidt, Brian Yelen		SURFACE ELEV.: -
PROJECT LOCATION: 2000 Eight Mile Road	N: - E: -	DATE STARTED: 12.12.22
DRILLED BY: TERRAPROBE, INC.	DRILLER NAME: BM	DATE COMPLETED: 12.13.22

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
						TOP SOIL	
1	HA	-	-	-	2.5	SAND, NO F-M SAND, TR GRV, BRICK, CONC NO ODR, DRV, LOOSE	12.12.22 2-3 1755
					5.0	Δ NO TR GRV/BRICK/CONC @ 5.0	
2	DP	50	-	-	7.5		
					10.0	Δ WET, GRAYISH BR 10 YR S/L @ 10.0'	12.13.22 8-10 0850
3	DP	90	-	-	12.5		
					15.0		
4	DP	100	-	-	17.5		WELL 15-20
					20.0	SAND, NO C. SAND TR-F F-M SAND, TR GRV GRAY 10 YR S/L, NO ODR, WET, M DENSE	

DRILLING METHOD	DIRECT PUSH
DRILL RIG	GP 7822
BORING DIAMETER	3"

WATER LEVEL OBSERVATIONS			
FIRST OCCURRENCE:	10.0		
DATE	TIME	DEPTH TO WATER	DEPTH TO BOTTOM

SIGNED BY 3, 21, 23 DATE

CHECKED AW 8, 21, 23 DATE



LOG OF SOIL BORING

SHEET 2 OF 2

PROJECT NAME: Detroit Axle Southern IA RCRA Assessment SOIL BORING ID: MW-22-08

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
5	DP	100	-	-	22.5	CLAY, MO CL, TR-F F-M SAND, SILT, DK GR 10 YR 4/1, L PLOS, NO ODRR MST. V. STIFF	
					25.0	EOB 25.0	
					27.5		
					30.0		
					32.5		
					35.0		
					37.5		
					40.0		
					42.5		
					45.0		

SIGNED BY 3.21.23 DATE CHECKED AW 3.21.23 DATE



LOG OF SOIL BORING

PROJECT NAME: Detroit Axle Southern IA RCRA Assessment	SOIL BORING ID: MW-22-09
PROJECT NUMBER: 495430.0001.0000	LOCATION: ACC 7
LOGGED BY: Henry Schnaidt, Brian Yelen	SHEET 1 OF 2
PROJECT LOCATION: 2000 Eight Mile Road	N: - E: -
DRILLED BY: TERRAPROBE, INC.	DRILLER NAME: BM
	DATE STARTED: 12.12.22
	DATE COMPLETED: 12.13.22

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
1	HA	HA	-	-	2.5	ASPHALT SAND, NO F-M SAND, TR-F GRV, BRICK, NO OOR BR 10 YR 4/3, LOOSE Dry-MST,	2-4 1230
2	DP	60	-	-	7.5	NO BRICK, YELLOWISH BR 10 YR S/4 SAND	8-10 1300
3	DP	80	-	-	12.5	GRAYISH BR 10 YR S/2 @ 12.5'	
4	DP	90	-	-	17.5		Well 17-22

DRILLING METHOD DIRECT PUSH
DRILL RIG GP 7022
BORING DIAMETER 3"

WATER LEVEL OBSERVATIONS			
FIRST OCCURRENCE:	10:0		
DATE	TIME	DEPTH TO WATER	DEPTH TO BOTTOM

SIGNED BY DATE 3.21.23

CHECKED AW DATE 3.21.23



LOG OF SOIL BORING

SHEET 2 OF 2

PROJECT NAME: Detroit Axle Southern IA RCRA Assessment				SOIL BORING ID: MW-22-09			
NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
5	SP	100	-	-		SAND, MG C, SAND, F GRV, GRAYISH BR 10 YR 5/2, NO ODOR, M DENSE, WET	
					22.5	CLAY, MO CL, F SILT, GR 10 YR 5/1, 2 NO ODOR, MST, DENSE VI STIFF	PLAS
					25.0	END 25.0	
					27.5		
					30.0		
					32.5		
					35.0		
					37.5		
					40.0		
					42.5		
					45.0		

SIGNED BY DATE 3.21.23

CHECKED AW DATE 3.21.23



LOG OF SOIL BORING

PROJECT NAME: Detroit Axle Southern IA RCRA Assessment	SOIL BORING ID: MW-22-10	
PROJECT NUMBER: 495430.0001.0000	LOCATION: AOC 11	SHEET 1 OF 1
LOGGED BY: Henry Schnaidt, Brian Yelen		SURFACE ELEV: 4243.22
PROJECT LOCATION: 2000 Eight Mile Road	N: - E: -	DATE STARTED: 12.13.22
DRILLED BY: TERRAPROBE, INC.	DRILLER NAME: ROB M	DATE COMPLETED: 12.13.22

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
1	DP	75	-	-	2.5	SAND, NO F-M SAND, TR GRN, TR BRK/CONC BR 10 YR 5/2, NO ORGR, MST, LOOSE	1245 2-4
					5.0		
2	DP	75	-	-	7.5	NO GRN, BRK/CONC, YELLOWISH BR 10 YR 5/6	
					10.0	SAND, NO CI SAND, TR-F F-M SAND DK GRAYSH BR 10 YR 4/2, NO ORGR, WIT LOOSE	1300 8-10
3	DP	75	-	-	12.5	SAND, NO F-M SAND, DK GRAYSH BR 10 YR 4/2, NO ORGR, WIT, LOOSE	
					15.0		
4	DP	100	-	-	17.5		WELL 15-20
					20.0	2003 2010	CLAY SA MW-22-08 @ 20.0

DRILLING METHOD	DIRECT PUSH
DRILL RIG	7822
BORING DIAMETER	3"

WATER LEVEL OBSERVATIONS			
FIRST OCCURRENCE: 10.0			
DATE	TIME	DEPTH TO WATER	DEPTH TO BOTTOM

SIGNED BY 3.21.23 DATE

CHECKED AW 3.21.23 DATE



LOG OF SOIL BORING

PROJECT NAME: Detroit Axle Southern IA RCRA Assessment	SOIL BORING ID: MW-22-11	
PROJECT NUMBER: 495430.0001.0000	LOCATION: ACC 3	SHEET 1 OF 1
LOGGED BY: Henry Schnaidt, Brian Yelen		SURFACE ELEV.: 1213.22
PROJECT LOCATION: 2000 Eight Mile Road	N: - E: -	DATE STARTED: 12.13.22
DRILLED BY: TERRAPROBE, INC.	DRILLER NAME: BM	DATE COMPLETED: 12.13.22

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
1	DP	60	-	-	2.5	ASPHALT SAND, MO F-M SAND, DK YELLOWISH BR 10 YR 4/6, NO OD, MST, LOOSE	2-4 1350
2	DP	80	-	-	7.5	Δ LT GR 10 YR 7/1 @ 6.0'	8-10 1400
					10.0	Δ GR 10 YR 5/1 @ 9.5' Δ WET @ 10.0'	
3	DP	95	-	-	12.5		
4	DP	100	-	-	17.5	↓ CLAY SA MW-22-08	MW 12.5-17.5
					20.0		EOB 20.0

DRILLING METHOD DIRECT PUSH
DRILL RIG GP 7822
BORING DIAMETER 3"

WATER LEVEL OBSERVATIONS			
FIRST OCCURRENCE:	10.0		
DATE	TIME	DEPTH TO WATER	DEPTH TO BOTTOM

SIGNED BY 3.21.23 DATE

CHECKED AW 3.21.23 DATE



LOG OF SOIL BORING

PROJECT NAME: Detroit Axle Southern IA RCRA Assessment	SOIL BORING ID: MW-22-12	
PROJECT NUMBER: 495430.0001.0000	LOCATION: AOC 3	SHEET 1 OF 1
LOGGED BY: Henry Schnaidt, Brian Yelen		SURFACE ELEV.: —
PROJECT LOCATION: 2000 Eight Mile Road	N: — E: —	DATE STARTED: 12.13.22
DRILLED BY: TERRAPROBE, INC.	DRILLER NAME: BM	DATE COMPLETED: 12.13.22

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
						TOP SOIL	
1	DP	80	—	—	2.5	SA MW-22-11	2-4 4-6 1600
2	DP	85	—	—	7.5		8-10 14-20 1610
3	DP	75	—	—	12.5		
4	DP	100	—	—	17.5		WAL 15-20
					20.0	CLAY SA MW-22-11 @ 20.0'	EUB 20.0

DRILLING METHOD DIRECT PUSH
DRILL RIG GP 7822 7728
BORING DIAMETER 3"

WATER LEVEL OBSERVATIONS			
FIRST OCCURRENCE: 10.0			
DATE	TIME	DEPTH TO WATER	DEPTH TO BOTTOM

SIGNED BY DATE 3.21.23

CHECKED AW DATE 3.21.23



LOG OF SOIL BORING

PROJECT NAME: Detroit Axle Southern IA RCRA Assessment	SOIL BORING ID: MW-22-13	
PROJECT NUMBER: 495430.0001.0000	LOCATION: A0C9	SHEET 1 OF 1
LOGGED BY: Henry Schnaidt, Brian Yelen		SURFACE ELEV.: -
PROJECT LOCATION: 2000 Eight Mile Road	N: - E: -	DATE STARTED: 12.14.22
DRILLED BY: TERRAPROBE, INC.	DRILLER NAME: BM	DATE COMPLETED: 12.14.22

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
1	DP	60	-	-	2.5	ASPHALT SAND NO F-M SAND, BROWNISH YELLOW 10 YR 6/8 NO OCCUR, MST, LOOSE	2-4 0930
2	DP	80	-	-	5.0	Δ GRAYISH BR 10 YR 5/2 @ 5.0'	
3	DP	90	-	-	10.0	10.0 Δ WET	8-10 0940
4	DP	100	-	-	17.5	C: SAND CLAY SA MW-22-12	well 13-18
					20.0		OB 20.0

DRILLING METHOD DIRECT PUSH
DRILL RIG GP 7822
BORING DIAMETER 3"

WATER LEVEL OBSERVATIONS			
FIRST OCCURRENCE: 10			
DATE	TIME	DEPTH TO WATER	DEPTH TO BOTTOM

SIGNED BY DATE 3.21.23
 CHECKED AW DATE 3.21.23



LOG OF SOIL BORING

PROJECT NAME: Detroit Axle Southern IA RCRA Assessment	SOIL BORING ID: MW-22-14	
PROJECT NUMBER: 495430.0001.0000	LOCATION: AOC 9	SHEET 1 OF 1
LOGGED BY: Henry Schnaidt, Brian Yelen		SURFACE ELEV.: -
PROJECT LOCATION: 2000 Eight Mile Road	N: - E: -	DATE STARTED: 12.14.22
DRILLED BY: TERRAPROBE, INC.	DRILLER NAME: BM	DATE COMPLETED: 12.14.22

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
1	DP	80	-	-	2.5	TOPSOIL SA SB-01	2-4 1130
2	DP	80	-	-	7.5		8-10 1150
					10.0	WET @ 10.0'	
3	DP	90	-	-	12.5		
					15.0		well 13-18
4	DP	100	-	-	17.5	CLAY SA SB-01	
					20.0		EOB 20.0

DRILLING METHOD DIRECT PUSH
DRILL RIG GP 7822
BORING DIAMETER 3"

WATER LEVEL OBSERVATIONS			
FIRST OCCURRENCE: 10.0			
DATE	TIME	DEPTH TO WATER	DEPTH TO BOTTOM

SIGNED BY DATE 3.21.23

CHECKED AW DATE 3.21.23



LOG OF SOIL BORING

PROJECT NAME: Detroit Axle Southern IA RCRA Assessment	SOIL BORING ID: MW-27-15
PROJECT NUMBER: 495430.0001.0000	LOCATION: ACC9
LOGGED BY: Henry Schnaidt, Brian Yelen	SHEET 1 of 1
PROJECT LOCATION: 2000 Eight Mile Road	N: - E: -
DRILLED BY: TERRAPROBE, INC.	DRILLER NAME: BM
	DATE STARTED: 12.14.22
	DATE COMPLETED: 12.14.22

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
1	DP	75	-	-	2.5	TOP SOIL SAND, NO F-M SAND, TR-F CONC + BRICK, DK BR 10 YR 3/3, NO COOR, DRY-MST, Loose	2-4 1330
					5.0		
2	DP	80	-	-	7.5		
					10.0	NO CONC/BRICK, YELLOWISH BR 10 YR 5/4 @ 3.0'	8-10 1340
					12.5		
3	DP	90	-	-	15.0		
					17.5		
4	DP	90	-	-	20.0	CLAY SA SB-01	WELL 14-19 END 20.0

DRILLING METHOD DIRECT PUSH
DRILL RIG 7822
BORING DIAMETER 3"

WATER LEVEL OBSERVATIONS			
FIRST OCCURRENCE:	10.0		
DATE	TIME	DEPTH TO WATER	DEPTH TO BOTTOM

SIGNED BY DATE 3.21.23

CHECKED AW DATE 3.21.23



LOG OF SOIL BORING

PROJECT NAME: Detroit Axle Southern IA RCRA Assessment	SOIL BORING ID: MW-22-16
PROJECT NUMBER: 495430.0001.0000	LOCATION: AOC 10
LOGGED BY: Henry Schnaidt, Brian Yelen	SHEET 1 OF 1
PROJECT LOCATION: 2000 Eight Mile Road	DATE STARTED: 12.14.22
DRILLED BY: TERRAPROBE, INC.	DRILLER NAME: BM
	DATE COMPLETED: 12.14.22

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
1	DP	75	-	-	2.5	TOP SOIL 12-16 GRAY & CONC SAND, MO F-M SAND, DK BR 10YR 3/3 NO ORG, DRY, LOOSE	2-4 1550
					5.0	SAND, MO F-M SAND, BROWNISH YL 10 YR CL, NO ORG, MST, LOOSE	
2	DP	80	-	-	7.5	GRAY 10 YR SIL @ 7.5' BR	8-10 1600
					10.0	DWET @ 10.0'	
						GRAY 10 YR SIL @ 11.0'	
3	DP	90	-	-	12.5		
					15.0		
4	DP	100	-	-	17.5		
					20.0	CLAY (SA SBO) @ 20.0'	well 15-20 EOB 200

DRILLING METHOD	DIRECT PUSH
DRILL RIG	7822
BORING DIAMETER	3"

WATER LEVEL OBSERVATIONS			
FIRST OCCURRENCE: 10.0'			
DATE	TIME	DEPTH TO WATER	DEPTH TO BOTTOM

SIGNED BY 3.21.23 DATE

CHECKED AW 3.21.23 DATE



LOG OF SOIL BORING

PROJECT NAME: Detroit Axle Southern IA RCRA Assessment	SOIL BORING ID: MW-22-17	
PROJECT NUMBER: 495430.0001.0000	LOCATION: ACC 10	SHEET 1 OF 1
LOGGED BY: Henry Schnaidt, Brian Yelen		SURFACE ELEV.: -
PROJECT LOCATION: 2000 Eight Mile Road	N: - E: -	DATE STARTED: 12.15.22
DRILLED BY: TERRAPROBE, INC.	DRILLER NAME: BM	DATE COMPLETED: 12.15.22

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
1	DP	60	-	-	2.5	TOP SOIL SAND, MD F-M SAND, DK YELLOWISH BR 10yr 4/6, NO CO, MST, LOOSE	2-4 0910
2	DP	60	-	-	7.5		8-10
					10.0	GAAISH BR 10yr 5/2, WET @ 10.0'	0920
3	DP	75	-	-	12.5		
4	DP	100	-	-	17.5		Well
					18.5	DL S C. SAND @ 18.5'	14-19
					20.0	CLAY SA SITE CL	END 20.0

DRILLING METHOD DIRECT PUSH
DRILL RIG 7022
BORING DIAMETER 3"

WATER LEVEL OBSERVATIONS			
FIRST OCCURRENCE: 10.0			
DATE	TIME	DEPTH TO WATER	DEPTH TO BOTTOM

SIGNED BY 3.21.23 DATE

CHECKED AW 3.21.23 DATE



LOG OF SOIL BORING

PROJECT NAME: Detroit Axle Southern IA RCRA Assessment	SOIL BORING ID: MW-22-18
PROJECT NUMBER: 495430.0001.0000	LOCATION: AOC 2
LOGGED BY: Henry Schnaidt, Brian Yejen	SHEET 1 OF 2
PROJECT LOCATION: 2000 Eight Mile Road	N: - E: -
DRILLED BY: TERRAPROBE, INC.	DRILLER NAME: B M
	DATE STARTED: 12.15.22
	DATE COMPLETED: 12.15.22

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
1	DP	75	-	-	0.0	TOP SOIL SAND, NO F-M SAND, YELLOWISH BR 10 YR 5/6, No CO, MST, LOOSE	
					2.5	SAND, NO F-M SAND, TR GRN, BNC, CL V. DK BR 10 YR 3/2, No COGR, MST, LOOSE	2-4 1040
					5.0	Rounded BR SAND, NO F-M SAND, 5 YR 4/3, NO COGR, MST LOOSE D BR 10 YR 5/3 @ 5.0'	
2	DP	80	-	-	7.5		
					10.0	A WGT @ 10.0'	8-10 1050
					11.5	A V. DK GR @ 11.5' 10 YR 3/1	
3	DP	100	-	-	12.5	A GR 10 YR 5/1 @ 13.0'	
					15.0		
					17.5		
4	DP	100	-	-	20.0		Well 16-21

DRILLING METHOD	DIRECT PUSH
DRILL RIG	7822
BORING DIAMETER	3"

WATER LEVEL OBSERVATIONS			
FIRST OCCURRENCE: 10.0			
DATE	TIME	DEPTH TO WATER	DEPTH TO BOTTOM

SIGNED BY DATE 3.21.23

CHECKED AW DATE 3.21.23



LOG OF SOIL BORING

SHEET 2 OF 2

PROJECT NAME: Detroit Axle Southern IA RCRA Assessment SOIL BORING ID: MW-22-18

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
					22.5	C SAND, MO C. SAND, TR-F F-M SAND, NO CO. WT, LOSS 62 10/2 S11	
						CLAY, SA SITE CL	
					25.0	COB 25.0	
					27.5		
					30.0		
					32.5		
					35.0		
					37.5		
					40.0		
					42.5		
					45.0		

SIGNED BY DATE 3.21.23

CHECKED AW DATE 3.21.23



LOG OF SOIL BORING

PROJECT NAME: Detroit Axle Southern IA RCRA Assessment	SOIL BORING ID: MW-22-19
PROJECT NUMBER: 495430.0001.0000	LOCATION: AOC 8
LOGGED BY: Henry Schnaidt, Brian Yelen	SHEET 1 OF 2
PROJECT LOCATION: 2000 Eight Mile Road	N: — E: —
DRILLED BY: TERRAPROBE, INC.	DRILLER NAME: B M
	DATE STARTED: 12.15.22
	DATE COMPLETED: 12.15.22

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
1	DP	75	-	-	2.5	TOP SOIL SAND, MO F-M SAND, BR 10 YR S/B, NO COAR, MST, LOOSE	2-4 1250
2	DP	60	-	-	7.5		8-10 1300
3	DP	75	-	-	12.5	Δ WET @ 10.0' Δ DK GR 10 YR u/l @ 13.0'	
4	DP	80	-	-	17.5	Δ GRAYISH BR 10 YR S/B @ 17.0'	WELL 17-22

DRILLING METHOD	DIRECT PUSH
DRILL RIG	7822
BORING DIAMETER	3"

WATER LEVEL OBSERVATIONS			
FIRST OCCURRENCE: 10.0			
DATE	TIME	DEPTH TO WATER	DEPTH TO BOTTOM

SIGNED BY 3, 21, 23 DATE

CHECKED AW 3, 21, 23 DATE



LOG OF SOIL BORING

SHEET 2 OF 2

PROJECT NAME: Detroit Axle Southern IA RCRA Assessment SOIL BORING ID: MW-22-19

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
5	SP	100	-	-	22.5	MO CL SAND, TR-F F-M SAND, GRAYISH BROWN SLT, No CLAY SA SITEWIDE CL 0.0, WT, 0.00	
					25.0	END 25	
					27.5		
					30.0		
					32.5		
					35.0		
					37.5		
					40.0		
					42.5		
					45.0		

SIGNED BY DATE 3.21.23

CHECKED AW DATE 3.21.23



LOG OF SOIL BORING

PROJECT NAME: Detroit Axle Southern IA RCRA Assessment	SOIL BORING ID: MW-22-20	
PROJECT NUMBER: 495430.0001.0000	LOCATION: AOC 12	SHEET 1 OF 2
LOGGED BY: Henry Schnaidt, Brian Yelen		SURFACE ELEV.: -
PROJECT LOCATION: 2000 Eight Mile Road	N: - E: -	DATE STARTED: 12.15.22
DRILLED BY: TERRAPROBE, INC.	DRILLER NAME: BM	DATE COMPLETED: 12.15.22

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
1	DP	70	-	-	2.5	TOP SOIL SAND, MU F-M SAND, BR 10 YR 5/3 NO OD, MST, LOOSE	2-4 1430
2	DP	80	-	-	7.5	SAND, MU F-M SAND, F GRV, BRICK, CONC, WOOD TR CL, DIC BR 10 YR 3/3, NO OD, MST DENSE	8-10 10-12 1510
3	PP	90	-	-	12.5	SAND, MU F-M SAND, DK GRAYISH BR 10 YR 4/2 NO OD, WET, DENSE	
4	PP	100	-	-	17.5		WELL 17-22
					20.0		

DRILLING METHOD DIRECT PUSH
DRILL RIG 7822
BORING DIAMETER 3"

WATER LEVEL OBSERVATIONS			
FIRST OCCURRENCE: 10.0			
DATE	TIME	DEPTH TO WATER	DEPTH TO BOTTOM

SIGNED BY DATE 3.21.23

CHECKED AW DATE 3-21-23



LOG OF SOIL BORING

SHEET 2 OF 2

PROJECT NAME: Detroit Axle Southern IA RCRA Assessment SOIL BORING ID: MW-22-20

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
						SAA	
5	DP	100	-	-	22.5	C. SAND SA MW-22-19	
						CLAY - SA SITE WIDE ICL	
					25.0	EUB 25.0	
					27.5		
					30.0		
					32.5		
					35.0		
					37.5		
					40.0		
					42.5		
					45.0		

SIGNED BY 3.21.23
DATE

CHECKED AW 3.21.23
DATE



LOG OF SOIL BORING

PROJECT NAME: Detroit Axle Southern IA RCRA Assessment	SOIL BORING ID: MW-22-21
PROJECT NUMBER: 495430.0001.0000	LOCATION: ACC 12
LOGGED BY: Henry Schnaidt, Brian Yelen	SHEET 1 OF 2
PROJECT LOCATION: 2000 Eight Mile Road	N: — E: —
DRILLED BY: TERRAPROBE, INC.	DRILLER NAME: B M
	DATE STARTED: 12.16.22
	DATE COMPLETED: 12.16.22

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
1	DP	75	-	-	2.5	TOP SOIL SAND, M-F-M SAND, YELLOWISH BR 10 YR 5/6, NO OP, MST, LOOSE	2-4 0810
2	DP	60	-	-	5.0	SAND M-F-M SAND, F-L BR, CONC, BRICK TR WOOD, DK GRAYISH BR 10 YR 4/2 NO OP, MST, MOD DENSE	8-10 0820
3	DP	80	-	-	10.0	CONC POSSIBLE SLAB @ 10.0' SAND, M-F-M SAND, BRWN 10YR 5/3, NO OP, WLT, MED DENSE	
4	DP	90	-	-	12.5		WELL 17-22

DRILLING METHOD DIRECT PUSH
DRILL RIG 7822
BORING DIAMETER 3"

WATER LEVEL OBSERVATIONS			
FIRST OCCURRENCE: 10'			
DATE	TIME	DEPTH TO WATER	DEPTH TO BOTTOM

SIGNED BV DATE 3.21.23 CHECKED AW DATE 3.21.23



LOG OF SOIL BORING

SHEET 2 OF 2

PROJECT NAME: Detroit Axle Southern IA RCRA Assessment SOIL BORING ID: MW-22-21

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
5	DP	100	-	-	22.5	SAA	
					25.0	CLAY, SA SITEWIDE CL	
					25.0	EOB 25.0	
					27.5		
					30.0		
					32.5		
					35.0		
					37.5		
					40.0		
					42.5		
					45.0		

SIGNED BY 3.21.23
DATE

CHECKED AW 3.21.23
DATE



LOG OF SOIL BORING

PROJECT NAME: Detroit Axle Southern IA RCRA Assessment	SOIL BORING ID: SB-01	
PROJECT NUMBER: 495430.0001.0000	LOCATION: A009	SHEET 1 OF 1
LOGGED BY: Henry Schnaidt, Brian Yelen		SURFACE ELEV.: -
PROJECT LOCATION: 2000 Eight Mile Road	N: - E: -	DATE STARTED: 12.14.22
DRILLED BY: TERRAPROBE, INC.	DRILLER NAME: B M	DATE COMPLETED: 12.14.22

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
1	DP6U	-	-	-	2.5	ASPHALT	Soil Boring only
						SAND, M-F-M SAND, YELLOWISH BR 10 yr 5/8, NO OD, MST, LOOSE	2-4 1010
					5.0	Δ Yellowish Br 10yr 5/4 @ 5.0'	
2	DP	80	-	-	7.5		
					10.0	Δ DK GR 10yr 4/1, WCT @ 10.0	8-10 1100
3	DP90	-	-	-	12.5		
					15.0		
4	DP	80	-	-	17.5	↓ CLAY SA MW-22-13	EOS 20.0 - NATIVE CL
					20.0		

DRILLING METHOD DIRECT PUSH
DRILL RIG GP 7822
BORING DIAMETER 3"

WATER LEVEL OBSERVATIONS			
FIRST OCCURRENCE: 10.0			
DATE	TIME	DEPTH TO WATER	DEPTH TO BOTTOM

SIGNED BY DATE 3.21.23

CHECKED AW DATE 3.21.23



LOG OF SOIL BORING

PROJECT NAME: Detroit Axle Southern IA RCRA Assessment	SOIL BORING ID: SB-02	
PROJECT NUMBER: 495430.0001.0000	LOCATION: AOC 9	SHEET 1 OF 1
LOGGED BY: Henry Schnaidt, Brian Yelen		SURFACE ELEV.: -
PROJECT LOCATION: 2000 Eight Mile Road	N: - E: -	DATE STARTED: 12.14.22
DRILLED BY: TERRAPROBE, INC.	DRILLER NAME: B. N	DATE COMPLETED: 12.14.22

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
1	DR	75	-	-	2.5	SA MW-22-14 ↓	2-4 1250
2	DR	80	-	-	5.0		
3	DR	75	-	-	10.0		
4	DR	75	-	-	15.0		
					17.5		8-10 1300
					20.0		EUR 20.0

DRILLING METHOD DIRECT PUSH
DRILL RIG 7822
BORING DIAMETER 3"

WATER LEVEL OBSERVATIONS			
FIRST OCCURRENCE: 10.0			
DATE	TIME	DEPTH TO WATER	DEPTH TO BOTTOM

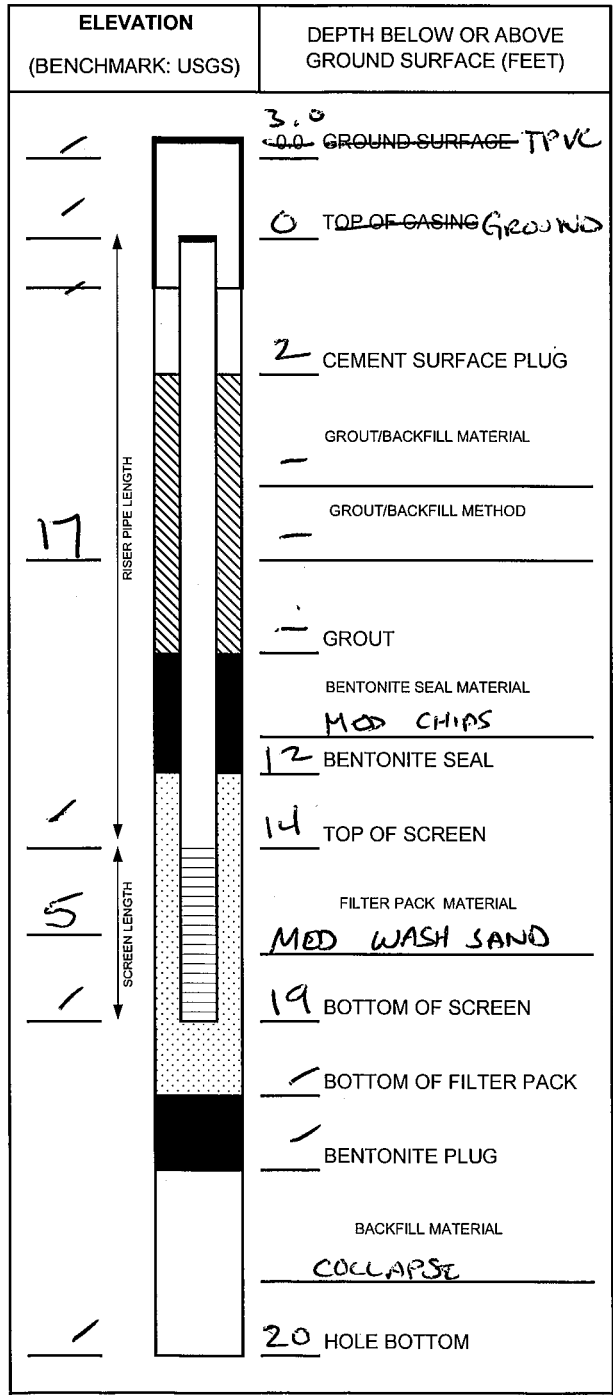
SIGNED B/Y DATE 3.21.23

CHECKED AW DATE 3.21.23



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Detroit Axle Southern IA RCRA Assessment WELL ID: MW-22-07
 PROJ. NO: 495430.0001.0 DATE INSTALLED: 12.13.22 INSTALLED BY: Henry Schnaidt, Brian Ye CHECKED BY: AW



CASING AND SCREEN DETAILS

TYPE OF RISER: 2-INCH PVC
 PIPE SCHEDULE: 40
 PIPE JOINTS: THREADED O-RINGS
 SOLVENT USED? NO
 SCREEN TYPE: 2-INCH PVC
 SCR. SLOT SIZE: 0.01-INCH

BOREHOLE DIAMETER: 9 IN. FROM 0 TO 20 FT.
 SURF. CASING DIAMETER: _____ IN. FROM _____ TO _____ FT.

WELL DEVELOPMENT

DEVELOPMENT METHOD: Peristaltic Pump
 TIME DEVELOPING: 1.5 HOURS
 WATER REMOVED: 15 GALLONS
 WATER ADDED: 10 GALLONS

WATER CLARITY BEFORE / AFTER DEVELOPMENT

CLARITY BEFORE: Very turbid
 COLOR BEFORE: Dark Brown
 CLARITY AFTER: Clear
 COLOR AFTER: Clear
 ODOR (IF PRESENT): None

WATER LEVEL SUMMARY

MEASUREMENT (FEET)	DATE	TIME
DTB BEFORE DEVELOPING: 22.15 T/PVC	12.13.22	1355
DTB AFTER DEVELOPING: 22.20 T/PVC		1540
SWE BEFORE DEVELOPING: 12.71 T/PVC		1355
SWE AFTER DEVELOPING: 12.88 T/PVC		1540
OTHER SWE:		
OTHER SWE:		

PROTECTIVE CASING DETAILS

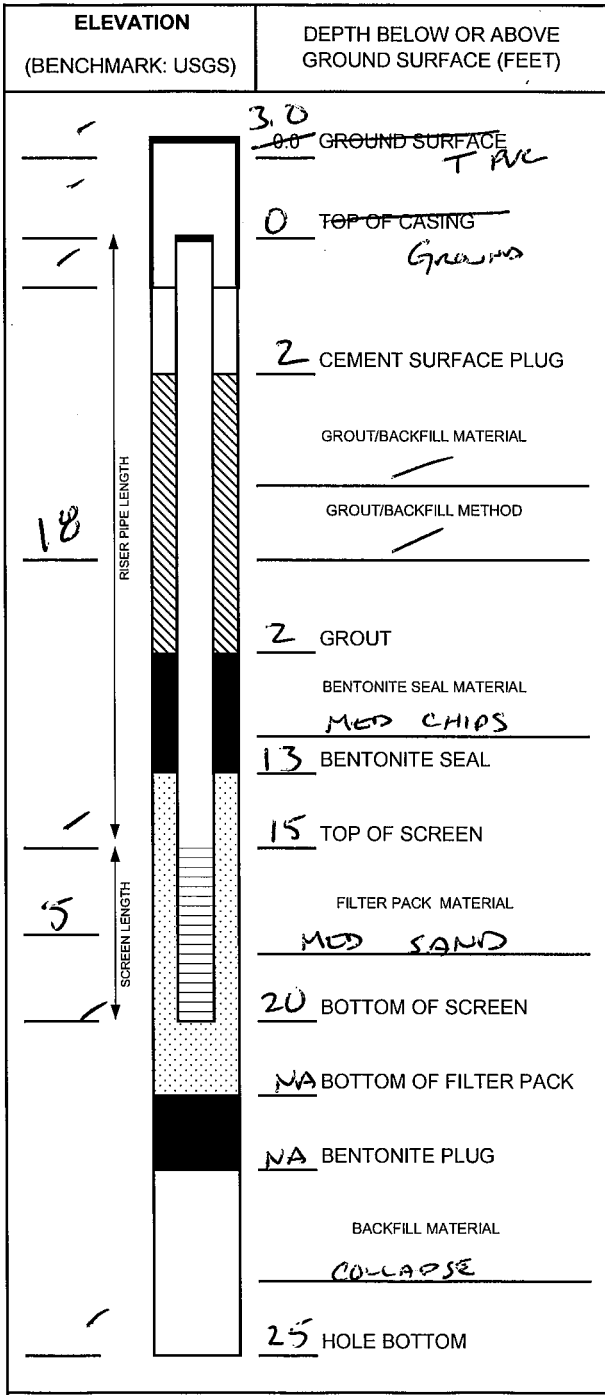
PERMANENT, LEGIBLE WELL LABEL ADDED? YES NO
 PROTECTIVE COVER AND LOCK INSTALLED? YES NO
 LOCK KEY NUMBER: 3120

NOTES:



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Detroit Axle Southern IA RCRA Assessment	WELL ID: MW-22-08
PROJ. NO: 495430.0001.0	DATE INSTALLED: 12/13/22 INSTALLED BY: Henry Schnaidt, Brian Yes CHECKED BY: AW



CASING AND SCREEN DETAILS

TYPE OF RISER: 2-INCH PVC
 PIPE SCHEDULE: 40
 PIPE JOINTS: THREADED O-RINGS
 SOLVENT USED? NO
 SCREEN TYPE: 2-INCH PVC
 SCR. SLOT SIZE: 0.01-INCH
 BOREHOLE DIAMETER: 9 IN. FROM 0 TO 20 FT.
 SURF. CASING DIAMETER: _____ IN. FROM _____ TO _____ FT.

WELL DEVELOPMENT

DEVELOPMENT METHOD: Peristaltic Pump
 TIME DEVELOPING: 1.5 HOURS
 WATER REMOVED: 18 GALLONS
 WATER ADDED: 0 GALLONS
 WATER CLARITY BEFORE / AFTER DEVELOPMENT
 CLARITY BEFORE: Brown Very turbid
 CLARITY AFTER: Clear
 COLOR BEFORE: Brown
 COLOR AFTER: Clear
 ODOR (IF PRESENT): None

WATER LEVEL SUMMARY

MEASUREMENT (FEET)		DATE	TIME
DTB BEFORE DEVELOPING:	<u>22.58</u>	T/PVC	<u>12/22/22 1052</u>
DTB AFTER DEVELOPING:	<u>22.46</u>	T/PVC	<u>1240</u>
SWE BEFORE DEVELOPING:	<u>13.20</u>	T/PVC	<u>1052</u>
SWE AFTER DEVELOPING:	<u>13.20</u>	T/PVC	<u>1240</u>
OTHER SWE:		T/PVC	
OTHER SWE:		T/PVC	

PROTECTIVE CASING DETAILS

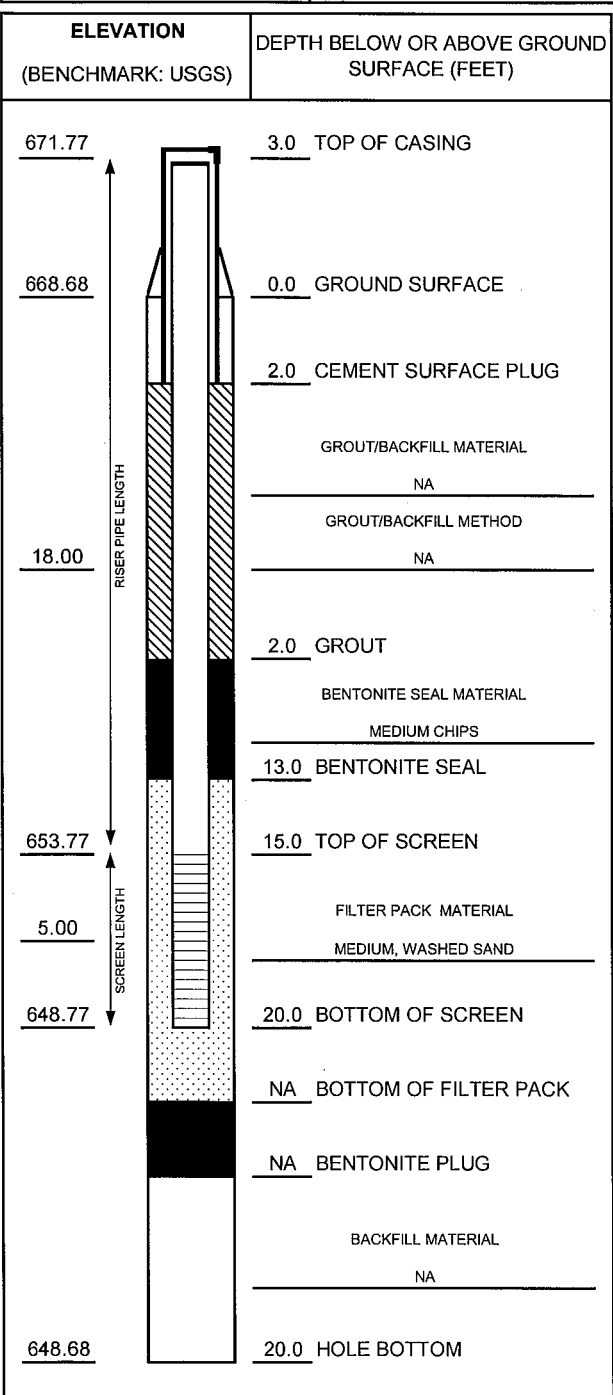
PERMANENT, LEGIBLE WELL LABEL ADDED? YES NO
 PROTECTIVE COVER AND LOCK INSTALLED? YES NO
 LOCK KEY NUMBER: 3720

NOTES:



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Detroit Axle Southern IA RCRA Assessment	WELL ID: MW-22-10
PROJ. NO: 495430.0001	DATE INSTALLED: 12/13/2022 INSTALLED BY: Brian Yelen
CHECKED BY: Andrew Whaley	



CASING AND SCREEN DETAILS	
TYPE OF RISER:	2-INCH PVC
PIPE SCHEDULE:	40
PIPE JOINTS:	THREADED O-RINGS
SOLVENT USED?	NO
SCREEN TYPE:	2-INCH PVC
SCR. SLOT SIZE:	0.01-INCH
BOREHOLE DIAMETER:	9 IN. FROM 0 TO 20 FT.
	IN. FROM TO FT.
SURF. CASING DIAMETER:	IN. FROM TO FT.
	IN. FROM TO FT.

WELL DEVELOPMENT	
DEVELOPMENT METHOD:	SURGE AND PUMP
TIME DEVELOPING:	1 HOURS
WATER REMOVED:	11 GALLONS
WATER ADDED:	10 GALLONS
WATER CLARITY BEFORE / AFTER DEVELOPMENT	
CLARITY BEFORE:	Very Turbid → turbid
COLOR BEFORE:	Brown
CLARITY AFTER:	Clear
COLOR AFTER:	Clear
ODOR (IF PRESENT):	None

WATER LEVEL SUMMARY				
	MEASUREMENT (FEET)		DATE	TIME
DTB BEFORE DEVELOPING:	22.99	T/PVC	12/13/2022	1535
DTB AFTER DEVELOPING:	23.10	T/PVC	12/13/2022	1630
SWE BEFORE DEVELOPING:	13.44	T/PVC	12/13/2022	1535
SWE AFTER DEVELOPING:	13.44	T/PVC	12/13/2022	1630
OTHER SWE:		T/PVC		
OTHER SWE:		T/PVC		

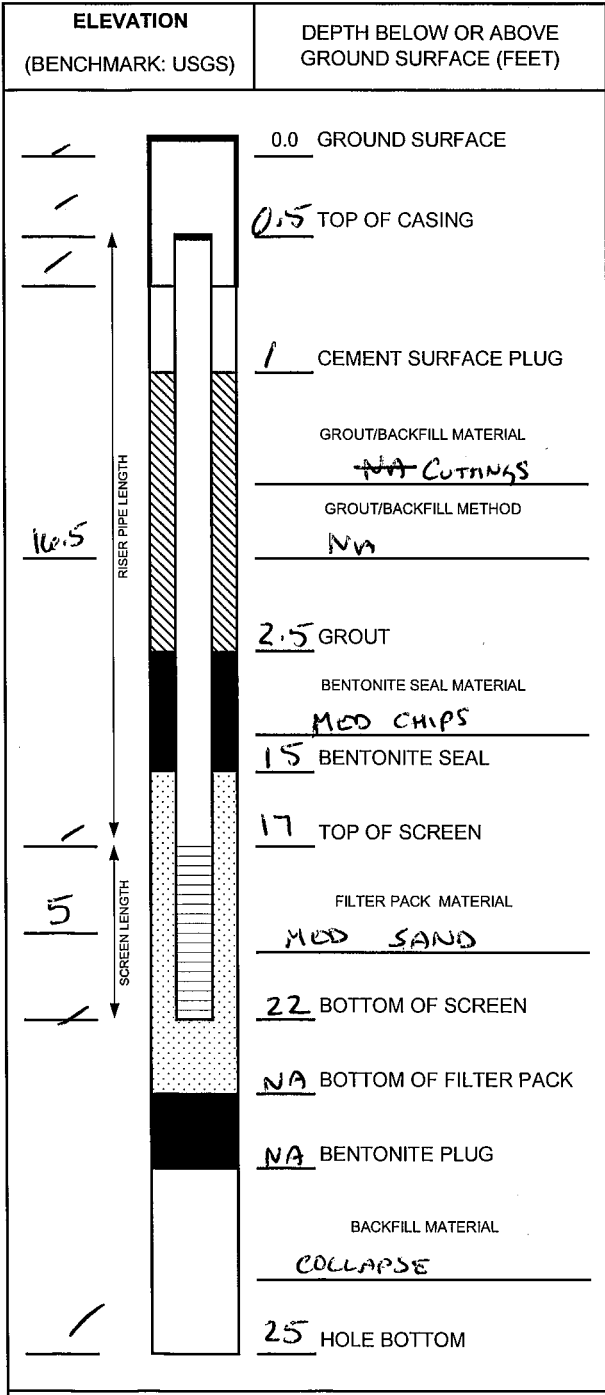
NOTES:

PROTECTIVE CASING DETAILS		
PERMANENT, LEGIBLE WELL LABEL ADDED?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
PROTECTIVE COVER AND LOCK INSTALLED?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO
LOCK KEY NUMBER:	3120	



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Detroit Axle Southern IA RCRA Assessment	WELL ID: MW-22-09
PROJ. NO: 495430.0001.0	DATE INSTALLED: 12.13.22 INSTALLED BY: Henry Schnaidt, Brian Yeck CHECKED BY: AW



CASING AND SCREEN DETAILS

TYPE OF RISER: 2-INCH PVC
PIPE SCHEDULE: 40
PIPE JOINTS: THREADED O-RINGS
SOLVENT USED? NO
SCREEN TYPE: 2-INCH PVC
SCR. SLOT SIZE: 0.01-INCH

BOREHOLE DIAMETER: 9 IN. FROM 0 TO 22 FT.
SURF. CASING DIAMETER: _____ IN. FROM _____ TO _____ FT.

WELL DEVELOPMENT

DEVELOPMENT METHOD: Peristaltic Pump
TIME DEVELOPING: 50 HOURS MIN.
WATER REMOVED: 25,000 GALLONS ML
WATER ADDED: 0 GALLONS

WATER CLARITY BEFORE / AFTER DEVELOPMENT

CLARITY BEFORE: Very turbid
COLOR BEFORE: Gray
CLARITY AFTER: Slightly cloudy
COLOR AFTER: light gray - clear
ODOR (IF PRESENT): None

WATER LEVEL SUMMARY

MEASUREMENT (FEET)	DATE	TIME
DTB BEFORE DEVELOPING: 21.30	T/PVC 12.13.22	750
DTB AFTER DEVELOPING: 21.35	T/PVC 12.13.22	850
SWE BEFORE DEVELOPING: 10.30	T/PVC 12.13.22	750
SWE AFTER DEVELOPING: 10.30	T/PVC 12.13.22	850
OTHER SWE:	T/PVC	
OTHER SWE:	T/PVC	

PROTECTIVE CASING DETAILS

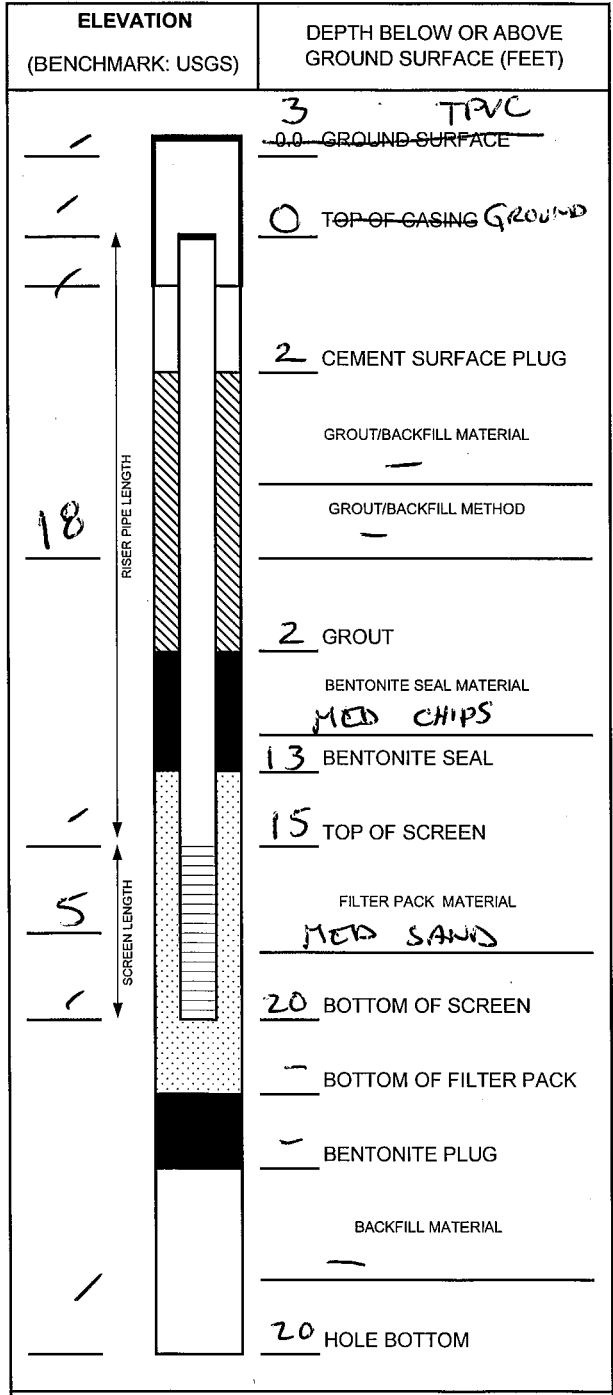
PERMANENT, LEGIBLE WELL LABEL ADDED? YES NO
 PROTECTIVE COVER AND LOCK INSTALLED? YES NO
 LOCK KEY NUMBER: 5120

NOTES:



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Detroit Axle Southern IA RCRA Assessment WELL ID: MW-22-10
 PROJ. NO: 495430.0001.0 DATE INSTALLED: 12.13.22 INSTALLED BY: Henry Schnaidt, Brian Ye CHECKED BY: MW-22-10 AW



CASING AND SCREEN DETAILS

TYPE OF RISER: 2-INCH PVC
 PIPE SCHEDULE: 40
 PIPE JOINTS: THREADED O-RINGS
 SOLVENT USED? NO
 SCREEN TYPE: 2-INCH PVC
 SCR. SLOT SIZE: 0.01-INCH
 BOREHOLE DIAMETER: 9 IN. FROM 0 TO 20 FT.
 SURF. CASING DIAMETER: _____ IN. FROM _____ TO _____ FT.

WELL DEVELOPMENT

DEVELOPMENT METHOD: Peristaltic Pump/surge
 TIME DEVELOPING: 1 HOURS
 WATER REMOVED: 11 GALLONS
 WATER ADDED: 10 GALLONS
 WATER CLARITY BEFORE / AFTER DEVELOPMENT
 CLARITY BEFORE: Turbid
 COLOR BEFORE: Brown
 CLARITY AFTER: Clear
 COLOR AFTER: Clear
 ODOR (IF PRESENT): None

WATER LEVEL SUMMARY

MEASUREMENT (FEET)	DATE	TIME
DTB BEFORE DEVELOPING: 22.97 T/PVC	12.13.22	1535
DTB AFTER DEVELOPING: 23.10 T/PVC		1630
SWE BEFORE DEVELOPING: 13.44 T/PVC		1535
SWE AFTER DEVELOPING: 13.44 T/PVC		1630
OTHER SWE:		
OTHER SWE:		

NOTES:

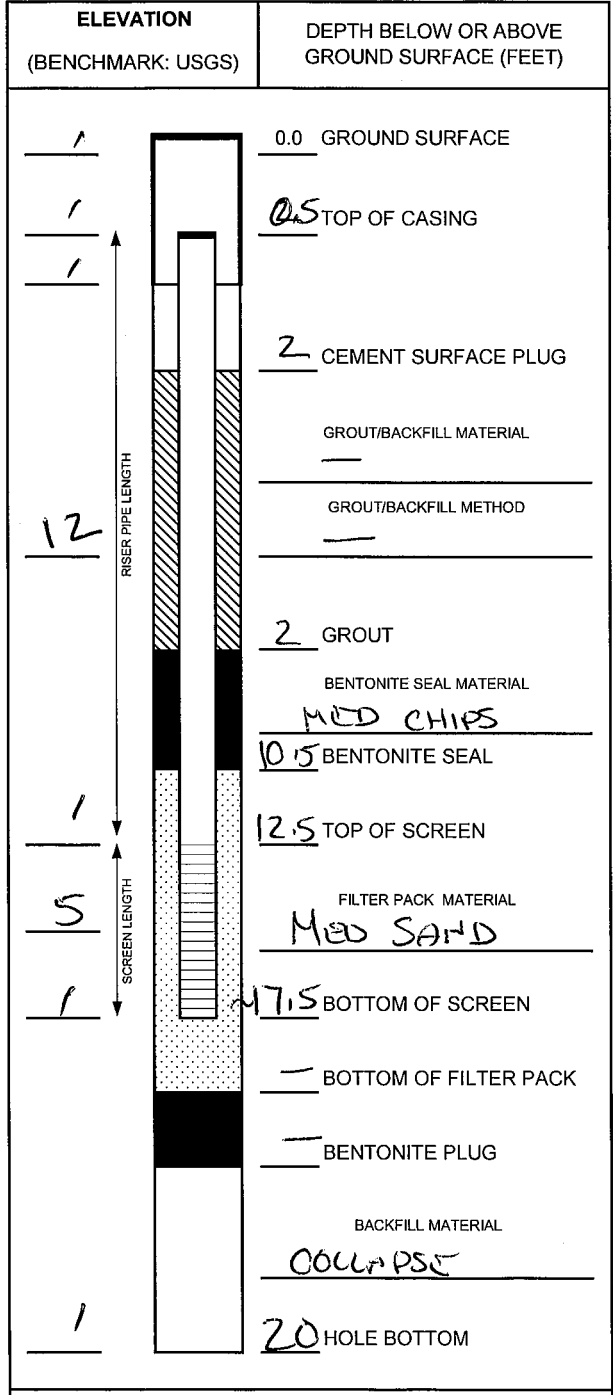
PROTECTIVE CASING DETAILS

PERMANENT, LEGIBLE WELL LABEL ADDED? YES NO
 PROTECTIVE COVER AND LOCK INSTALLED? YES NO
 LOCK KEY NUMBER: 3120



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Detroit Axle Southern IA RCRA Assessment	WELL ID: MW-22-11
PROJ. NO: 495430.0001.0	DATE INSTALLED: <u>12.13.22</u> INSTALLED BY: Henry Schnaidt, Brian Yeck CHECKED BY: <u>AW</u>



CASING AND SCREEN DETAILS

TYPE OF RISER: 2-INCH PVC
PIPE SCHEDULE: 40
PIPE JOINTS: THREADED O-RINGS
SOLVENT USED? NO
SCREEN TYPE: 2-INCH PVC
SCR. SLOT SIZE: 0.01-INCH
BOREHOLE DIAMETER: 9 IN. FROM 0 TO 17.5 FT.
 IN. FROM _____ TO _____ FT.
SURF. CASING DIAMETER: _____ IN. FROM _____ TO _____ FT.
 IN. FROM _____ TO _____ FT.

WELL DEVELOPMENT

DEVELOPMENT METHOD: Peristaltic Pump (HDPE)
TIME DEVELOPING: 2.0 HOURS
WATER REMOVED: 15 GALLONS
WATER ADDED: 10 GALLONS
WATER CLARITY BEFORE / AFTER DEVELOPMENT
 CLARITY BEFORE: Very Turbid
 COLOR BEFORE: Brown
 CLARITY AFTER: Clear
 COLOR AFTER: Clear
 ODOR (IF PRESENT): None

WATER LEVEL SUMMARY

MEASUREMENT (FEET)		DATE	TIME
DTB BEFORE DEVELOPING:	<u>16.70</u> T/PVC	12.14.22	<u>1210</u>
DTB AFTER DEVELOPING:	<u>16.70</u> T/PVC		<u>1400</u>
SWE BEFORE DEVELOPING:	<u>9.90</u> T/PVC		<u>1210</u>
SWE AFTER DEVELOPING:	<u>10.00</u> T/PVC		<u>1400</u>
OTHER SWE:	T/PVC		
OTHER SWE:	T/PVC		

PROTECTIVE CASING DETAILS

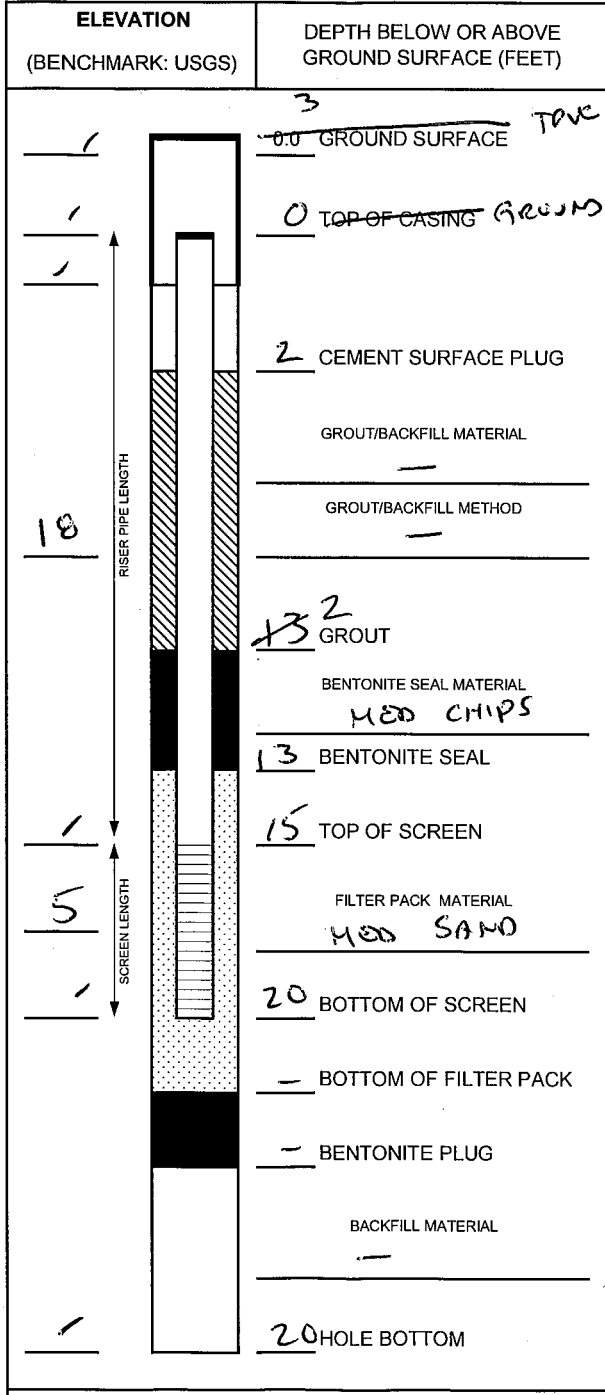
PERMANENT, LEGIBLE WELL LABEL ADDED? YES NO
 PROTECTIVE COVER AND LOCK INSTALLED? YES NO
 LOCK KEY NUMBER: 3120

NOTES:



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Detroit Axle Southern IA RCRA Assessment	WELL ID: MW-22-12
PROJ. NO: 495430.0001.0	DATE INSTALLED: 12.13.22
INSTALLED BY: Henry Schnaidt, Brian Ye	CHECKED BY: AW



CASING AND SCREEN DETAILS

TYPE OF RISER: 2-INCH PVC
PIPE SCHEDULE: 40
PIPE JOINTS: THREADED O-RINGS
SOLVENT USED? NO
SCREEN TYPE: 2-INCH PVC
SCR. SLOT SIZE: 0.01-INCH

BOREHOLE DIAMETER: 9 IN. FROM 0 TO 20 FT.
 _____ IN. FROM _____ TO _____ FT.
SURF. CASING DIAMETER: _____ IN. FROM _____ TO _____ FT.
 _____ IN. FROM _____ TO _____ FT.

WELL DEVELOPMENT

DEVELOPMENT METHOD: Surge + pumps
TIME DEVELOPING: 2.5 HOURS
WATER REMOVED: 15 GALLONS
WATER ADDED: 10 GALLONS

WATER CLARITY BEFORE / AFTER DEVELOPMENT

CLARITY BEFORE: Very turbid
COLOR BEFORE: Grey
CLARITY AFTER: clear
COLOR AFTER: clear
ODOR (IF PRESENT): None

WATER LEVEL SUMMARY

MEASUREMENT (FEET)		DATE	TIME
DTB BEFORE DEVELOPING:	— T/PVC	—	—
DTB AFTER DEVELOPING:	— T/PVC	—	—
SWE BEFORE DEVELOPING:	13.80 T/PVC	12/15/22	1427
SWE AFTER DEVELOPING:	13.82 T/PVC	12/15/22	1700
OTHER SWE:	T/PVC		
OTHER SWE:	T/PVC		

PROTECTIVE CASING DETAILS

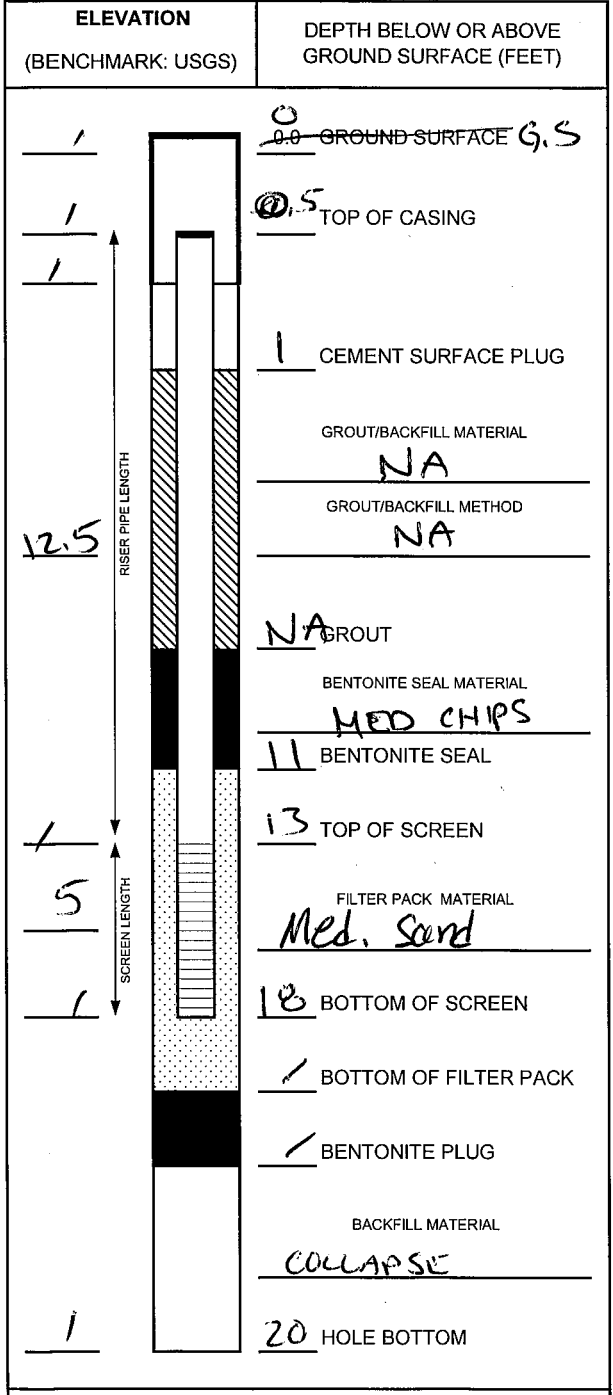
PERMANENT, LEGIBLE WELL LABEL ADDED? YES NO
 PROTECTIVE COVER AND LOCK INSTALLED? YES NO
 LOCK KEY NUMBER: 8120

NOTES:



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Detroit Axle Southern IA RCRA Assessment	WELL ID: MW-22-13
PROJ. NO: 495430.0001.0	DATE INSTALLED: 12.14.22
INSTALLED BY: Henry Schnaidt, Brian Ye	CHECKED BY: AW



CASING AND SCREEN DETAILS

TYPE OF RISER: 2-INCH PVC
 PIPE SCHEDULE: 40
 PIPE JOINTS: THREADED O-RINGS
 SOLVENT USED? NO
 SCREEN TYPE: 2-INCH PVC
 SCR. SLOT SIZE: 0.01-INCH

BOREHOLE DIAMETER: 9 IN. FROM 0 TO 20 FT.
 SURF. CASING DIAMETER: IN. FROM TO FT.

WELL DEVELOPMENT

DEVELOPMENT METHOD: Pump/urge
 TIME DEVELOPING: 1.5 HOURS
 WATER REMOVED: 15 GALLONS
 WATER ADDED: 0 GALLONS

WATER CLARITY BEFORE / AFTER DEVELOPMENT

CLARITY BEFORE: Very Turbid
 COLOR BEFORE: Brown
 CLARITY AFTER: Clear
 COLOR AFTER: Clear
 ODOR (IF PRESENT): None

WATER LEVEL SUMMARY

MEASUREMENT (FEET)	DATE	TIME
DTB BEFORE DEVELOPING: 18.05 T/PVC	12.14.22	1410
DTB AFTER DEVELOPING: 18.10 T/PVC		1540
SWE BEFORE DEVELOPING: 10.60 T/PVC		1410
SWE AFTER DEVELOPING: 10.70 T/PVC		1540
OTHER SWE:		
OTHER SWE:		

PROTECTIVE CASING DETAILS

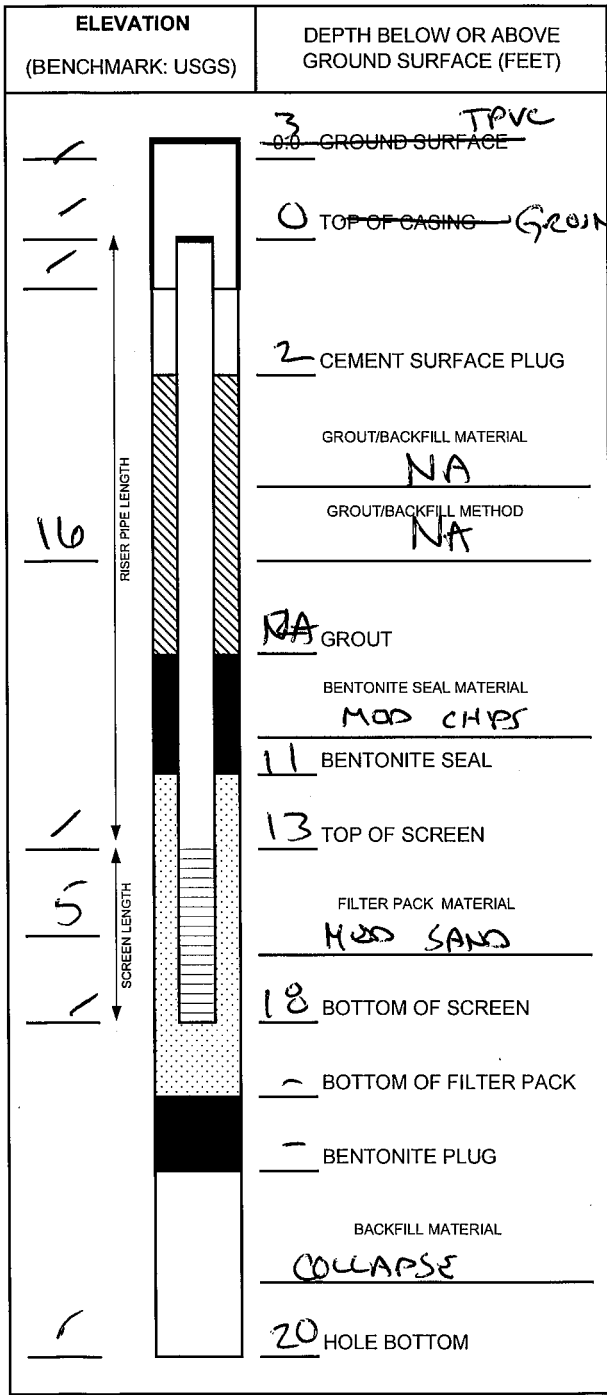
PERMANENT, LEGIBLE WELL LABEL ADDED? YES NO
 PROTECTIVE COVER AND LOCK INSTALLED? YES NO
 LOCK KEY NUMBER: 3120

NOTES:



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Detroit Axle Southern IA RCRA Assessment	WELL ID: MW-22-14
PROJ. NO: 495430.0001.0	DATE INSTALLED: 12.14.22
INSTALLED BY: Henry Schnaidt	CHECKED BY: AW



CASING AND SCREEN DETAILS	
TYPE OF RISER:	<u>2-INCH PVC</u>
PIPE SCHEDULE:	<u>40</u>
PIPE JOINTS:	<u>THREADED O-RINGS</u>
SOLVENT USED?	<u>NO</u>
SCREEN TYPE:	<u>2-INCH PVC</u>
SCR. SLOT SIZE:	<u>0.01-INCH</u>
BOREHOLE DIAMETER:	<u>9</u> IN. FROM <u>0</u> TO <u>20</u> FT.
SURF. CASING DIAMETER:	___ IN. FROM ___ TO ___ FT.

WELL DEVELOPMENT	
DEVELOPMENT METHOD:	<u>Pump and Surge (ADPE)</u>
TIME DEVELOPING:	<u>1.5</u> HOURS
WATER REMOVED:	<u>12</u> GALLONS
WATER ADDED:	<u>0</u> GALLONS
WATER CLARITY BEFORE / AFTER DEVELOPMENT	
CLARITY BEFORE:	<u>High turbidity</u>
COLOR BEFORE:	<u>Brown</u>
CLARITY AFTER:	<u>Clear</u>
COLOR AFTER:	<u>Clear</u>
ODOR (IF PRESENT):	<u>None</u>

WATER LEVEL SUMMARY			
MEASUREMENT (FEET)		DATE	TIME
DTB BEFORE DEVELOPING:	<u>21.20</u>	T/PVC	<u>12.14.22 1545</u>
DTB AFTER DEVELOPING:	<u>21.20</u>	T/PVC	<u>1630</u>
SWE BEFORE DEVELOPING:	<u>13.45</u>	T/PVC	<u>1545</u>
SWE AFTER DEVELOPING:	<u>12.50</u>	T/PVC	<u>1650</u>
OTHER SWE:		T/PVC	
OTHER SWE:		T/PVC	

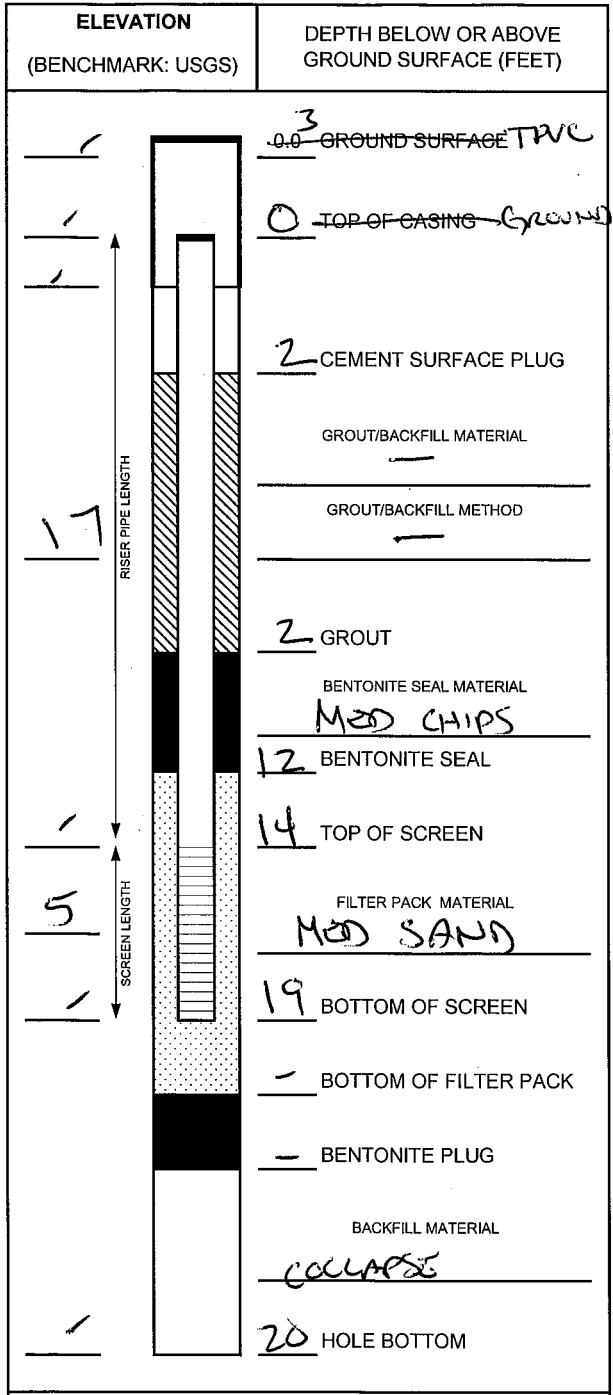
PROTECTIVE CASING DETAILS	
PERMANENT, LEGIBLE WELL LABEL ADDED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
PROTECTIVE COVER AND LOCK INSTALLED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
LOCK KEY NUMBER:	<u>320</u>

NOTES:



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Detroit Axle Southern IA RCRA Assessment	WELL ID: MW-22-15
PROJ. NO: 495430.0001.0	DATE INSTALLED: <u>12.14.22</u> INSTALLED BY: Henry Schnaidt (Brian Ye) CHECKED BY: <u>AW</u>



CASING AND SCREEN DETAILS

TYPE OF RISER: 2-INCH PVC

PIPE SCHEDULE: 40

PIPE JOINTS: THREADED O-RINGS

SOLVENT USED? NO

SCREEN TYPE: 2-INCH PVC

SCR. SLOT SIZE: 0.01-INCH

BOREHOLE DIAMETER: 9 IN. FROM 0 TO 20 FT.

IN. FROM TO FT.

SURF. CASING DIAMETER: IN. FROM TO FT.

IN. FROM TO FT.

WELL DEVELOPMENT

DEVELOPMENT METHOD: Pump / Surge

TIME DEVELOPING: 1.5 HOURS

WATER REMOVED: 15 GALLONS

WATER ADDED: 0 GALLONS

WATER CLARITY BEFORE / AFTER DEVELOPMENT

CLARITY BEFORE: Very turbid

COLOR BEFORE: Brown

CLARITY AFTER: Clear

COLOR AFTER: Clear

ODOR (IF PRESENT): None

WATER LEVEL SUMMARY

MEASUREMENT (FEET)		DATE	TIME
DTB BEFORE DEVELOPING:	<u>22.20</u> T/PVC	<u>12.15.22</u>	<u>0730</u>
DTB AFTER DEVELOPING:	<u>22.70</u> T/PVC	<u> </u>	<u>900</u>
SWE BEFORE DEVELOPING:	<u>14.12</u> T/PVC	<u> </u>	<u>0750</u>
SWE AFTER DEVELOPING:	<u>14.70</u> T/PVC	<u> </u>	<u>900</u>
OTHER SWE:	T/PVC		
OTHER SWE:	T/PVC		

PROTECTIVE CASING DETAILS

PERMANENT, LEGIBLE WELL LABEL ADDED? YES NO

PROTECTIVE COVER AND LOCK INSTALLED? YES NO

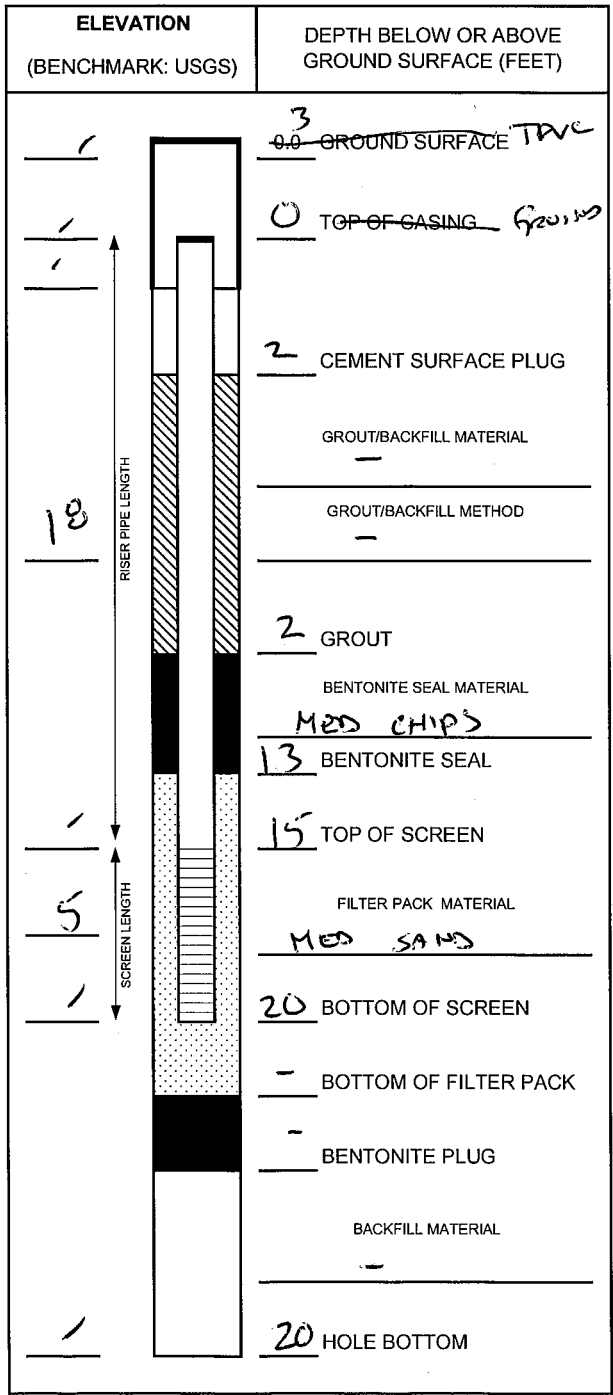
LOCK KEY NUMBER: 3120

NOTES:



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Detroit Axle Southern IA RCRA Assessment	WELL ID: MW-22-16
PROJ. NO: 495430.0001.0	DATE INSTALLED: 2.15.22
INSTALLED BY: Henry Schnaidt (Brian) Ye	CHECKED BY: AW



CASING AND SCREEN DETAILS

TYPE OF RISER: 2-INCH PVC
PIPE SCHEDULE: 40
PIPE JOINTS: THREADED O-RINGS
SOLVENT USED? NO
SCREEN TYPE: 2-INCH PVC
SCR. SLOT SIZE: 0.01-INCH

BOREHOLE DIAMETER: 9 IN. FROM 6 TO 20 FT.
SURF. CASING DIAMETER: _____ IN. FROM _____ TO _____ FT.

WELL DEVELOPMENT

DEVELOPMENT METHOD: Surge + purge
TIME DEVELOPING: 3 HOURS
WATER REMOVED: 15 GALLONS
WATER ADDED: 10 GALLONS

WATER CLARITY BEFORE / AFTER DEVELOPMENT

CLARITY BEFORE: Very turbid
COLOR BEFORE: gray
CLARITY AFTER: clear
COLOR AFTER: clear
ODOR (IF PRESENT): None

WATER LEVEL SUMMARY

MEASUREMENT (FEET)	DATE	TIME
DTB BEFORE DEVELOPING: <u>---</u>	T/PVC	<u>---</u>
DTB AFTER DEVELOPING: <u>---</u>	T/PVC	<u>---</u>
SWE BEFORE DEVELOPING: <u>14.66</u>	T/PVC	<u>2/16/22 850</u>
SWE AFTER DEVELOPING: <u>14.64</u>	T/PVC	<u>2/16/22 1105</u>
OTHER SWE:	T/PVC	
OTHER SWE:	T/PVC	

PROTECTIVE CASING DETAILS

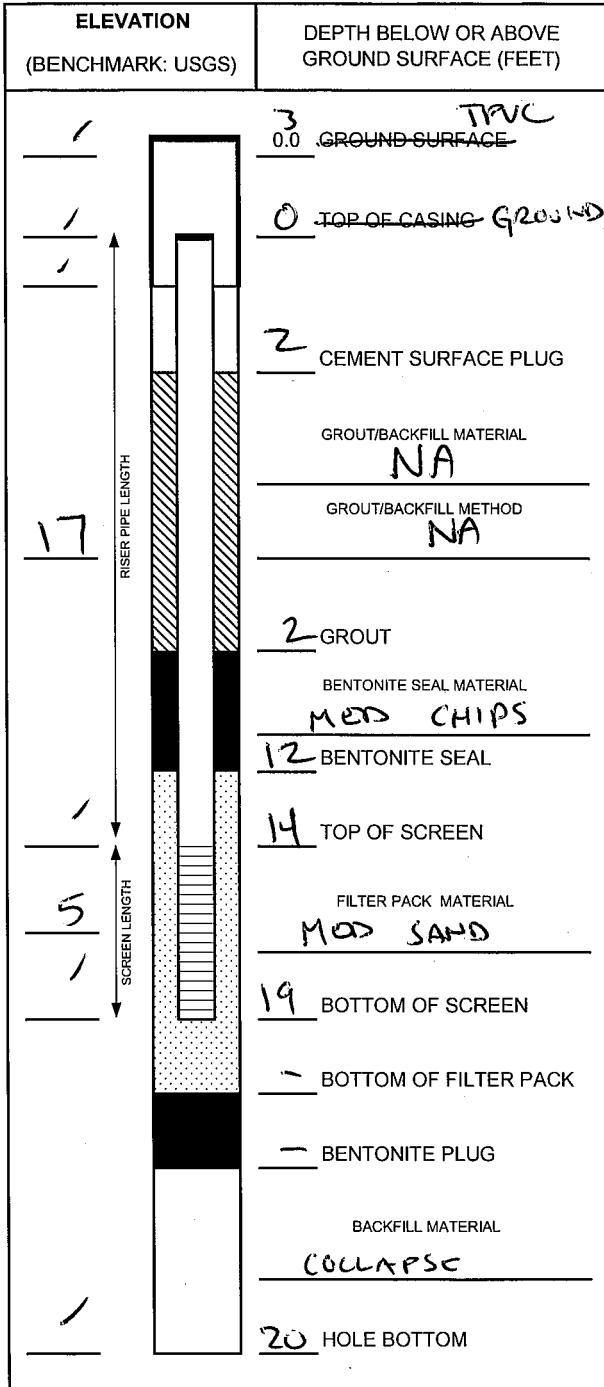
PERMANENT, LEGIBLE WELL LABEL ADDED? YES NO
 PROTECTIVE COVER AND LOCK INSTALLED? YES NO
 LOCK KEY NUMBER: 3120

NOTES:



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Detroit Axle Southern IA RCRA Assessment	WELL ID: MW-22-17
PROJ. NO: 495430.0001.0	DATE INSTALLED: <u>2.15.22</u> INSTALLED BY: Henry Schnaidt, Brian Ye
	CHECKED BY: <u>AW</u>



CASING AND SCREEN DETAILS	
TYPE OF RISER:	<u>2-INCH PVC</u>
PIPE SCHEDULE:	<u>40</u>
PIPE JOINTS:	<u>THREADED O-RINGS</u>
SOLVENT USED?	<u>NO</u>
SCREEN TYPE:	<u>2-INCH PVC</u>
SCR. SLOT SIZE:	<u>0.01-INCH</u>
BOREHOLE DIAMETER:	<u>9</u> IN. FROM <u>0</u> TO <u>20</u> FT.
	IN. FROM <u> </u> TO <u> </u> FT.
SURF. CASING DIAMETER:	IN. FROM <u> </u> TO <u> </u> FT.
	IN. FROM <u> </u> TO <u> </u> FT.

WELL DEVELOPMENT	
DEVELOPMENT METHOD:	<u>AMP/Surge HDPE</u>
TIME DEVELOPING:	<u>1.5</u> HOURS
WATER REMOVED:	<u>13</u> GALLONS
WATER ADDED:	<u>10</u> GALLONS
WATER CLARITY BEFORE / AFTER DEVELOPMENT	
CLARITY BEFORE:	<u>Very Turbid</u>
COLOR BEFORE:	<u>Brown</u>
CLARITY AFTER:	<u>Clear</u>
COLOR AFTER:	<u>Clear</u>
ODOR (IF PRESENT):	<u>None</u>

WATER LEVEL SUMMARY			
MEASUREMENT (FEET)		DATE	TIME
DTB BEFORE DEVELOPING:	<u>22.30</u>	T/PVC	<u>12.16.22 1005</u>
DTB AFTER DEVELOPING:	<u>22.30</u>	T/PVC	<u>1140</u>
SWE BEFORE DEVELOPING:	<u>13.02</u>	T/PVC	<u>1005</u>
SWE AFTER DEVELOPING:	<u>13.05</u>	T/PVC	<u>1140</u>
OTHER SWE:		T/PVC	
OTHER SWE:		T/PVC	

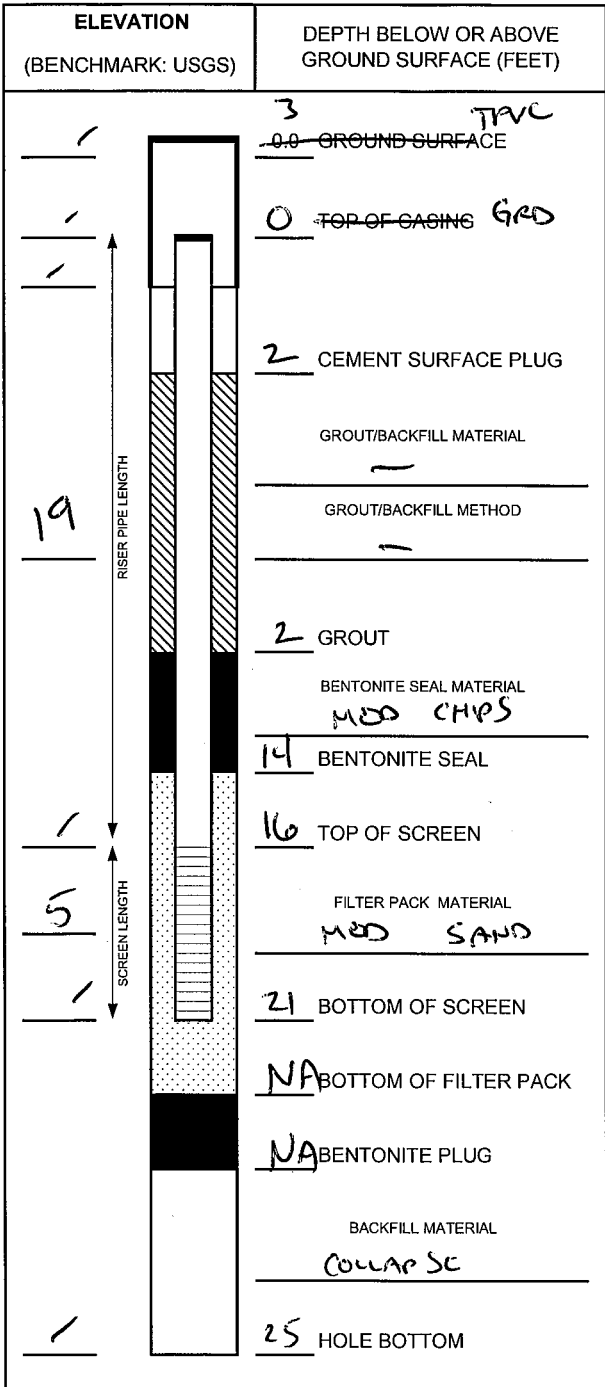
NOTES:

PROTECTIVE CASING DETAILS	
PERMANENT, LEGIBLE WELL LABEL ADDED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
PROTECTIVE COVER AND LOCK INSTALLED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
LOCK KEY NUMBER:	<u>3120</u>



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Detroit Axle Southern IA RCRA Assessment	WELL ID: MW-22-18
PROJ. NO: 495430.0001.0	DATE INSTALLED: 12.15.22
INSTALLED BY: Henry Schnaidt, Brian Ye	CHECKED BY: AW



CASING AND SCREEN DETAILS

TYPE OF RISER: 2-INCH PVC
 PIPE SCHEDULE: 40
 PIPE JOINTS: THREADED O-RINGS
 SOLVENT USED? NO
 SCREEN TYPE: 2-INCH PVC
 SCR. SLOT SIZE: 0.01-INCH

BOREHOLE DIAMETER: 9 IN. FROM TO 21 FT.
 SURF. CASING DIAMETER: IN. FROM TO FT.

WELL DEVELOPMENT

DEVELOPMENT METHOD: Surge Pump
 TIME DEVELOPING: 1 HOURS
 WATER REMOVED: 60 GALLONS
 WATER ADDED: 60 GALLONS

WATER CLARITY BEFORE / AFTER DEVELOPMENT

CLARITY BEFORE: very Turbid
 CLARITY AFTER: Clear
 COLOR BEFORE: Gray
 COLOR AFTER: Clear
 ODOR (IF PRESENT): None

WATER LEVEL SUMMARY

MEASUREMENT (FEET)	DATE	TIME
DTB BEFORE DEVELOPING: NM	T/PVC	-
DTB AFTER DEVELOPING: NM	T/PVC	-
SWE BEFORE DEVELOPING: 14.59	T/PVC	1132 12/14/22
SWE AFTER DEVELOPING: 15.61	T/PVC	1236 12/14/22
OTHER SWE:	T/PVC	
OTHER SWE:	T/PVC	

PROTECTIVE CASING DETAILS

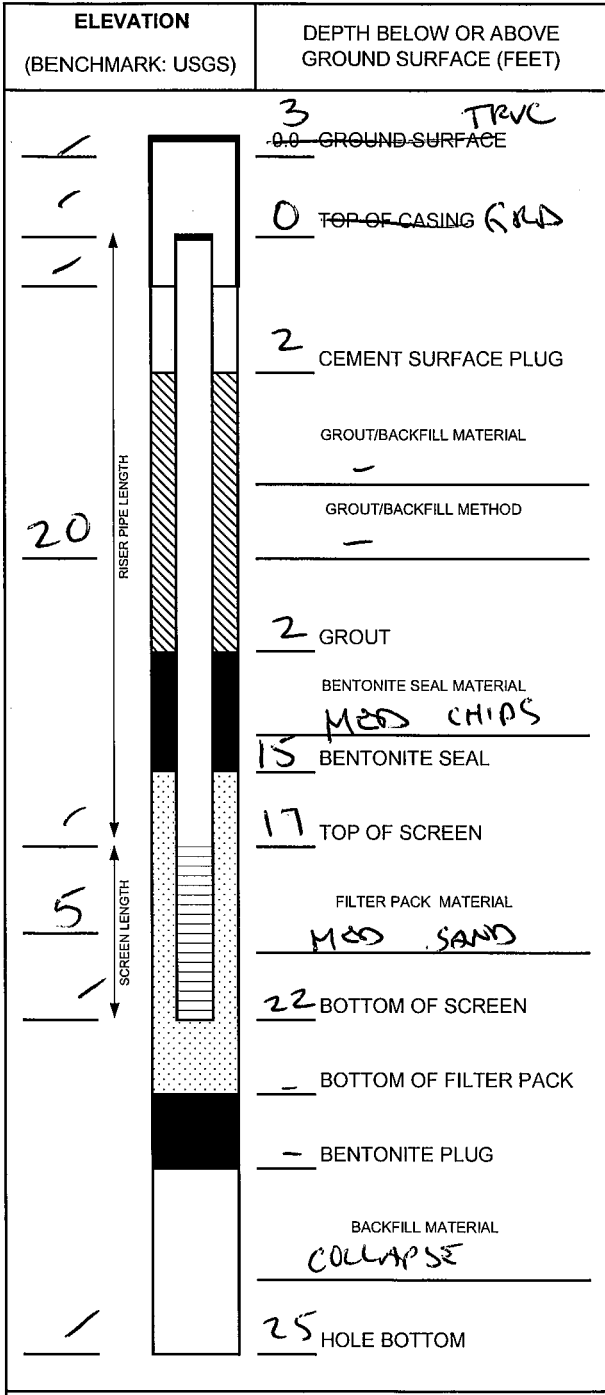
PERMANENT, LEGIBLE WELL LABEL ADDED? YES NO
 PROTECTIVE COVER AND LOCK INSTALLED? YES NO
 LOCK KEY NUMBER: 3120

NOTES:



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Detroit Axle Southern IA RCRA Assessment	WELL ID: MW-22-19
PROJ. NO: 495430.0001.0	DATE INSTALLED: 12.15.22 INSTALLED BY: Henry Schnaidt, Brian Ye
	CHECKED BY: AJ



CASING AND SCREEN DETAILS

TYPE OF RISER: 2-INCH PVC
PIPE SCHEDULE: 40
PIPE JOINTS: THREADED O-RINGS
SOLVENT USED? NO
SCREEN TYPE: 2-INCH PVC
SCR. SLOT SIZE: 0.01-INCH

BOREHOLE DIAMETER: 9 IN. FROM 0 TO 25 FT.
 _____ IN. FROM _____ TO _____ FT.
SURF. CASING DIAMETER: _____ IN. FROM _____ TO _____ FT.
 _____ IN. FROM _____ TO _____ FT.

WELL DEVELOPMENT

DEVELOPMENT METHOD: PUMP/SURGE
TIME DEVELOPING: 1 HOURS
WATER REMOVED: 10 GALLONS
WATER ADDED: 1 GALLONS

WATER CLARITY BEFORE / AFTER DEVELOPMENT

CLARITY BEFORE: TURBID
COLOR BEFORE: BROWN
CLARITY AFTER: CLR
COLOR AFTER: CLR
ODOR (IF PRESENT): NONE

WATER LEVEL SUMMARY

	MEASUREMENT (FEET)		DATE	TIME
	DTB	SWE		
DTB BEFORE DEVELOPING:	<u>NA</u>	T/PVC	<u>NA</u>	<u>NA</u>
DTB AFTER DEVELOPING:	<u>1</u>	T/PVC	<u>1</u>	<u>1</u>
SWE BEFORE DEVELOPING:	<u>1</u>	T/PVC	<u>1</u>	<u>1</u>
SWE AFTER DEVELOPING:	<u>1</u>	T/PVC	<u>1</u>	<u>1</u>
OTHER SWE:		T/PVC		
OTHER SWE:		T/PVC		

PROTECTIVE CASING DETAILS

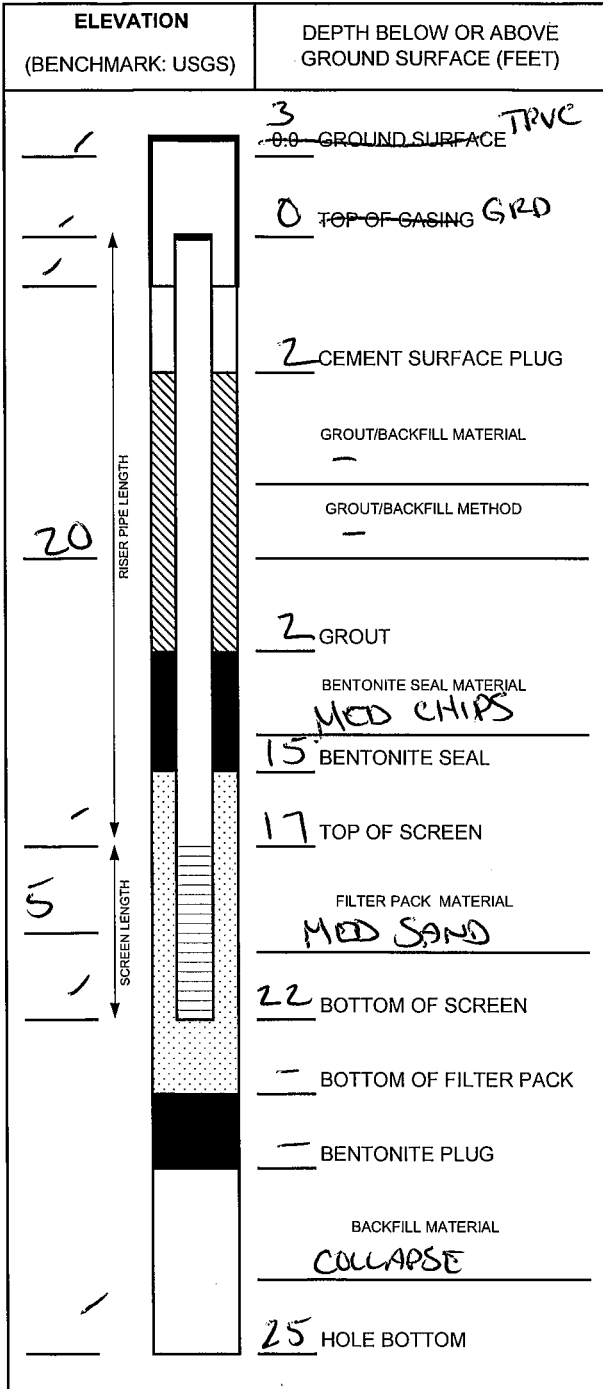
PERMANENT, LEGIBLE WELL LABEL ADDED? YES NO
 PROTECTIVE COVER AND LOCK INSTALLED? YES NO
 LOCK KEY NUMBER: 3120

NOTES:



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Detroit Axle Southern IA RCRA Assessment	WELL ID: MW-22-20
PROJ. NO: 495430.0001.0	DATE INSTALLED: 12.15.22
INSTALLED BY: Henry Schnaidt, Brian	CHECKED BY: AW



CASING AND SCREEN DETAILS

TYPE OF RISER: 2-INCH PVC
PIPE SCHEDULE: 40
PIPE JOINTS: THREADED O-RINGS
SOLVENT USED? NO
SCREEN TYPE: 2-INCH PVC
SCR. SLOT SIZE: 0.01-INCH

BOREHOLE DIAMETER: 9 IN. FROM 0 TO 22 FT.
3 IN. FROM 22 TO 25 FT.
SURF. CASING DIAMETER: IN. FROM TO FT.
 IN. FROM TO FT.

WELL DEVELOPMENT

DEVELOPMENT METHOD: Surge + purge
TIME DEVELOPING: 1 HOURS
WATER REMOVED: 10 GALLONS
WATER ADDED: 10 GALLONS

WATER CLARITY BEFORE / AFTER DEVELOPMENT

CLARITY BEFORE: Very turbid
COLOR BEFORE: gray
CLARITY AFTER: clear
COLOR AFTER: clear
ODOR (IF PRESENT): None

WATER LEVEL SUMMARY

	MEASUREMENT (FEET)	DATE	TIME
DTB BEFORE DEVELOPING:	-	T/PVC	-
DTB AFTER DEVELOPING:	-	T/PVC	<i>12/16/22 12:37</i>
SWE BEFORE DEVELOPING:	<u>14.82</u>	T/PVC	<i>12/16/22 12:45</i>
SWE AFTER DEVELOPING:	<u>14.83</u>	T/PVC	<i>12/16/22 1:33</i>
OTHER SWE:		T/PVC	
OTHER SWE:		T/PVC	

PROTECTIVE CASING DETAILS

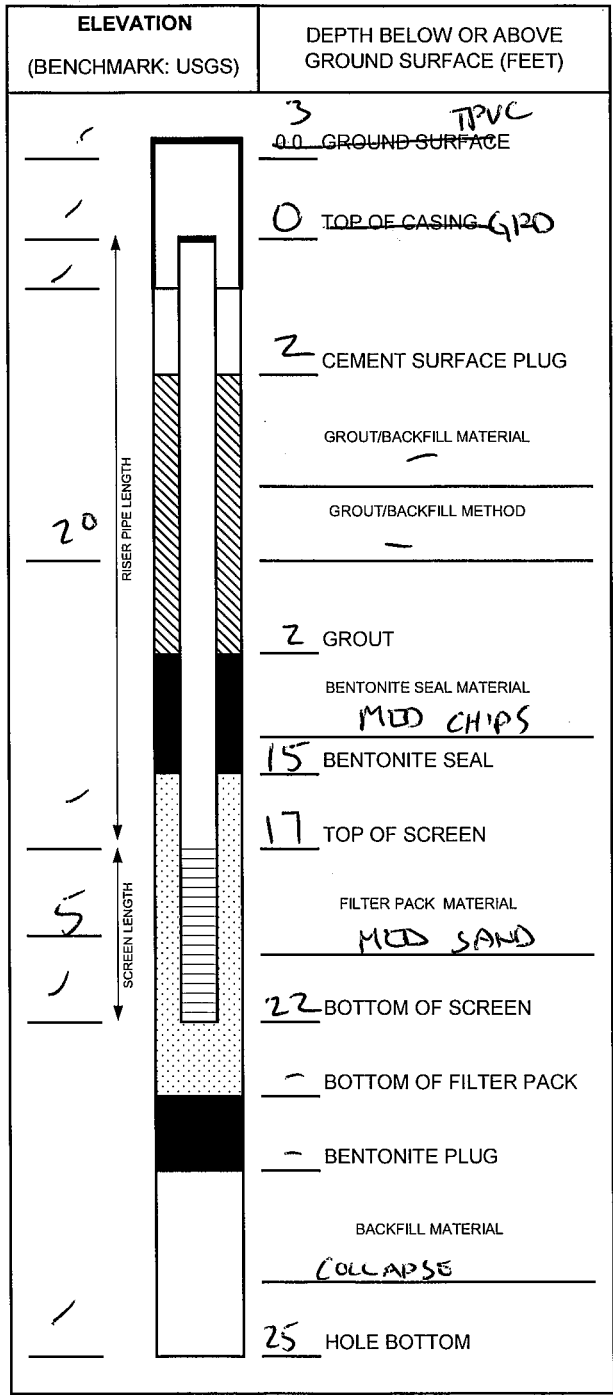
PERMANENT, LEGIBLE WELL LABEL ADDED? YES NO
PROTECTIVE COVER AND LOCK INSTALLED? YES NO
LOCK KEY NUMBER: 3120

NOTES:



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Detroit Axle Southern IA RCRA Assessment	WELL ID: MW-22-21
PROJ. NO: 495430.0001.0	DATE INSTALLED: 12.16.22
INSTALLED BY: Henry Schnaidt, Brian Ye	CHECKED BY: ACW



CASING AND SCREEN DETAILS

TYPE OF RISER: 2-INCH PVC

PIPE SCHEDULE: 40

PIPE JOINTS: THREADED O-RINGS

SOLVENT USED? NO

SCREEN TYPE: 2-INCH PVC

SCR. SLOT SIZE: 0.01-INCH

BOREHOLE DIAMETER: 9 IN. FROM 0 TO 22 FT.

3 IN. FROM 22 TO 25 FT.

SURF. CASING DIAMETER: _____ IN. FROM _____ TO _____ FT.

_____ IN. FROM _____ TO _____ FT.

WELL DEVELOPMENT

DEVELOPMENT METHOD: Pump and Surge HDPE

TIME DEVELOPING: 1.5 HOURS

WATER REMOVED: 12 GALLONS

WATER ADDED: 10 GALLONS

WATER CLARITY BEFORE / AFTER DEVELOPMENT

CLARITY BEFORE: Very turbid

COLOR BEFORE: Brown

CLARITY AFTER: Clear

COLOR AFTER: None

ODOR (IF PRESENT): None

WATER LEVEL SUMMARY

MEASUREMENT (FEET)		DATE	TIME
DTB BEFORE DEVELOPING:	<u>25.20</u> T/PVC	<u>12.16.22</u>	<u>1140</u>
DTB AFTER DEVELOPING:	<u>25.25</u> T/PVC		<u>1310</u>
SWE BEFORE DEVELOPING:	<u>14.14</u> T/PVC		<u>1140</u>
SWE AFTER DEVELOPING:	<u>14.20</u> T/PVC		<u>1310</u>
OTHER SWE:	T/PVC		
OTHER SWE:	T/PVC		

PROTECTIVE CASING DETAILS

PERMANENT, LEGIBLE WELL LABEL ADDED? YES NO

PROTECTIVE COVER AND LOCK INSTALLED? YES NO

LOCK KEY NUMBER: 3120

NOTES:



PROJECT NAME: Detroit Axle Southern IA RCRA Assessment

PROJECT NUMBER: 495430.0001.0000

PROJECT MANAGER: Kelly Cratsenburg

SITE LOCATION: 2000 Eight Mile Road
Ferndale, MI 48220

DATES OF FIELDWORK: 12.19.22 12.22.22
~~12/12/2022~~ TO ~~12/16/2022~~

PURPOSE OF FIELDWORK: Deep
~~Soil sampling, test pitting, and well installs~~

WORK PERFORMED BY: Henry Schnaidt, Brian Yelen

BY 3.21.23
SIGNED DATE

AW 3.21.23
CHECKED BY DATE



GENERAL NOTES

PROJECT NAME: Detroit Axle Southern IA RCRA	DATE: 12.19.22	TIME ARRIVED: 0800
PROJECT NUMBER: 495430.0001.0000	AUTHOR: HS, BY	TIME LEFT: 1600

WEATHER		
TEMPERATURE: 25-30 °F	WIND: 0-5 MPH	VISIBILITY: OVERCAST
WORK / SAMPLING PERFORMED		
STOCK ONSITE 0845	INSTALLING MW 22-22D	
BEGIN SB 1030		
BEGIN OUTER CASE 1115		
FINISH O.C. TO 25' 1500		
STOCK OFFSITE 1530		

PROBLEMS ENCOUNTERED	CORRECTIVE ACTION TAKEN
LOCATING WATER SOURCE	STOCK BRINGING HYDRANT ADAPTER ON 12/20.

COMMUNICATION		
NAME	REPRESENTING	SUBJECT / COMMENTS
K. GRASENBURG	TRC	UPDATES

INVESTIGATION DERIVED WASTE SUMMARY		
WASTE MATRIX	QUANTITY	COMMENTS
SOIL	NM	ROLL OFF

BY 3.21.23 AW 3.21.23
 SIGNED DATE CHECKED BY DATE



GENERAL NOTES

PROJECT NAME: Detroit Axle Southern IA RCRA	DATE: 12.20.22	TIME ARRIVED: 0745
PROJECT NUMBER: 495430.0001.0000	AUTHOR: HS, BY	TIME LEFT: 1700

WEATHER		
TEMPERATURE: 25-30 °F	WIND: 0-5 MPH	VISIBILITY: OVERCAST
WORK / SAMPLING PERFORMED		
0815	STOCK ON SITE	
0900	BEGIN DRILLING	
1630	END DRILLING	
1645	STOCK OFF SITE	

PROBLEMS ENCOUNTERED	CORRECTIVE ACTION TAKEN

COMMUNICATION		
NAME	REPRESENTING	SUBJECT / COMMENTS
K. CRATSON BURG	TRC	UPDATES

INVESTIGATION DERIVED WASTE SUMMARY		
WASTE MATRIX	QUANTITY	COMMENTS
SOIL	NM	ROLLOFF

B/ 3.21.23
SIGNED _____ DATE _____

AW 3.21.23
CHECKED BY _____ DATE _____



GENERAL NOTES

PROJECT NAME: Detroit Axle Southern IA RCRA	DATE: 12.21.22	TIME ARRIVED: 0745
PROJECT NUMBER: 495430.0001.0000	AUTHOR: HS, (BY)	TIME LEFT: 1800

WEATHER		
TEMPERATURE: 25-30 °F	WIND: 0-5 MPH	VISIBILITY: CLEAR

WORK / SAMPLING PERFORMED
815 STOCK ONSITE
0900 BEGIN DRILLING @ 130'
1230 END DRILLING TO 150'
1245 BEGIN WELL INSTALL TO 150' (10' SCREEN)
1415 PVC INSTALLED + GROUTED
1505 PRO COVER INSTALLED + CONC. SITE CLEANUP
1600 BEGIN DEVELOP - 2 DRUMS , END 1715
1745 STOCK OFF SITE

PROBLEMS ENCOUNTERED	CORRECTIVE ACTION TAKEN

COMMUNICATION		
NAME	REPRESENTING	SUBJECT / COMMENTS
K. CHATSENBURG	TRC	UPDATES

INVESTIGATION DERIVED WASTE SUMMARY		
WASTE MATRIX	QUANTITY	COMMENTS
SOIL	NM	REGULOC

BY 3.21.23
SIGNED DATE

AW 3.21.23
CHECKED BY DATE



GENERAL NOTES

PROJECT NAME: Detroit Axle Southern IA RCRA	DATE: 12.22.22	TIME ARRIVED: 0800
PROJECT NUMBER: 495430.0001.0000	AUTHOR: HS, BY	TIME LEFT: 1200

WEATHER		
TEMPERATURE: 30-35 °F	WIND: 0-5 MPH	VISIBILITY: CLEAR
WORK / SAMPLING PERFORMED		
0830 BMS ON SITE For Post Survey		
0840 BEGIN SURVEY		
1115 FINISH SURVEY, BMS OFFSITE		
1200 OFFSITE - ALL		

PROBLEMS ENCOUNTERED	CORRECTIVE ACTION TAKEN
—	—

COMMUNICATION		
NAME	REPRESENTING	SUBJECT / COMMENTS
K. CAASENBURG	TRC	UPDATES

INVESTIGATION DERIVED WASTE SUMMARY		
WASTE MATRIX	QUANTITY	COMMENTS
—	—	—

_____ BY 3.21.23 _____ AW {3.21.23} _____
 SIGNED DATE CHECKED BY DATE



LOG OF SOIL BORING

PROJECT NAME: Detroit Axle Southern IA RCRA Assessment	SOIL BORING ID: MW-22-22D
PROJECT NUMBER: 495430.0001.0000	LOCATION: BTW AOC 8 + AOC 9
LOGGED BY: Henry Schnaidt, Brian Yelen	SHEET 1 OF 5
PROJECT LOCATION: 2000 Eight Mile Road	N: - E: -
DRILLED BY: TERRAPROBE, INC.	DRILLER NAME: RYAN
	DATE STARTED: 12.19.22
	DATE COMPLETED: 12.21.22

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
						TOP SOIL	
					2.5	SAND. NO F-M SAND, BR 10 XLS13, NO OO, DRY-MST, LOOSE	
1	SN	20	-	-	5.0		SCREEN 140'-150'
					7.5		
					10.0	Δ MST @ 10.0' BR 10 XLS13 BR 10 XLS12	
					12.5		
2	SN	75	-	-	15.0		
					17.5		
					20.0		

DRILLING METHOD	Sonic DIRECT PUSH
DRILL RIG	TERRA SONIC 150 CC
BORING DIAMETER	6"

WATER LEVEL OBSERVATIONS			
FIRST OCCURRENCE: Not encountered			
DATE	TIME	DEPTH TO WATER	DEPTH TO BOTTOM

SIGNED BY DATE 3.21.23

CHECKED AW DATE 3.21.23



LOG OF SOIL BORING

SHEET 2 OF 5

PROJECT NAME: Detroit Axle Southern IA RCRA Assessment SOIL BORING ID: MW-22-22D

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
3	SN	100	-	-	22.5	CLAY, MO CL, TR-F F SAND, TR SAV, DR GR 10YR 4/1, NO COOR, DRY-MST, HARD LOW PLS	OUTER CASING, SET TO 25'
4	SN	100	-	-	25.0	CLAY, MO CL, TR-F F SAND, SILT, M-H PLS DR GR 10 YR 4/1, NO CO, MST, V. STIFF	SHELBY TUBE ST-01 1000 30'-32.5'
5	SN	100	-	-	32.5	SAA	
6	SN	100	-	-	42.5	SAA	

SIGNED BY 3,21,23 DATE

CHECKED AW 3-21-23 DATE



LOG OF SOIL BORING

SHEET 23 OF 5

PROJECT NAME: Detroit Axle Southern IA RCRA Assessment SOIL BORING ID: MW-22-22D

NO.	TYPE	%	BLOWS	DEPTH FT	DEPTH M	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
6	SN	100	-	-	-	SAA	
7	SN	100	-	50	25.0	SAA	
8	SN	100	-	60	30.0	SAA	
9	SN	100	-	70	35.0	TR SILT, F SAND @ 70.0' H PAS, STIFF	
10	SN	100	-	80	40.0	SAA	
				90	45.0		

SIGNED BY 3.21.23 DATE

CHECKED AW 3.21.23 DATE



LOG OF SOIL BORING

SHEET 24 OF 5

PROJECT NAME: Detroit Axle Southern IA RCRA Assessment SOIL BORING ID: MW 22-220

NO.	TYPE	%	BLOWS	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
11	SN	100	-	90	D NO F SAND, SILT	
				92.5		
12	SN	50	-	100	SAA	
				102.5		
				110	SAND, MO F-M SAND, DK GR 15% CL, NO CO, WET, M DENSE	
13	SN	80	-	110	SA CLAY ABOVE	
				112.5		
				120	CLAY, MO LL, T2-F F SAND + SILT, DK GR NO COBN DRY-HST, NARD	
14	SN	100	-	120	LOW PARTS	
				122.5		
				127.5	CLAY SHALE TRANSITION	
15	SN	100	-	130		
				132.5		
				140	SHALE, GRANITE COBBLE PRESENT	

SIGNED BY 3.21.23 DATE

CHECKED AW 3.21.23 DATE



LOG OF SOIL BORING

SHEET 5 OF 5

PROJECT NAME: Detroit Axle Southern IA RCRA Assessment SOIL BORING ID: MW-22-220

NO.	TYPE	%	BLOWS	PID	DEPTH	VISUAL CLASSIFICATION AND OBSERVATIONS	COMMENT
					140	No COBBLES @ 140'	
					150	COB 150'	
					160		
					175		
					190		
					200		
					215		
					230		
					245		
					260		
					275		
					290		
					305		
					320		
					335		
					350		
					365		
					380		
					395		
					410		
					425		
					440		
					450		

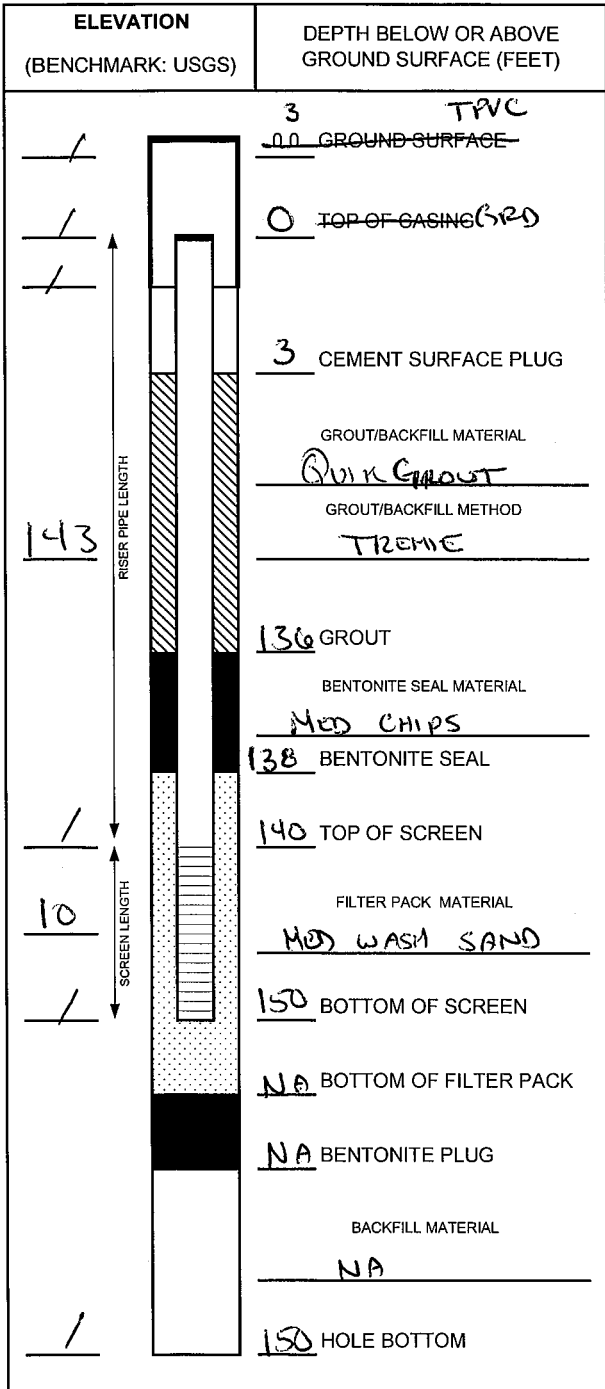
SIGNED BY 3.21.23
DATE

CHECKED AW 3.21.23
DATE



WELL CONSTRUCTION DIAGRAM

PROJ. NAME: Detroit Axle Southern IA RCRA Assessment	WELL ID: MW-22-220
PROJ. NO: 495430.0001.0	DATE INSTALLED: 12.21.22
INSTALLED BY: Henry Schnaidt, Brian Ye	CHECKED BY: AW 3.21.23



CASING AND SCREEN DETAILS	
TYPE OF RISER:	2-INCH PVC
PIPE SCHEDULE:	40
PIPE JOINTS:	THREADED O-RINGS
SOLVENT USED?	NO
SCREEN TYPE:	2-INCH PVC
SCR. SLOT SIZE:	0.01-INCH
BOREHOLE DIAMETER:	12.8 IN. FROM 0 TO 25 FT. 8 IN. FROM 25 TO 150 FT.
SURF. CASING DIAMETER:	___ IN. FROM ___ TO ___ FT. ___ IN. FROM ___ TO ___ FT.

WELL DEVELOPMENT	
DEVELOPMENT METHOD:	<u>Pump/Surge</u>
TIME DEVELOPING:	<u>1.25</u> HOURS
WATER REMOVED:	<u>~10050</u> GALLONS
WATER ADDED:	<u>0</u> GALLONS
WATER CLARITY BEFORE / AFTER DEVELOPMENT	
CLARITY BEFORE:	<u>V. TURBID</u>
COLOR BEFORE:	<u>BROWN</u>
CLARITY AFTER:	<u>M. TURB</u>
COLOR AFTER:	<u>TAN/CLR</u>
ODOR (IF PRESENT):	<u>NA</u>

WATER LEVEL SUMMARY				
MEASUREMENT (FEET)			DATE	TIME
DTB BEFORE DEVELOPING:	-	T/PVC	-	-
DTB AFTER DEVELOPING:	-	T/PVC	-	-
SWE BEFORE DEVELOPING:	-	T/PVC	-	-
SWE AFTER DEVELOPING:	30.03	T/PVC	12.22.22	1117
OTHER SWE:		T/PVC		
OTHER SWE:		T/PVC		

PROTECTIVE CASING DETAILS	
PERMANENT, LEGIBLE WELL LABEL ADDED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
PROTECTIVE COVER AND LOCK INSTALLED?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
LOCK KEY NUMBER:	<u>3120</u>

NOTES:



PROJECT NAME:	DA Southerin Investigation
PROJECT NUMBER:	495430.0001
PROJECT MANAGER:	Kelly Cratsenburg
SITE LOCATION:	1600 West 8 Mile Road Ferndale, MI 48167
DATES OF FIELDWORK:	12/12/022 TO 12/23/2022 + 12/27/22
PURPOSE OF FIELDWORK:	Groundwater Sampling
WORK PERFORMED BY:	A Whaley, J Jasso

A Whaley 12.28.22
SIGNED DATE

David D... 12-29-22
CHECKED BY DATE



GENERAL NOTES

PROJECT NAME: DA Southerin Investigation	DATE: 12.12.22	TIME ARRIVED: 0830
PROJECT NUMBER: 495430.0001	AUTHOR: AW, JJ	TIME LEFT: 1630

WEATHER

TEMPERATURE: 85 °F WIND: 0-5 MPH VISIBILITY: Overcast

WORK / SAMPLING PERFORMED

Water levels Eastern Boundary, Southern boundary and adjacent

Meet w/ Brian / Henry and job site @ 0900

Calibrate Meter 1230 to begin sampling EB

Sampled MW-104, MW-22-01, MW-22-02, MW-22-03
Dur'olw

PROBLEMS ENCOUNTERED	CORRECTIVE ACTION TAKEN
Old wells ^{covers} filled with water and soil, removed before collecting water level	

COMMUNICATION

NAME	REPRESENTING	SUBJECT / COMMENTS
Kelly Cratsenburg	TRC	Check in/out, Updates

INVESTIGATION DERIVED WASTE SUMMARY

WASTE MATRIX	QUANTITY	COMMENTS
GW	NM	Purge to ground

AW 12.28.22
 SIGNED DATE

David King 12-29-22
 CHECKED BY DATE



GENERAL NOTES

PROJECT NAME: DA Southerin Investigation	DATE: 12.13.22	TIME ARRIVED: 0730
PROJECT NUMBER: 495430.0001	AUTHOR: AW, JJ	TIME LEFT: 1700

WEATHER		
TEMPERATURE: 30 °F	WIND: 5-8 MPH	VISIBILITY: overcast
WORK / SAMPLING PERFORMED		
Begin developing MW-22-09, MW-22-08, MW-22-07, MW-22-10		
Sample wells MW 22-09, MW-22-08		

PROBLEMS ENCOUNTERED	CORRECTIVE ACTION TAKEN

COMMUNICATION		
NAME	REPRESENTING	SUBJECT / COMMENTS
Kelly Cratsenburg	TRC	Check in/out, Updates

INVESTIGATION DERIVED WASTE SUMMARY		
WASTE MATRIX	QUANTITY	COMMENTS
GW	NM	Purge to ground Drilled

AW
 SIGNED

12-28-22
 DATE

David King
 CHECKED BY

12-29-22
 DATE



GENERAL NOTES

PROJECT NAME: DA Southerin Investigation	DATE: <u>12.14.22</u>	TIME ARRIVED: <u>0720</u>
PROJECT NUMBER: 495430.0001	AUTHOR: <u>AW/JJ</u>	TIME LEFT: <u>1630</u>

WEATHER		
TEMPERATURE: <u>30</u> °F	WIND: <u>5-8</u> MPH	VISIBILITY: <u>Overcast</u>
WORK / SAMPLING PERFORMED		
<u>Set Javier up on Eastern Boundary wells</u>		
<u>Calibrate</u>		
<u>Sample wells: MW-22-07, MW-22-10</u>		
<u>Sample Develop wells: MW-22-11, MW-22-13, MW-22-14</u>		

PROBLEMS ENCOUNTERED	CORRECTIVE ACTION TAKEN

COMMUNICATION		
NAME	REPRESENTING	SUBJECT / COMMENTS
Kelly Cratsenburg	TRC	Check in/out, Updates

INVESTIGATION DERIVED WASTE SUMMARY		
WASTE MATRIX	QUANTITY	COMMENTS
GW	NM	Purge to ground <u>Drummed</u>

AW 12.28.22
 SIGNED DATE

Devin Perry 12.29.22
 CHECKED BY DATE



GENERAL NOTES

PROJECT NAME: DA Southerin Investigation	DATE: <u>12.15.22</u>	TIME ARRIVED: <u>0725</u>
PROJECT NUMBER: 495430.0001	AUTHOR: <u>AW</u> , JJ	TIME LEFT: <u>01630</u>

WEATHER		
TEMPERATURE: <u>36</u> °F	WIND: <u>5-8</u> MPH	VISIBILITY: <u>Overcast AM rain</u>
WORK / SAMPLING PERFORMED		
<u>Develop MW-22-15</u>		
<u>Calibrate YSI</u>		
<u>Sample wells: MW-22-15, MW-22-14, MW-22-13,</u>		
<u>MW-22-11</u>		

PROBLEMS ENCOUNTERED	CORRECTIVE ACTION TAKEN

COMMUNICATION		
NAME	REPRESENTING	SUBJECT / COMMENTS
<u>Kelly Cratsenburg</u>	<u>TRC</u>	<u>Check in/out, Updates</u>

INVESTIGATION DERIVED WASTE SUMMARY		
WASTE MATRIX	QUANTITY	COMMENTS
<u>GW</u>	<u>NM</u>	<u>Purge to ground Drummed</u>

AW 12.28.22
 SIGNED DATE

David King 12-29-22
 CHECKED BY DATE



GENERAL NOTES

PROJECT NAME: DA Southerin Investigation	DATE: 12.16.22	TIME ARRIVED: 0745
PROJECT NUMBER: 495430.0001	AUTHOR: AW, JJ	TIME LEFT: 1415

WEATHER		
TEMPERATURE: 31 °F	WIND: 5-10 MPH	VISIBILITY: overcast
WORK / SAMPLING PERFORMED		
Sample MW-22-12		
Develop wells MW-22-16, MW-22-17, MW-22-20		

PROBLEMS ENCOUNTERED	CORRECTIVE ACTION TAKEN

COMMUNICATION		
NAME	REPRESENTING	SUBJECT / COMMENTS
Kelly Cratsenburg	TRC	Check in/out, Updates

INVESTIGATION DERIVED WASTE SUMMARY		
WASTE MATRIX	QUANTITY	COMMENTS
GW	NM	Purge to ground

AW 12.28.22
 SIGNED DATE

David King 12-29-22
 CHECKED BY DATE



GENERAL NOTES


PROJECT NAME: DA Southerin Investigation	DATE: 12/16/18	TIME ARRIVED: 0700
PROJECT NUMBER: 495430.0001	AUTHOR: AW, JJ	TIME LEFT: 1400

WEATHER		
TEMPERATURE: 34 °F	WIND: 15 MPH	VISIBILITY: Overcast
WORK / SAMPLING PERFORMED		
Wells Sampled = mw 101, 103, 129, 138		
Dry wells = mw 102		

PROBLEMS ENCOUNTERED	CORRECTIVE ACTION TAKEN

COMMUNICATION		
NAME	REPRESENTING	SUBJECT / COMMENTS
Kelly Cratsenburg	TRC	Check in/out, Updates

INVESTIGATION DERIVED WASTE SUMMARY		
WASTE MATRIX	QUANTITY	COMMENTS
GW	NM	Purge to ground


12/19/18
AW
12.22.18
 SIGNED _____ DATE _____ CHECKED BY _____ DATE _____



GENERAL NOTES

PROJECT NAME: DA Southerin Investigation	DATE: 12/20/21	TIME ARRIVED: 0550
PROJECT NUMBER: 495430.0001	AUTHOR: AW, JJ	TIME LEFT: 0821

WEATHER		
TEMPERATURE: 28 °F	WIND: 10 MPH	VISIBILITY: overcast
WORK / SAMPLING PERFORMED		
Wells Sampled = MW- 22-21, 22-20, 22-19, 22-18, 22-16, 22-17,		

PROBLEMS ENCOUNTERED	CORRECTIVE ACTION TAKEN

COMMUNICATION		
NAME	REPRESENTING	SUBJECT / COMMENTS
Kelly Cratsenburg	TRC	Check in/out, Updates

INVESTIGATION DERIVED WASTE SUMMARY		
WASTE MATRIX	QUANTITY	COMMENTS
GW	NM	Purge to ground

 12/20/21 DATE
 12.28.22 CHECKED BY DATE



GENERAL NOTES

PROJECT NAME: DA Southern Investigation	DATE: 12/27/22	TIME ARRIVED: 0600
PROJECT NUMBER: 4954309.0001.0000	AUTHOR: JJASSO	TIME LEFT: 0835

WEATHER		
TEMPERATURE: <u>21</u> °F	WIND: <u>15</u> MPH	VISIBILITY: <u>overcast</u>
WORK / SAMPLING PERFORMED		
WATER LEVELS		
WELLS SAMPLED <u>MW-22-22D</u>		

PROBLEMS ENCOUNTERED	CORRECTIVE ACTION TAKEN

COMMUNICATION		
NAME	REPRESENTING	SUBJECT / COMMENTS

INVESTIGATION DERIVED WASTE SUMMARY		
WASTE MATRIX	QUANTITY	COMMENTS
DRUM		

SIGNED [Signature] DATE 12/28/22

CHECKED BY A. Whaley DATE 12-30-22



EQUIPMENT SUMMARY

PROJECT NAME: DA Southerin Investigation	SAMPLER NAME: A Whaley, J Jasso
PROJECT NO.: 495430.0001	

WATER LEVEL MEASUREMENTS COLLECTED WITH:

HERON DIPPER-T	PROJECT DEDICATED
NAME AND MODEL OF INSTRUMENT	SERIAL NUMBER (IF APPLICABLE)

PRODUCT LEVEL MEASUREMENTS COLLECTED WITH:

NA	
NAME AND MODEL OF INSTRUMENT	SERIAL NUMBER (IF APPLICABLE)

DEPTH TO BOTTOM OF WELL MEASUREMENTS COLLECTED WITH:

HERON DIPPER-T	PROJECT DEDICATED
NAME AND MODEL OF INSTRUMENT	SERIAL NUMBER (IF APPLICABLE)

PURGING METHOD

PERISTALTIC PUMP	TRC A2
NAME AND MODEL OF PUMP OR TYPE OF BAILER	SERIAL NUMBER (IF APPLICABLE)

SAMPLING METHOD

PERISTALTIC PUMP	TRC A2
NAME AND MODEL OF PUMP OR TYPE OF BAILER	SERIAL NUMBER (IF APPLICABLE)

GEOTECH DISPOSABLE FILTER	0.45 MICRON
NAME AND MODEL OF FILTRATION DEVICE	FILTER TYPE AND SIZE

DEDICATED POLY TUBING	<input checked="" type="checkbox"/> LOW-FLOW SAMPLING EVENT
TUBING TYPE	

PURGE WATER DISPOSAL METHOD

GROUND
 DRUM
 POTW
 POLYTANK
 OTHER _____

DECONTAMINATION AND FIELD BLANK WATER SOURCE

STORE BOUGHT	LABORATORY PROVIDED
POTABLE WATER SOURCE	DI WATER SOURCE

AW 12.28.22
 SIGNED DATE

David King 12-29-22
 CHECKED BY DATE



WATER LEVEL DATA

PROJECT NAME: DA Southern Boundary	DATE: 12.12.22
PROJECT NUMBER: 495430.0001	AUTHOR: AW

WELL LOCATION	TIME	REFERENCE	DEPTH TO WATER (FEET)	DEPTH TO BOTTOM (FEET)	DEPTH TO PRODUCT (FEET)	WATER ELEVATION	
MW-101	920	TOC	8.72	NM	NA	NM	
MW-102	930	↓	Dry	8.20			
MW-103	936		11.02	NM			
MW-116	900		9.72				
MW-117	902		10.48				
MW-118	918		Dry	13.50			
MW-122			Not Found				
Mw-123							
Mw-124							
MW-125							
MW-126							
MW-127	1147	TOC	Dry	10.96			
MW-128	1150	↓	11.70	NM			
MW-129	1152		11.52	NM			
MW-130			Not Found				
MW-131							
MW-132							
MW-133							

ALL WATER LEVELS MUST INCLUDE REFERENCE POINT AND TAPE CORRECTION FACTOR (E.G., 1.1 + 0.00 T/PVC).

Clinton Whaley 12/29/22
 SIGNED DATE

Don't King 12-29-22
 CHECKED DATE



WATER QUALITY METER CALIBRATION LOG

PROJECT NAME: DA Southerin Investigation	MODEL: YSI ProDSS	SAMPLER: AW JJ
PROJECT NO.: 495430.0001	SERIAL #: TRC A2	DATE: 12.13.22

PH CALIBRATION CHECK

LOT #	PH	EXP. DATE	POST-CAL. READING / STANDARD	CAL. RANGE	TIME
204764	7	8/24	7.02 / 7.02	WITHIN RANGE	800
200908	10	7/24	4.00 / 4.00	WITHIN RANGE	
/	/	/	/	WITHIN RANGE	
/	/	/	/	WITHIN RANGE	
/	/	/	/	WITHIN RANGE	

SPECIFIC CONDUCTIVITY CALIBRATION CHECK

LOT #	CAL. READING	EXP. DATE	POST-CAL. READING / STANDARD	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
205977		9/23	1050 / 1050	9.7	WITHIN RANGE	805
/	/	/	/	/	WITHIN RANGE	
/	/	/	/	/	WITHIN RANGE	
/	/	/	/	/	WITHIN RANGE	

ORP CALIBRATION CHECK

LOT #	CAL. READING	EXP. DATE	POST-CAL. READING / STANDARD	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
21100501		11/26	229.7 / 229.7	10.2	WITHIN RANGE	808
/	/	/	/	/	WITHIN RANGE	
/	/	/	/	/	WITHIN RANGE	
/	/	/	/	/	WITHIN RANGE	

D.O. CALIBRATION CHECK

LOT #	CAL. READING	EXP. DATE	POST-CAL. READING / SATURATED AIR	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
	DI		11.09 / 11.09	9.8	WITHIN RANGE	811
/	/	/	/	/	WITHIN RANGE	
/	/	/	/	/	WITHIN RANGE	
/	/	/	/	/	WITHIN RANGE	

TURBIDITY CALIBRATION CHECK

LOT #	CALIBRATION READING (NTU)	EXP. DATE	POST-CAL. READING / STANDARD	CAL. RANGE	TIME
19040115		8/23	0.00 / 0.00	WITHIN RANGE	816
/	/	/	/	WITHIN RANGE	
/	/	/	/	WITHIN RANGE	
/	/	/	/	WITHIN RANGE	

COMMENTS

<input type="checkbox"/> AUTOCAL SOLUTION	<input checked="" type="checkbox"/> STANDARD SOLUTION (S)
(LOT #):	LIST LOT NUMBERS AND EXPIRATION DATES UNDER CALIBRATION CHECK
(EXP. DATE):	
CALIBRATED PARAMETERS	CALIBRATION RANGES ⁽¹⁾
<input type="checkbox"/> pH	pH: +/- 0.2 S.U.
<input type="checkbox"/> COND	COND: +/- 1% OF CAL. STANDARD
<input type="checkbox"/> ORP	ORP: +/- 25 mV
<input type="checkbox"/> D.O.	D.O.: VARIES
<input type="checkbox"/> TURB	TURB: +/- 5% OF CAL. STANDARD
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	

⁽¹⁾ CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE WATER QUALITY METER

NOTES

Separate Turbidity Meter
LaMotte 2020ve

PROBLEMS ENCOUNTERED

CORRECTIVE ACTIONS

SIGNED: AW DATE: 12.28.22

CHECKED BY: *David D...* DATE: 12-29-22



WATER QUALITY METER CALIBRATION LOG

PROJECT NAME: DA Southerin Investigation	MODEL: YSI ProDSS	SAMPLER: <u>AVV JJ</u>
PROJECT NO.: 495430.0001	SERIAL #: TRC A2	DATE: <u>12-14-22</u>

PH CALIBRATION CHECK

(LOT #): <u>pH 7 264 264</u> (EXP. DATE): <u>8/24</u>	(LOT #): <u>pH 4/10 266 908</u> (EXP. DATE): <u>7/24</u>	CAL. RANGE	TIME
POST-CAL. READING / STANDARD	POST-CAL. READING / STANDARD		
<u>7.08 / 7.03</u>	<u>4.00 / 4.00</u>	<input checked="" type="checkbox"/> WITHIN RANGE	<u>7:50</u>
/	/	<input type="checkbox"/> WITHIN RANGE	
/	/	<input type="checkbox"/> WITHIN RANGE	
/	/	<input type="checkbox"/> WITHIN RANGE	

SPECIFIC CONDUCTIVITY CALIBRATION CHECK

CAL. READING (LOT #): <u>260 999</u> (EXP. DATE): <u>9/23</u>	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
POST-CAL. READING / STANDARD			
<u>970 / 970</u>	<u>7.8</u>	<input checked="" type="checkbox"/> WITHIN RANGE	<u>7:56</u>
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

ORP CALIBRATION CHECK

CAL. READING (LOT #): <u>21 100807</u> (EXP. DATE): <u>11/26</u>	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
POST-CAL. READING / STANDARD			
<u>231.0 / 231.0</u>	<u>8.1</u>	<input checked="" type="checkbox"/> WITHIN RANGE	<u>8:00</u>
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

D.O. CALIBRATION CHECK

CAL. READING (LOT #): <u>D1</u>	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
POST-CAL. READING / SATURATED AIR			
<u>11.20 / 11.20</u>	<u>9.2</u>	<input checked="" type="checkbox"/> WITHIN RANGE	<u>8:07</u>
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

TURBIDITY CALIBRATION CHECK

CALIBRATION READING (NTU)		CAL. RANGE	TIME
(LOT #): <u>19010115</u> (EXP. DATE): <u>3/23</u>	(LOT #): (EXP. DATE):		
POST-CAL. READING / STANDARD	POST-CAL. READING / STANDARD		
<u>0.00 / 0.00</u>	/	<input checked="" type="checkbox"/> WITHIN RANGE	<u>8:10</u>
/	/	<input type="checkbox"/> WITHIN RANGE	
/	/	<input type="checkbox"/> WITHIN RANGE	
/	/	<input type="checkbox"/> WITHIN RANGE	

COMMENTS

<input type="checkbox"/> AUTOCAL SOLUTION	<input checked="" type="checkbox"/> STANDARD SOLUTION (S)
(LOT #):	LIST LOT NUMBERS AND EXPIRATION DATES UNDER CALIBRATION CHECK
(EXP. DATE):	
CALIBRATED PARAMETERS	CALIBRATION RANGES ⁽¹⁾
<input type="checkbox"/> pH	pH: +/- 0.2 S.U.
<input type="checkbox"/> COND	COND: +/- 1% OF CAL. STANDARD
<input type="checkbox"/> ORP	ORP: +/- 25 mV
<input type="checkbox"/> D.O.	D.O.: VARIES
<input type="checkbox"/> TURB	TURB: +/- 5% OF CAL. STANDARD
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
⁽¹⁾ CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE WATER QUALITY METER	

NOTES

Separate Turbidity Meter
La Motte 2020

PROBLEMS ENCOUNTERED	CORRECTIVE ACTIONS

AW 12.28.22
SIGNED DATE

David Dising 12-29-22
CHECKED BY DATE



WATER QUALITY METER CALIBRATION LOG

PROJECT NAME: DA Southerin Investigation	MODEL: YSI ProDSS	SAMPLER: AWJJ
PROJECT NO.: 495430.0001	SERIAL #: TRC A2	DATE: 12.15.22

PH CALIBRATION CHECK

pH 7 (LOT #): ZGH764 (EXP. DATE): 8/24		pH 4/10 (LOT #): ZG6908 (EXP. DATE): 7/24		CAL. RANGE	TIME
POST-CAL. READING / STANDARD		POST-CAL. READING / STANDARD			
7.06 / 7.06		4.00 / 4.00		<input checked="" type="checkbox"/> WITHIN RANGE	750
/		/		<input type="checkbox"/> WITHIN RANGE	
/		/		<input type="checkbox"/> WITHIN RANGE	
/		/		<input type="checkbox"/> WITHIN RANGE	

SPECIFIC CONDUCTIVITY CALIBRATION CHECK

CAL. READING (LOT #): ZGD999 (EXP. DATE): 4/23		TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
POST-CAL. READING / STANDARD				
1083 / 1083		7.6	<input checked="" type="checkbox"/> WITHIN RANGE	800
/			<input type="checkbox"/> WITHIN RANGE	
/			<input type="checkbox"/> WITHIN RANGE	
/			<input type="checkbox"/> WITHIN RANGE	

ORP CALIBRATION CHECK

CAL. READING (LOT #): ZIK100307 (EXP. DATE): 6/26		TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
POST-CAL. READING / STANDARD				
230.6 / 230.6		7.2	<input checked="" type="checkbox"/> WITHIN RANGE	805
/			<input type="checkbox"/> WITHIN RANGE	
/			<input type="checkbox"/> WITHIN RANGE	
/			<input type="checkbox"/> WITHIN RANGE	

D.O. CALIBRATION CHECK

CAL. READING D1 POST-CAL. READING / SATURATED AIR		TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
10.7 / 10.7				
/			<input type="checkbox"/> WITHIN RANGE	
/			<input type="checkbox"/> WITHIN RANGE	
/			<input type="checkbox"/> WITHIN RANGE	

TURBIDITY CALIBRATION CHECK

CALIBRATION READING (NTU) (LOT #): 1904/115 (EXP. DATE): 8/23		CAL. RANGE	TIME
POST-CAL. READING / STANDARD			
0.00 / 0.00		<input checked="" type="checkbox"/> WITHIN RANGE	813
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

COMMENTS

<input type="checkbox"/> AUTOCAL SOLUTION	<input checked="" type="checkbox"/> STANDARD SOLUTION (S)
(LOT #):	LIST LOT NUMBERS AND EXPIRATION DATES UNDER CALIBRATION CHECK
(EXP. DATE):	
CALIBRATED PARAMETERS	CALIBRATION RANGES ⁽¹⁾
<input type="checkbox"/> pH	pH: +/- 0.2 S.U.
<input type="checkbox"/> COND	COND: +/- 1% OF CAL. STANDARD
<input type="checkbox"/> ORP	ORP: +/- 25 mV
<input type="checkbox"/> D.O.	D.O.: VARIES
<input type="checkbox"/> TURB	TURB: +/- 5% OF CAL. STANDARD
<input type="checkbox"/>	
<input type="checkbox"/>	
⁽¹⁾ CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE WATER QUALITY METER.	

NOTES

Separate Turbidity Motte 2020

PROBLEMS ENCOUNTERED	CORRECTIVE ACTIONS

SIGNED: AW DATE: 12.28.22

CHECKED BY: David King DATE: 12-29-22



WATER QUALITY METER CALIBRATION LOG

PROJECT NAME: DA Southerin Investigation	MODEL: YSI ProDSS	SAMPLER: <u>AW JJ</u>
PROJECT NO.: 495430.0001	SERIAL #: TRC A2	DATE: <u>12.16.22</u>

PH CALIBRATION CHECK

(LOT #): <u>pH 7 261764</u> (EXP. DATE): <u>8/24</u>	(LOT #): <u>pH 10 266908</u> (EXP. DATE): <u>7/24</u>	CAL. RANGE	TIME
POST-CAL. READING / STANDARD	POST-CAL. READING / STANDARD	<input checked="" type="checkbox"/> WITHIN RANGE	752
<u>7.09 / 7.09</u>	<u>4.00 / 4.00</u>	<input type="checkbox"/> WITHIN RANGE	
/	/	<input type="checkbox"/> WITHIN RANGE	
/	/	<input type="checkbox"/> WITHIN RANGE	

SPECIFIC CONDUCTIVITY CALIBRATION CHECK

CAL. READING (LOT #): <u>260994</u> (EXP. DATE): <u>4/23</u>	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
POST-CAL. READING / STANDARD		<input checked="" type="checkbox"/> WITHIN RANGE	758
<u>992 / 992</u>	<u>6.7</u>	<input type="checkbox"/> WITHIN RANGE	
/	/	<input type="checkbox"/> WITHIN RANGE	
/	/	<input type="checkbox"/> WITHIN RANGE	

ORP CALIBRATION CHECK

CAL. READING (LOT #): <u>21100007</u> (EXP. DATE): <u>6/16</u>	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
POST-CAL. READING / STANDARD		<input checked="" type="checkbox"/> WITHIN RANGE	801
<u>231.8 / 231.6</u>	<u>5.8</u>	<input type="checkbox"/> WITHIN RANGE	
/	/	<input type="checkbox"/> WITHIN RANGE	
/	/	<input type="checkbox"/> WITHIN RANGE	

D.O. CALIBRATION CHECK

CAL. READING <u>DI</u>	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
POST-CAL. READING / SATURATED AIR		<input checked="" type="checkbox"/> WITHIN RANGE	804
<u>11.1 / 11.1</u>	<u>7.2</u>	<input type="checkbox"/> WITHIN RANGE	
/	/	<input type="checkbox"/> WITHIN RANGE	
/	/	<input type="checkbox"/> WITHIN RANGE	

TURBIDITY CALIBRATION CHECK

CALIBRATION READING (NTU)		CAL. RANGE	TIME
(LOT #): <u>1964015</u> (EXP. DATE): <u>8/23</u>	(LOT #): (EXP. DATE):	<input checked="" type="checkbox"/> WITHIN RANGE	810
POST-CAL. READING / STANDARD	POST-CAL. READING / STANDARD		
<u>0.00 / 0.00</u>	/		
/	/		

COMMENTS

<input type="checkbox"/> AUTOCAL SOLUTION	<input checked="" type="checkbox"/> STANDARD SOLUTION (S)
(LOT #):	LIST LOT NUMBERS AND EXPIRATION DATES UNDER CALIBRATION CHECK
(EXP. DATE):	
CALIBRATED PARAMETERS	CALIBRATION RANGES ⁽¹⁾
<input type="checkbox"/> pH	pH: +/- 0.2 S.U.
<input type="checkbox"/> COND	COND: +/- 1% OF CAL. STANDARD
<input type="checkbox"/> ORP	ORP: +/- 25 mV
<input type="checkbox"/> D.O.	D.O.: VARIES
<input type="checkbox"/> TURB	TURB: +/- 5% OF CAL. STANDARD
<input type="checkbox"/>	
<input type="checkbox"/>	

(1) CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE WATER QUALITY METER

NOTES

Separate turbidity Meter
LaMotte 2020

PROBLEMS ENCOUNTERED	CORRECTIVE ACTIONS

AW 12.28.22
SIGNED DATE

David Dising 12-29-22
CHECKED BY DATE



WATER QUALITY METER CALIBRATION LOG

PROJECT NAME: DA Southerin Investigation	MODEL: YSI ProDSS	SAMPLER: AW, JJ
PROJECT NO.: 495430.0001	SERIAL #: TRC A2	DATE: 12/16/12

PH CALIBRATION CHECK

pH 7 (LOT #): 264764 (EXP. DATE): 8/24	pH 4 / 10 (LOT #): 264668 (EXP. DATE): 8/24	CAL. RANGE	TIME
POST-CAL. READING / STANDARD	POST-CAL. READING / STANDARD		
700 / 700	400 / 400	<input checked="" type="checkbox"/> WITHIN RANGE	0530
/	/	<input type="checkbox"/> WITHIN RANGE	
/	/	<input type="checkbox"/> WITHIN RANGE	
/	/	<input type="checkbox"/> WITHIN RANGE	

SPECIFIC CONDUCTIVITY CALIBRATION CHECK

CAL. READING (LOT #): 2641493 (EXP. DATE): 8/23	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
POST-CAL. READING / STANDARD			
1278 / 1278	20.	<input checked="" type="checkbox"/> WITHIN RANGE	0520
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

ORP CALIBRATION CHECK

CAL. READING (LOT #): 27610074 (EXP. DATE): 7/27	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
POST-CAL. READING / STANDARD			
223 / 223	20.0	<input checked="" type="checkbox"/> WITHIN RANGE	0530
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

D.O. CALIBRATION CHECK

CAL. READING	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
POST-CAL. READING / SATURATED AIR			
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

TURBIDITY CALIBRATION CHECK

CALIBRATION READING (NTU)		CAL. RANGE	TIME
(LOT #): A2172 (EXP. DATE): 6/24	(LOT #): (EXP. DATE):		
POST-CAL. READING / STANDARD	POST-CAL. READING / STANDARD		
0 / 0	/	<input checked="" type="checkbox"/> WITHIN RANGE	0520
100 / 100	/	<input checked="" type="checkbox"/> WITHIN RANGE	0520
/	/	<input type="checkbox"/> WITHIN RANGE	
/	/	<input type="checkbox"/> WITHIN RANGE	

COMMENTS

<input type="checkbox"/> AUTOCAL SOLUTION	<input checked="" type="checkbox"/> STANDARD SOLUTION (S)
(LOT #):	LIST LOT NUMBERS AND EXPIRATION DATES UNDER CALIBRATION CHECK
(EXP. DATE):	
CALIBRATED PARAMETERS	CALIBRATION RANGES ⁽¹⁾
<input type="checkbox"/> pH	pH: +/- 0.2 S.U.
<input type="checkbox"/> COND	COND: +/- 1% OF CAL. STANDARD
<input type="checkbox"/> ORP	ORP: +/- 25 mV
<input type="checkbox"/> D.O.	D.O.: VARIES
<input type="checkbox"/> TURB	TURB: +/- 5% OF CAL. STANDARD
<input type="checkbox"/> _____	⁽¹⁾ CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE WATER QUALITY METER
<input type="checkbox"/> _____	

NOTES

DO out of Range

PROBLEMS ENCOUNTERED	CORRECTIVE ACTIONS

SIGNED: 12/16/12 DATE

CHECKED BY: AW 12.22.12 DATE



WATER QUALITY METER CALIBRATION LOG

PROJECT NAME: DA Southerin Investigation	MODEL: YSI ProDSS	SAMPLER: AW, JJ
PROJECT NO.: 495430.0001	SERIAL #: TRC A2	DATE: 12/20/11

PH CALIBRATION CHECK

(LOT #): 26H704 pH 7 (EXP. DATE): 8/24	(LOT #): 26H666 pH 4 / 10 (EXP. DATE): 6/12	CAL. RANGE	TIME
POST-CAL. READING / STANDARD	POST-CAL. READING / STANDARD		
700 / 700	400 / 400	<input checked="" type="checkbox"/> WITHIN RANGE	6:00
/	/	<input type="checkbox"/> WITHIN RANGE	
/	/	<input type="checkbox"/> WITHIN RANGE	
/	/	<input type="checkbox"/> WITHIN RANGE	

SPECIFIC CONDUCTIVITY CALIBRATION CHECK

CAL. READING (LOT #): 26H1413 (EXP. DATE):	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
POST-CAL. READING / STANDARD			
1578 / 1576	20.5	<input checked="" type="checkbox"/> WITHIN RANGE	6:00
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

ORP CALIBRATION CHECK

CAL. READING (LOT #): 276100070 (EXP. DATE): 7/17	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
POST-CAL. READING / STANDARD			
223 / 223	20.0	<input checked="" type="checkbox"/> WITHIN RANGE	6:00
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

D.O. CALIBRATION CHECK

CAL. READING	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
POST-CAL. READING / SATURATED AIR			
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

TURBIDITY CALIBRATION CHECK

CALIBRATION READING (NTU)		CAL. RANGE	TIME
(LOT #): LAM (EXP. DATE):	(LOT #): (EXP. DATE):		
POST-CAL. READING / STANDARD	POST-CAL. READING / STANDARD		
10 / 10	/	<input checked="" type="checkbox"/> WITHIN RANGE	6:00
100 / 100	/	<input checked="" type="checkbox"/> WITHIN RANGE	6:00
/	/	<input type="checkbox"/> WITHIN RANGE	
/	/	<input type="checkbox"/> WITHIN RANGE	

COMMENTS

<input type="checkbox"/> AUTOCAL SOLUTION	<input checked="" type="checkbox"/> STANDARD SOLUTION (S)
(LOT #):	LIST LOT NUMBERS AND EXPIRATION DATES UNDER CALIBRATION CHECK
(EXP. DATE):	
CALIBRATED PARAMETERS	CALIBRATION RANGES ⁽¹⁾
<input type="checkbox"/> pH	pH: +/- 0.2 S.U.
<input type="checkbox"/> COND	COND: +/- 1% OF CAL. STANDARD
<input type="checkbox"/> ORP	ORP: +/- 25 mV
<input type="checkbox"/> D.O.	D.O.: VARIES
<input type="checkbox"/> TURB	TURB: +/- 5% OF CAL. STANDARD
<input type="checkbox"/>	
<input type="checkbox"/>	
	⁽¹⁾ CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE WATER QUALITY METER

NOTES

Do out of range

PROBLEMS ENCOUNTERED	CORRECTIVE ACTIONS

SIGNED 12/20/11 DATE

CHECKED BY 12.20.11 DATE



WATER QUALITY METER CALIBRATION LOG

PROJECT NAME: DA Southern Investigation	MODEL: YSI 600XL	SAMPLER: JJASSO
PROJECT NO.: 495430.0001.0000	SERIAL #: TRC A2	DATE: 12/27/22

PH CALIBRATION CHECK

(LOT #): 2611704 (EXP. DATE): 8/24	(LOT #): 2611606 (EXP. DATE): 8/24	CAL. RANGE	TIME
POST-CAL. READING / STANDARD	POST-CAL. READING / STANDARD		
700 / 700	400 / 400	<input checked="" type="checkbox"/> WITHIN RANGE	0644
/	/	<input type="checkbox"/> WITHIN RANGE	
/	/	<input type="checkbox"/> WITHIN RANGE	
/	/	<input type="checkbox"/> WITHIN RANGE	

SPECIFIC CONDUCTIVITY CALIBRATION CHECK

CAL. READING (LOT #): 2611497 (EXP. DATE):	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
POST-CAL. READING / STANDARD			
1278 / 1278	20.0	<input type="checkbox"/> WITHIN RANGE	0644
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

ORP CALIBRATION CHECK

CAL. READING (LOT #): 2706020 (EXP. DATE): 7/27	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
POST-CAL. READING / STANDARD			
203 / 207	20.0	<input checked="" type="checkbox"/> WITHIN RANGE	0644
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

D.O. CALIBRATION CHECK

CAL. READING	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
POST-CAL. READING / SATURATED AIR			
8.85 / 8.85	20.0	<input checked="" type="checkbox"/> WITHIN RANGE	0644
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

TURBIDITY CALIBRATION CHECK

CALIBRATION READING (NTU)		CAL. RANGE	TIME
(LOT #): 2706020 (EXP. DATE):	(LOT #): (EXP. DATE):		
POST-CAL. READING / STANDARD	POST-CAL. READING / STANDARD		
0 / 0	/	<input checked="" type="checkbox"/> WITHIN RANGE	0644
100 / 100	/	<input checked="" type="checkbox"/> WITHIN RANGE	0644
/	/	<input type="checkbox"/> WITHIN RANGE	
/	/	<input type="checkbox"/> WITHIN RANGE	

COMMENTS

<input type="checkbox"/> AUTOCAL SOLUTION	<input type="checkbox"/> STANDARD SOLUTION (S)
(LOT #):	LIST LOT NUMBERS AND EXPIRATION DATES UNDER CALIBRATION CHECK
(EXP. DATE):	
CALIBRATED PARAMETERS	CALIBRATION RANGES ⁽¹⁾
<input type="checkbox"/> pH	pH: +/- 0.2 S.U.
<input type="checkbox"/> COND	COND: +/- 1% OF CAL. STANDARD
<input type="checkbox"/> ORP	ORP: +/- 25 mV
<input type="checkbox"/> D.O.	D.O.: VARIES
<input type="checkbox"/> TURB	TURB: +/- 5% OF CAL. STANDARD
<input type="checkbox"/>	
<input type="checkbox"/>	
	⁽¹⁾ CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE WATER QUALITY METER

NOTES

PROBLEMS ENCOUNTERED

CORRECTIVE ACTIONS

SIGNED

DATE

[Signature] 12/28/22

CHECKED BY

DATE

[Signature] 12.30.22



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: <u>AW JJ</u>	DATE: <u>12.13.22</u>
	BY: <u>DD</u>	DATE: <u>12/29/22</u>

SAMPLE ID: <u>MW-22-09</u>	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: <u>0855</u>	DATE: <u>12.13.22</u>	SAMPLE	TIME: <u>0925</u>	DATE: <u>12.13.22</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: <u>7.33</u> SU	CONDUCTIVITY: <u>967</u> umhos/cm	ORP: <u>36.3</u> mV	DO: <u>1.3</u> mg/L	
DEPTH TO WATER: <u>10.30</u> T/ PVC	TURBIDITY: <u>32.5</u> NTU		<input type="checkbox"/> NONE <input checked="" type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
DEPTH TO BOTTOM: <u>NM</u> T/ PVC	TEMPERATURE: <u>13.5</u> °C	OTHER: <u>-</u>			
WELL VOLUME: <u>NM</u> <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	COLOR: <u>light brown</u>	ODOR: <u>None</u>			
VOLUME REMOVED: <u>6.0</u> <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		FILTRATE COLOR: <u>NA</u> FILTRATE ODOR: <u>NA</u>		
COLOR: <u>light brown</u> ODOR: <u>None</u>	TURBIDITY <input type="checkbox"/> NONE <input checked="" type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		QC SAMPLE: <input type="checkbox"/> MS/MSD <input checked="" type="checkbox"/> DUP- <u>01</u>		
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER	COMMENTS:				

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
855	200	6.50	851	129.2	2.0	71.6	12.3	10.30	INITIAL
900		7.09	939	83.1	1.4	68.3	13.3		1.0
905		7.25	962	60.0	1.3	41.4	13.7		2.0
910		7.27	960	56.2	1.3	37.2	13.5		3.0
915		7.32	962	43.2	1.3	32.8	13.6		4.0
920		7.33	964	38.2	1.3	39.7	13.6		5.0
925		7.33	967	36.3	1.3	32.5	13.5		6.0

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____								
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
<u>8</u>	1 L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	<u>2</u>	125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
<u>42</u>	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
<u>6</u>	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
<u>6</u>	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
<u>6</u>	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	

SHIPPING METHOD: <u>Courier</u>	DATE SHIPPED: <u>12.14.22</u>	AIRBILL NUMBER: <u>NA</u>
COC NUMBER: <u>NA</u>	SIGNATURE: <u>AW</u>	DATE SIGNED: <u>12.28.22</u>

TRC WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: <u>AW JJ</u> DATE: <u>12.13.22</u>	BY: <u>DD</u> DATE: <u>12/29/22</u>

SAMPLE ID: <u>MW-22-022</u>	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: <u>1240</u>	DATE: <u>12.13.22</u>	SAMPLE	TIME: <u>1310</u>	DATE: <u>12.13.22</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: <u>7.58</u> SU		CONDUCTIVITY: <u>75P</u> umhos/cm		
DEPTH TO WATER: <u>13.20</u> T/ PVC	ORP: <u>-139.8</u> mV		DO: <u>1.2</u> mg/L		
DEPTH TO BOTTOM: <u>NM</u> T/ PVC	TURBIDITY: <u>20.7</u> NTU		<input type="checkbox"/> NONE <input checked="" type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: <u>NM</u> <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	TEMPERATURE: <u>12.4</u> °C		OTHER: _____		
VOLUME REMOVED: <u>6.0</u> <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	COLOR: <u>1 Lead</u>		ODOR: <u>None</u>		
COLOR: <u>Clear</u>	ODOR: <u>None</u>		FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE COLOR: <u>NA</u>		FILTRATE ODOR: <u>NA</u>
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER			QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP- _____		
COMMENTS: _____					

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
<u>1240</u>	<u>200</u>	<u>7.75</u>	<u>708</u>	<u>-14.5</u>	<u>2.6</u>	<u>27.3</u>	<u>11.5</u>	<u>13.20</u>	INITIAL
<u>1245</u>		<u>7.59</u>	<u>718</u>	<u>-113.3</u>	<u>1.3</u>	<u>22.4</u>	<u>12.4</u>		<u>1.0</u>
<u>1250</u>		<u>7.54</u>	<u>727</u>	<u>-126.0</u>	<u>1.3</u>	<u>23.5</u>	<u>12.4</u>		<u>2.0</u>
<u>1255</u>		<u>7.59</u>	<u>731</u>	<u>-133.6</u>	<u>1.3</u>	<u>24.0</u>	<u>12.3</u>		<u>3.0</u>
<u>1300</u>		<u>7.58</u>	<u>743</u>	<u>-131.5</u>	<u>1.3</u>	<u>22.2</u>	<u>12.4</u>		<u>4.0</u>
<u>1305</u>		<u>7.58</u>	<u>750</u>	<u>-138.2</u>	<u>1.2</u>	<u>19.6</u>	<u>12.5</u>		<u>5.0</u>
<u>1310</u>		<u>7.58</u>	<u>758</u>	<u>-139.8</u>	<u>1.2</u>	<u>20.7</u>	<u>12.4</u>		<u>6.0</u>

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____								
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
<u>4</u>	1 L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	<u>1</u>	125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
<u>2</u>	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
<u>3</u>	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
<u>3</u>	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
<u>3</u>	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	

SHIPPING METHOD: <u>Courier</u>	DATE SHIPPED: <u>12.14.22</u>	AIRBILL NUMBER: <u>NA</u>
COC NUMBER: <u>NA</u>	SIGNATURE: <u>AW</u>	DATE SIGNED: <u>12-28-22</u>



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: <u>AW/JJ</u> DATE: <u>12.19.22</u>	BY: <u>DD</u> DATE: <u>12/29/22</u>

SAMPLE ID: <u>MW-22-07</u>	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: <u>845</u>	DATE: <u>12.14.22</u>	SAMPLE	TIME: <u>0915</u>	DATE: <u>12.14.22</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: <u>7.55</u> SU	CONDUCTIVITY: <u>728</u> umhos/cm	ORP: <u>60.9</u> mV	DO: <u>1.5</u> mg/L	
DEPTH TO WATER: <u>12.70</u> T/ PVC	TURBIDITY: <u>4.22</u> NTU	<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			
DEPTH TO BOTTOM: <u>NM</u> T/ PVC	TEMPERATURE: <u>12.5</u> °C	OTHER: _____			
WELL VOLUME: <u>NM</u> <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	COLOR: <u>Clear</u>	ODOR: <u>None</u>			
VOLUME REMOVED: <u>60</u> <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO				
COLOR: <u>Clear</u> ODOR: <u>None</u>	FILTRATE COLOR: <u>NA</u>	FILTRATE ODOR: <u>NA</u>			
TURBIDITY <input type="checkbox"/> NONE <input checked="" type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY	QC SAMPLE: <input type="checkbox"/> MS/MSD <input checked="" type="checkbox"/> DUP- <u>Q2W</u>				
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input checked="" type="checkbox"/> DRUM <input type="checkbox"/> OTHER	COMMENTS:				

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR $\frac{1}{8}$)
<u>845</u>	<u>200</u>	<u>6.74</u>	<u>796</u>	<u>168.0</u>	<u>1.8</u>	<u>16.0</u>	<u>12.6</u>	<u>12.70</u>	INITIAL
<u>850</u>		<u>7.18</u>	<u>751</u>	<u>122.9</u>	<u>1.6</u>	<u>9.70</u>	<u>12.5</u>		<u>1.0</u>
<u>855</u>		<u>7.32</u>	<u>746</u>	<u>110.0</u>	<u>1.6</u>	<u>7.09</u>	<u>12.7</u>		<u>2.0</u>
<u>900</u>		<u>7.43</u>	<u>735</u>	<u>93.0</u>	<u>1.6</u>	<u>5.60</u>	<u>12.6</u>		<u>3.0</u>
<u>905</u>		<u>7.53</u>	<u>732</u>	<u>65.2</u>	<u>1.5</u>	<u>4.99</u>	<u>12.5</u>		<u>4.0</u>
<u>910</u>		<u>7.54</u>	<u>725</u>	<u>63.2</u>	<u>1.5</u>	<u>4.76</u>	<u>12.5</u>		<u>5.0</u>
<u>915</u>		<u>7.55</u>	<u>728</u>	<u>60.9</u>	<u>1.5</u>	<u>4.22</u>	<u>12.5</u>		<u>6.0</u>

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____								
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
<u>8</u>	1 L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	<u>2</u>	125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
<u>4</u>	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
<u>6</u>	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
<u>10/6</u>	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
<u>6</u>	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	

SHIPPING METHOD: <u>Courier</u>	DATE SHIPPED: <u>12.15.22</u>	AIRBILL NUMBER: <u>NA</u>
COC NUMBER: <u>NA</u>	SIGNATURE: <u>AW</u>	DATE SIGNED: <u>12.28.22</u>



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation		PREPARED		CHECKED	
PROJECT NUMBER: 495430.0001		BY: <u>AW JJ</u>	DATE: <u>12.14.22</u>	BY: <u>DD</u>	DATE: <u>12/29/22</u>
SAMPLE ID: <u>MW-22-10</u>		WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER			
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER					
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER					
PURGING	TIME: <u>1043</u>	DATE: <u>12.14.22</u>	SAMPLE	TIME: <u>1118</u>	DATE: <u>12.14.22</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER		PH: <u>7.51</u> SU		CONDUCTIVITY: <u>582</u> umhos/cm	
DEPTH TO WATER: <u>1345</u> T/ PVC		ORP: <u>-92.9</u> mV		DO: <u>1.0</u> mg/L	
DEPTH TO BOTTOM: <u>NM</u> T/ PVC		TURBIDITY: <u>5.91</u> NTU		<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY	
WELL VOLUME: <u>NM</u> <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS		TEMPERATURE: <u>13.4</u> °C		OTHER: _____	
VOLUME REMOVED: <u>7.0</u> <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS		COLOR: <u>Clear</u>		ODOR: <u>None</u>	
COLOR: <u>Clear</u> ODOR: <u>None</u>		FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		FILTRATE COLOR: <u>NA</u> FILTRATE ODOR: <u>NA</u>	
TURBIDITY: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP- _____			
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input checked="" type="checkbox"/> DRUM <input type="checkbox"/> OTHER		COMMENTS:			

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR)
<u>1043</u>	<u>200</u>	<u>7.60</u>	<u>607</u>	<u>17.8</u>	<u>2.3</u>	<u>35.1</u>	<u>12.6</u>	<u>1345</u>	INITIAL
<u>1048</u>		<u>7.56</u>	<u>616</u>	<u>-11.2</u>	<u>1.6</u>	<u>28.2</u>	<u>13.1</u>		<u>1.0</u>
<u>1053</u>		<u>7.55</u>	<u>612</u>	<u>-50.3</u>	<u>1.3</u>	<u>20.12</u>	<u>13.3</u>		<u>2.0</u>
<u>1058</u>		<u>7.54</u>	<u>610</u>	<u>-66.2</u>	<u>1.2</u>	<u>10.33</u>	<u>13.4</u>		<u>3.0</u>
<u>1103</u>		<u>7.53</u>	<u>608</u>	<u>-80.4</u>	<u>1.1</u>	<u>9.08</u>	<u>13.2</u>		<u>4.0</u>
<u>1108</u>		<u>7.53</u>	<u>588</u>	<u>-87.9</u>	<u>1.0</u>	<u>6.10</u>	<u>13.1</u>		<u>5.0</u>
<u>1113</u>		<u>7.51</u>	<u>580</u>	<u>-90.6</u>	<u>1.0</u>	<u>5.82</u>	<u>13.3</u>		<u>6.0</u>
<u>1118</u>		<u>7.51</u>	<u>582</u>	<u>-92.9</u>	<u>1.0</u>	<u>5.91</u>	<u>13.4</u>		<u>7.0</u>

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____							
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
<u>4</u>	1 L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	<u>1</u>	125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
<u>2</u>	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
<u>3</u>	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
<u>5</u>	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
<u>3</u>	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N

SHIPPING METHOD: <u>Courier</u>	DATE SHIPPED: <u>12.15.22</u>	AIRBILL NUMBER: <u>NA</u>
COC NUMBER: <u>NA</u>	SIGNATURE: <u>AW</u>	DATE SIGNED: <u>12.28.22</u>



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: <u>AW JJ</u>	DATE: <u>12.15.22</u>
	BY: <u>DD</u>	DATE: <u>12-29-22</u>

SAMPLE ID: <u>MW-22-15</u>	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: <u>0907</u>	DATE: <u>12.15.22</u>	SAMPLE	TIME: <u>0942</u>	DATE: <u>12.15.22</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER			PH: <u>7.30</u> SU CONDUCTIVITY: <u>728</u> umhos/cm		
DEPTH TO WATER: <u>14.70</u> T/ PVC			ORP: <u>-31.9</u> mV DO: <u>1.6</u> mg/L		
DEPTH TO BOTTOM: <u>NM</u> T/ PVC			TURBIDITY: <u>3.32</u> NTU		
WELL VOLUME: <u>NM</u> <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS			<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
VOLUME REMOVED: <u>7.0</u> <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS			TEMPERATURE: <u>12.8</u> °C OTHER:		
COLOR: <u>Clear</u> ODOR: <u>None</u>			FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE COLOR: <u>NA</u> FILTRATE ODOR: <u>NA</u>		
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER			QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP-		
COMMENTS:					

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
907	200	6.64	701	119.0	2.4	6.45	12.3	14.70	INITIAL
912		7.00	711	69.0	1.9	3.65	12.6	14.75	1.0
917		7.19	716	32.9	1.7	4.38	12.7		2.0
922		7.25	722	0.0	1.7	3.74	12.7		3.0
927		7.27	724	-9.8	1.6	3.63	12.7		4.0
932		7.28	723	-29.8	1.6	3.45	12.7		5.0
937		7.29	725	-31.2	1.6	3.24	12.7		6.0
942		7.30	728	-31.9	1.6	3.32	12.8		7.0

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F -									
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
4	1 L	AMBER	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N	1	125 mL	AMBER	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
2	125 mL	PLASTIC	B	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
	15 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
	40 mL	VOA	E	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
	40 mL	VOA	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N

SHIPPING METHOD: <u>Courier</u>	DATE SHIPPED: <u>12.16.22</u>	AIRBILL NUMBER: <u>NA</u>
COC NUMBER: <u>NA</u>	SIGNATURE: <u>AW</u>	DATE SIGNED: <u>12.28.22</u>

22.20
19.22



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: <u>AW JJ</u>	DATE: <u>12.15.22</u>
	BY: <u>DD</u>	DATE: <u>12/29/22</u>

SAMPLE ID: <u>MW-22-15 14</u>	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: <u>1025</u>	DATE: <u>12.15.22</u>	SAMPLE	TIME: <u>1055</u>	DATE: <u>12.15.22</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: <u>7.42</u> SU	CONDUCTIVITY: <u>1097</u> umhos/cm	ORP: <u>25.8</u> mV	DO: <u>1.3</u> mg/L	
DEPTH TO WATER: <u>13.46</u> T/ PVC	TURBIDITY: <u>4.27</u> NTU	<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			
DEPTH TO BOTTOM: <u>NM</u> T/ PVC	TEMPERATURE: <u>12.7</u> °C	OTHER: <u>-</u>			
WELL VOLUME: <u>NM</u> <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	COLOR: <u>Clear</u>	ODOR: <u>None</u>			
VOLUME REMOVED: <u>6.0</u> <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO				
COLOR: <u>Clear</u> ODOR: <u>None</u>	FILTRATE COLOR: <u>NA</u>	FILTRATE ODOR: <u>NA</u>			
TURBIDITY <input type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP- <u> </u>			
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input checked="" type="checkbox"/> DRUM <input type="checkbox"/> OTHER			COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL ORL)
1025	200	7.52	1039	69.0	2.7	4.79	12.0	13.46	INITIAL
1030		7.44	1080	51.4	1.7	5.11	12.4	13.55	1.0
1035		7.43	1091	44.1	1.6	4.90	12.6	13.60	2.0
1040		7.43	1095	35.8	1.4	4.51	12.5		3.0
1045		7.42	1101	28.3	1.4	4.63	12.8		4.0
1050		7.42	1098	26.9	1.3	4.18	12.6		5.0
1055		7.42	1097	25.8	1.3	4.27	12.7		6.0

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 10 % ORP: +/- 10 % D.O.: +/- 10 % TURB: +/- 10 % or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____									
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
<u>4</u>	1 L	AMBER	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N	<u>1</u>	125 mL	AMBER	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
<u>2</u>	125 mL	PLASTIC	B	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
<u>2</u>	15 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
<u>2</u>	40 mL	VOA	E	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
<u>3</u>	40 mL	VOA	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N

SHIPPING METHOD: <u>Courier</u>	DATE SHIPPED: <u>12.16.22</u>	AIRBILL NUMBER: <u>NA</u>
COC NUMBER: <u>NA</u>	SIGNATURE: <u>AW</u>	DATE SIGNED: <u>12.28.22</u>



WATER SAMPLE LOG

(CONTINUED FROM PREVIOUS PAGE)

PROJECT NAME: DA Southerin Investigation		PREPARED		CHECKED	
PROJECT NUMBER: 495430.0001		BY: <u>WJ</u>	DATE: <u>12.15.22</u>	BY: <u>DN</u>	DATE: <u>12-29-22</u>

SAMPLE ID: MW-22-13

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR ^L)
<u>1254</u>	<u>200</u>	<u>7.48</u>	<u>871</u>	<u>-119.3</u>	<u>1.0</u>	<u>8.56</u>	<u>13.4</u>	<u>10.70</u>	<u>10.0</u>

SIGNATURE: A. Whaley

DATE SIGNED: 12.28.22



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AWJ	DATE: 12.15.22
	BY: DJD	DATE: 12-19-22

SAMPLE ID: MW-22-13	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: 1204	DATE: 12.15.22	SAMPLE	TIME: 1254	DATE: 12.15.22
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: 7.48	SU	CONDUCTIVITY: 871	umhos/cm	
	ORP: -185	mV	DO: 1.0	mg/L	
DEPTH TO WATER: 10.65	T/ PVC		TURBIDITY: 8.56	NTU	
DEPTH TO BOTTOM: NM	T/ PVC		<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: NM	<input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS		TEMPERATURE: 13.8	°C	
VOLUME REMOVED: 10.0	<input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS		COLOR: Clear	ODOR: None	
COLOR: Clear	ODOR: None		FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE COLOR: NA	FILTRATE ODOR: NA	
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input checked="" type="checkbox"/> DRUM <input type="checkbox"/> OTHER			QC SAMPLE: <input type="checkbox"/> MS/MSD <input checked="" type="checkbox"/> DUP-02W		
COMMENTS:					

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR)
1204	200	7.71	825	-3.8	2.8	4.8	13.2	10.65	INITIAL
1209		7.53	843	-51.7	1.8	25.5	13.7	10.70	1.0
1214		7.50	846	-72.4	1.6	25.1	13.8		2.0
1219		7.49	853	-84.5	1.4	16.0	13.8		3.0
1224		7.48	870	-100.3	1.2	25.7	13.9		4.0
1229		7.49	851	-101.0	1.3	17.0	14.0		5.0
1234		7.49	853	-101.5	1.2	14.2	13.9		6.0
1239		7.48	869	-107.4	1.1	11.20	13.9		7.0
1244		7.48	870	-113.3	1.0	4.26	13.8		8.0
1249		7.48	868	-115.2	1.0	8.72	13.7		9.0

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

PH: +/- 0.1 COND: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____							
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
8	1 L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	2	125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
4	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
6	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
10	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
6	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input checked="" type="checkbox"/> N

SHIPPING METHOD: Courier	DATE SHIPPED: 12.16.22	AIRBILL NUMBER: NA
COC NUMBER: NA	SIGNATURE: AW	DATE SIGNED: 12.28.22



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation		PREPARED		CHECKED	
PROJECT NUMBER: 495430.0001		BY: <u>AW, JJ</u>	DATE: <u>12.15.22</u>	BY: <u>DD</u>	DATE: <u>12-29-22</u>
SAMPLE ID: <u>MW-22-11</u>		WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER			
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER					
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER					
PURGING	TIME: <u>1438</u>	DATE: <u>12.15.22</u>	SAMPLE	TIME: <u>1503</u>	DATE: <u>12.15.22</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER		PH: <u>7.53</u> SU		CONDUCTIVITY: <u>578</u> umhos/cm	
		ORP: <u>-66.4</u> mV		DO: <u>1.1</u> mg/L	
DEPTH TO WATER: <u>9.92</u> T/ PVC		TURBIDITY: <u>8.53</u> NTU			
DEPTH TO BOTTOM: <u>NM</u> T/ PVC		<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			
WELL VOLUME: <u>NM</u> <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS		TEMPERATURE: <u>14.3</u> °C		OTHER: <u>-</u>	
VOLUME REMOVED: <u>5.0</u> <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS		COLOR: <u>Clear</u>		ODOR: <u>None</u>	
COLOR: <u>Clear</u> ODOR: <u>None</u>		FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
TURBIDITY		FILTRATE COLOR: <u>NA</u>		FILTRATE ODOR: <u>NA</u>	
<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP-			
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER		COMMENTS:			

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR \varnothing)
<u>1438</u>	<u>200</u>	<u>7.88</u>	<u>597</u>	<u>39.0</u>	<u>5.3</u>	<u>15.8</u>	<u>13.7</u>	<u>9.92</u>	INITIAL
<u>1443</u>		<u>7.62</u>	<u>595</u>	<u>-10.2</u>	<u>1.9</u>	<u>12.8</u>	<u>14.3</u>	<u>9.98</u>	<u>1.0</u>
<u>1448</u>		<u>7.57</u>	<u>586</u>	<u>-42.4</u>	<u>1.5</u>	<u>12.4</u>	<u>14.4</u>		<u>2.0</u>
<u>1453</u>		<u>7.55</u>	<u>587</u>	<u>-60.9</u>	<u>1.2</u>	<u>9.03</u>	<u>14.4</u>		<u>3.0</u>
<u>1458</u>		<u>7.55</u>	<u>583</u>	<u>62.7</u>	<u>1.2</u>	<u>8.64</u>	<u>14.4</u>		<u>4.0</u>
<u>1503</u>		<u>7.53</u>	<u>578</u>	<u>-66.4</u>	<u>1.1</u>	<u>8.53</u>	<u>14.3</u>		<u>5.0</u>

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____									
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
<u>4</u>	<u>1 L</u>	<u>AMBER</u>	<u>A</u>	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N		<u>125 mL</u>	<u>AMBER</u>	<u>A</u>	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
<u>2</u>	<u>125 mL</u>	<u>PLASTIC</u>	<u>B</u>	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
<u>3</u>	<u>15 mL</u>	<u>PLASTIC</u>	<u>A</u>	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
<u>5</u>	<u>40 mL</u>	<u>VOA</u>	<u>E</u>	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
<u>3</u>	<u>40 mL</u>	<u>VOA</u>	<u>A</u>	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N

SHIPPING METHOD: <u>Courier</u>	DATE SHIPPED: <u>12.16.22</u>	AIRBILL NUMBER: <u>NA</u>
COC NUMBER: <u>NA</u>	SIGNATURE: <u>AW</u>	DATE SIGNED: <u>12.28.22</u>



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation		PREPARED		CHECKED	
PROJECT NUMBER: 495430.0001		BY: <u>AW JJ</u>	DATE: <u>12.16.22</u>	BY: <u>DD</u>	DATE: <u>12-29-22</u>
SAMPLE ID: <u>MW-22-12</u>		WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER			
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER					
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> VWW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER					

PURGING		TIME: <u>0825</u>	DATE: <u>12.16.22</u>	SAMPLE		TIME: <u>0910</u>	DATE: <u>12.16.22</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER		PH: <u>7.26</u> SU		CONDUCTIVITY: <u>575</u> umhos/cm		ORP: <u>-74.2</u> mV DO: <u>1.0</u> mg/L	
DEPTH TO WATER: <u>13.81</u> T/ PVC		TURBIDITY: <u>10.43</u> NTU		<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			
DEPTH TO BOTTOM: <u>NM</u> T/ PVC		TEMPERATURE: <u>10.5</u> °C		OTHER:			
WELL VOLUME: <u>NM</u> <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS		COLOR: <u>Clear</u>		ODOR: <u>None</u>			
VOLUME REMOVED: <u>4.0</u> <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS		FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		FILTRATE COLOR: <u>NA</u>		FILTRATE ODOR: <u>NA</u>	
COLOR: <u>Clear</u> ODOR: <u>None</u>		TURBIDITY <input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP-			
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER		COMMENTS:					

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
825	200	6.15	530	138.0	3.1	35.6	10.8	13.81	INITIAL
830		6.78	535	66.1	1.5	30.6	10.6	13.86	1.0
835		6.92	541	12.4	1.3	27.2	10.6		2.0
840		7.16	554	-5.7	1.2	21.4	10.5		3.0
845		7.18	561	-29.8	1.1	19.7	10.5		4.0
850		7.22	573	-50.7	1.1	15.2	10.5		5.0
855		7.23	572	-55.4	1.1	9.3	10.6		6.0
900		7.25	572	-68.2	1.0	11.37	10.6		7.0
905		7.26	573	-70.0	1.0	11.22	10.5		8.0
910		7.26	575	-74.2	1.0	10.43	10.5		9.0

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____								
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
<u>4</u>	1 L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
<u>2</u>	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
<u>3</u>	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
<u>5</u>	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
<u>3</u>	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	

SHIPPING METHOD: <u>Courier</u>	DATE SHIPPED: <u>12.19.22</u>	AIRBILL NUMBER: <u>NA</u>
COC NUMBER: <u>NA</u>	SIGNATURE: <u>AW</u>	DATE SIGNED: <u>12.28.22</u>



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW, <u>AW</u>	DATE: <u>12/12/22</u>

SAMPLE ID: <u>MW-102</u>	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME:	DATE:	SAMPLE	TIME:	DATE:
PURGE METHOD: <input checked="" type="checkbox"/> PUMP <input type="checkbox"/> BAILER	PERISTALTIC PUMP		PH: _____ SU	CONDUCTIVITY: _____ umhos/cm	
DEPTH TO WATER: _____ T/ PVC			ORP: _____ mV	DO: _____ mg/L	
DEPTH TO BOTTOM: _____ T/ PVC			TURBIDITY: _____ NTU		
WELL VOLUME: <u>NM</u> <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS			TEMPERATURE: _____ °C OTHER: _____		
VOLUME REMOVED: _____ <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS			COLOR: _____ ODOR: _____		
COLOR: _____ ODOR: _____			FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY: <input type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE COLOR: NA FILTRATE ODOR: NA		
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER			QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP- _____		
COMMENTS:					

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
									INITIAL
Day NO SAMPLE 12/12/22									

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____									
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
	1 L	AMBER	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
	125 mL	PLASTIC	B	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
	15 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
	40 mL	VOA	E	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
	40 mL	VOA	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N

SHIPPING METHOD: <u>Courier</u>	DATE SHIPPED: _____	AIRBILL NUMBER: <u>NA</u>
COC NUMBER: <u>NA</u>	SIGNATURE:	DATE SIGNED: <u>12/12/22</u>



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW, JJ DATE: 12/16/22	BY: AW DATE: 12/22/22

SAMPLE ID: Mw-101	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING TIME: 0737 DATE: 12/16/22	SAMPLE TIME: 0837 DATE: 12/16/22
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: 7.35 SU CONDUCTIVITY: 768 umhos/cm
DEPTH TO WATER: 9.78 T/ PVC	ORP: -460 mV DO: mg/L
DEPTH TO BOTTOM: T/ PVC	TURBIDITY: 4.4 NTU
WELL VOLUME: NM <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	TEMPERATURE: 120 °C OTHER:
VOLUME REMOVED: 15 <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	COLOR: 1105 ODOR: none
COLOR: Brown ODOR: none	FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
TURBIDITY <input type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input checked="" type="checkbox"/> VERY	FILTRATE COLOR: NA FILTRATE ODOR: NA
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER	QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP-
COMMENTS: DO not working	

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
0737	2.4	4.00	375	187		1300	10.3	9.76	INITIAL
0732		6.73	830	33.7		375	11.7	9.80	1
0737		6.86	825	19.1		350	11.8	9.80	2
0742		7.16	803	-19.5		265	11.6	9.80	3
0747		7.25	891	-28.6		11.0	11.7	9.80	4
0752		7.25	785	-32.0		8.9	11.9	9.80	5
0757		7.24	784	-38.5		16.5	11.9	9.80	6
0802		7.30	778	-45.8		7.5	11.9	9.80	7
0807		7.35	780	-46.0		5.6	11.9	9.80	8
0812		7.38	770	-46.5		4.3	12.0	9.80	9

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F -								
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
4	1 L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
2	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
5	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	

SHIPPING METHOD: Courier	DATE SHIPPED: 12.19.22	AIRBILL NUMBER: NA
COC NUMBER: NA	SIGNATURE:	DATE SIGNED: 12/19/22



WATER SAMPLE LOG

(CONTINUED FROM PREVIOUS PAGE)

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW, JJ DATE: <u>01/19/13</u>	BY: <u>AV</u> DATE: <u>12.22.22</u>

SAMPLE ID: MW-MW-101

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
<u>0817</u>	<u>2.4</u>	<u>7.35</u>	<u>767</u>	<u>-46.5</u>		<u>4.35</u>	<u>11.9</u>	<u>9.80</u>	<u>10</u>
<u>0822</u>		<u>7.35</u>	<u>772</u>	<u>-46.0</u>		<u>4.30</u>	<u>12.0</u>	<u>9.80</u>	<u>11</u>
<u>0837</u>		<u>7.35</u>	<u>768</u>	<u>-46.5</u>		<u>4.45</u>	<u>12.0</u>	<u>9.80</u>	<u>12</u>

SIGNATURE: [Signature] DATE SIGNED: _____



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW, JJ	DATE: <u>12/16/22</u>
	BY: <u>AW</u>	DATE: <u>12/22/22</u>

SAMPLE ID: <u>MW 103</u>	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: <u>0921</u>	DATE: <u>12/16/22</u>	SAMPLE	TIME: <u>1004</u>	DATE: <u>12/16/22</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: <u>7.90</u> SU	CONDUCTIVITY: <u>548</u> umhos/cm	ORP: <u>-124.0</u> mV	DO: <u>NM</u> mg/L	
DEPTH TO WATER: <u>110.5</u> T/ PVC	TURBIDITY: <u>4.2</u> NTU	<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			
DEPTH TO BOTTOM: T/ PVC	TEMPERATURE: <u>11.1</u> °C	OTHER: _____			
WELL VOLUME: <u>NM</u> <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	COLOR: <u>clear</u>	ODOR: <u>none</u>			
VOLUME REMOVED: <u>9</u> <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	FILTRATE COLOR: <u>NA</u> FILTRATE ODOR: <u>NA</u>			
COLOR: <u>Brownish</u> ODOR: <u>none</u>	TURBIDITY <input type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input checked="" type="checkbox"/> MODERATE <input type="checkbox"/> VERY	QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP- _____			
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER	COMMENTS: <u>DO not working</u>				

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
<u>0921</u>	<u>200</u>	<u>7.83</u>	<u>326</u>	<u>89.3</u>	<u>NM</u>	<u>50.0</u>	<u>9.3</u>	<u>110.5</u>	INITIAL
<u>0926</u>		<u>8.23</u>	<u>626</u>	<u>-33.3</u>		<u>21.1</u>	<u>10.5</u>	<u>110</u>	<u>1</u>
<u>0931</u>		<u>8.25</u>	<u>613</u>	<u>-100.0</u>		<u>17.7</u>	<u>10.6</u>	<u>110</u>	<u>2</u>
<u>0936</u>		<u>8.25</u>	<u>576</u>	<u>-100.5</u>		<u>10.0</u>	<u>10.6</u>	<u>110</u>	<u>3</u>
<u>0941</u>		<u>7.95</u>	<u>544</u>	<u>-113.0</u>		<u>5.7</u>	<u>10.9</u>	<u>110</u>	<u>4</u>
<u>0946</u>		<u>7.92</u>	<u>543</u>	<u>-116.0</u>		<u>5.3</u>	<u>10.8</u>	<u>110</u>	<u>5</u>
<u>0951</u>		<u>7.90</u>	<u>543</u>	<u>-122.5</u>		<u>4.5</u>	<u>10.9</u>	<u>110</u>	<u>6</u>
<u>0956</u>		<u>7.90</u>	<u>547</u>	<u>-123.8</u>		<u>4.2</u>	<u>11.2</u>	<u>110</u>	<u>7</u>
<u>1001</u>		<u>7.90</u>	<u>546</u>	<u>-124.0</u>		<u>4.3</u>	<u>11.1</u>	<u>110</u>	<u>8</u>
<u>1006</u>		<u>7.90</u>	<u>548</u>	<u>-124.0</u>		<u>4.2</u>	<u>11.1</u>	<u>110</u>	<u>9</u>

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

PH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____								
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
<u>4</u>	<u>1 L</u>	<u>AMBER</u>	<u>A</u>	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N		<u>125 mL</u>	<u>AMBER</u>	<u>A</u>	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
<u>2</u>	<u>125 mL</u>	<u>PLASTIC</u>	<u>B</u>	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
<u>1</u>	<u>15 mL</u>	<u>PLASTIC</u>	<u>A</u>	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
<u>5</u>	<u>40 mL</u>	<u>VOA</u>	<u>E</u>	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
<u>3</u>	<u>40 mL</u>	<u>VOA</u>	<u>A</u>	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	

SHIPPING METHOD: <u>Courier</u>	DATE SHIPPED: <u>12.19.22</u>	AIRBILL NUMBER: <u>NA</u>
COC NUMBER: <u>NA</u>	SIGNATURE:	DATE SIGNED: <u>12/19/22</u>



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW, JJ	DATE: <u>12/14/22</u>
	BY: <u>AW</u>	DATE: <u>12.14.22</u>

SAMPLE ID: <u>MW-129</u>	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: <u>10:55</u>	DATE: <u>12/14/22</u>	SAMPLE	TIME: <u>11:30</u>	DATE: <u>12/14/22</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: <u>7.20</u> SU		CONDUCTIVITY: <u>875</u> umhos/cm		
	ORP: <u>-210.1</u> mV		DO: <u>NM</u> mg/L		
DEPTH TO WATER: <u>11.55</u> T/ PVC	TURBIDITY: <u>2.9</u> NTU		<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
DEPTH TO BOTTOM: T/ PVC	TEMPERATURE: <u>12.5</u> °C		OTHER:		
WELL VOLUME: <u>NM</u> <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	COLOR: <u>clear</u>		ODOR: <u>none</u>		
VOLUME REMOVED: <u>7</u> <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		FILTRATE COLOR: <u>NA</u>		
COLOR: <u>cloudy</u>	ODOR: <u>none</u>		FILTRATE ODOR: <u>NA</u>		
TURBIDITY: <input type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input checked="" type="checkbox"/> MODERATE <input type="checkbox"/> VERY	QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP-				
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER	COMMENTS: <u>DO not working</u>				

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
10:55	2 @	7.63	458	15.0	NM	9.0	10.2	11.7	INITIAL
11:00		7.27	938	-93.9		14.3	12.1	11.65	1
11:05		7.57	886	-86.7		3.2	12.3	11.65	2
11:10		7.64	876	-189.3		2.9	12.3	11.65	3
11:15		7.69	871	-202.0		2.7	12.2	11.65	4
11:20		7.70	871	-210.0		2.9	12.4	11.65	5
11:25		7.64	872	-210.3		3.0	12.4	11.65	6
11:30		7.70	875	-210.5		2.9	12.5	11.65	7

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____								
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
1	1 L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
2	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
4	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	

SHIPPING METHOD: <u>Courier</u>	DATE SHIPPED: <u>12.14.22</u>	AIRBILL NUMBER: <u>NA</u>
COC NUMBER: <u>NA</u>	SIGNATURE:	DATE SIGNED: <u>12/14/22</u>



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW, JJ DATE: 12/16/22	BY: AW DATE: 12/22/22

SAMPLE ID: MW-128	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: 1200	DATE: 12/16/22	SAMPLE	TIME: 1230	DATE: 12/16/22
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: 7.14	SU	CONDUCTIVITY: 1439	umhos/cm	
DEPTH TO WATER: 1175 T/ PVC	ORP: -169.5	mV	DO:	mg/L	
DEPTH TO BOTTOM: T/ PVC	TURBIDITY: 1.6	NTU	<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: NM <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	TEMPERATURE: 11.4	°C	OTHER:		
VOLUME REMOVED: 6 <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	COLOR: clear		ODOR: none		
COLOR: Brownish	ODOR: none	FILTRATE (0.45 um)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY <input type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input checked="" type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE COLOR: NA	FILTRATE ODOR: NA	
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER	QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP-	COMMENTS: Do not working			

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1200	200	7.74	375	20.5	NM	23	9.5	1175	INITIAL
1205		7.11	1463	-61.5		14.5	10.6	1185	1
1210		7.11	1461	-104.5		8.4	11.4	1185	2
1215		7.13	1454	-196.0		6.7	11.4	1185	3
1220		7.14	1447	-168.2		1.6	11.4	1185	4
1225		7.14	1441	-169.5		1.6	11.3	1185	5
1230		7.14	1439	-169.5		1.6	11.4	1185	6

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____								
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
4	1 L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
2	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	

SHIPPING METHOD: Courier	DATE SHIPPED: 12/19/22	AIRBILL NUMBER: NA
COC NUMBER: NA	SIGNATURE:	DATE SIGNED: 12/19/22



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW, JJ	DATE: 12/20/22

SAMPLE ID: MW-22-21	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: 0605	DATE: 12/20/22	SAMPLE	TIME: 0630	DATE: 12/20/22
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: 7.26	SU	CONDUCTIVITY: 1076	umhos/cm	
DEPTH TO WATER: 14.6 T/ PVC	ORP: -112.5	mV	DO: NM	mg/L	
DEPTH TO BOTTOM: NM T/ PVC	TURBIDITY: NM	NTU			
WELL VOLUME: NM <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	TEMPERATURE: 12.0	°C	OTHER:		
VOLUME REMOVED: 9 <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	COLOR: Clear		ODOR: none		
COLOR: cloudy	ODOR: none		FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY <input type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input checked="" type="checkbox"/> VERY	FILTRATE COLOR: NA		FILTRATE ODOR: NA		
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER	QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP.		COMMENTS: Do out of Range		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
0605	200	11.0	647	100	NM	200	11.2	1410	INITIAL
0610		6.77	1153	-11.3			12.2	1414	1
0615		7.67	1123	-67.1			12.4	1414	2
0620		9.18	1081	-96.3			12.4	1414	3
0625		7.22	1068	-112.5			12.3	1414	4
0630		7.23	1064	-112.8			12.4	1414	5
0635		7.25	1043	-112.0			12.4	1414	6
0640		7.24	1038	-112.9			12.3	1414	7
0645		7.26	1035	-112.3			12.2	1414	8
0650		7.26	1034	-112.5			12.2	1414	9

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____								
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
1	1 L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
2	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
5	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	

SHIPPING METHOD: Courier	DATE SHIPPED: 12/21/22	AIRBILL NUMBER: NA
COC NUMBER: NA	SIGNATURE:	DATE SIGNED: 12/28/22



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW, JJ DATE: 12/20/22	BY: AW DATE: 12/30/22

SAMPLE ID: MW-22-20	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: 0910	DATE: 12/20/22	SAMPLE	TIME: 0940	DATE: 12/20/22
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: 7.68	SU	CONDUCTIVITY: 1123	umhos/cm	
DEPTH TO WATER: 14.80 T/ PVC	ORP: -147.2	mV	DO: NM	mg/L	
DEPTH TO BOTTOM: NM T/ PVC	TURBIDITY: 3.8	NTU			
WELL VOLUME: NM <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	TEMPERATURE: 11.8	°C	OTHER:		
VOLUME REMOVED: 6 <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	COLOR: clear		ODOR: none		
COLOR: clear	ODOR: none		FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY	FILTRATE COLOR: NA		FILTRATE ODOR: NA		
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER	QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP-		COMMENTS: 10 out of Range		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
0910	200	8.03	1141	-111.3	NM	23.7	11.7	1488	INITIAL
0911		7.61	1126	-126.3		14.5	12.1	1491	1
0920		7.63	1123	-136.0		10.8	11.8	1451	2
0925		7.63	1121	-145.5		6.0	11.8	1492	3
0930		7.63	1121	-144.8		4.9	11.7	1491	4
0935		7.62	1122	-147.0		3.9	11.8	1491	5
0940		7.62	1123	-147.2		3.8	11.8	1491	6
									7

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____								
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
4	1 L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
2	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
5	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	

SHIPPING METHOD: Courier	DATE SHIPPED: 12.21.22	AIRBILL NUMBER: NA
COC NUMBER: NA	SIGNATURE:	DATE SIGNED: 12/12/22



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW, JJ DATE: 12/21/22	BY: AW DATE: 12/30/22
SAMPLE ID: MW-22-19	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER	
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER		
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> VVW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER		

PURGING	TIME: 1000	DATE: 12/21/22	SAMPLE	TIME: 1045	DATE: 12/21/22
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: 7.59	SU	CONDUCTIVITY: 1283	umhos/cm	
DEPTH TO WATER: 1490 T/ PVC	ORP: -179.3	mV	DO: NM	mg/L	
DEPTH TO BOTTOM: NM T/ PVC	TURBIDITY: 7.7	NTU	<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: NM <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	TEMPERATURE: 11.7	°C	OTHER:		
VOLUME REMOVED: 9 <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	COLOR: Clear		ODOR: none		
COLOR: Clear	ODOR: none		FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY <input type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input checked="" type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE COLOR: NA	FILTRATE ODOR: NA	
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER			QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP.		
COMMENTS: Do out of Range					

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1000	20	7.84	621	48.0	NM	71.0	8.3	1490	INITIAL
1005		7.36	1286	-32.8		49.0	11.1	1491	1
1010		7.34	1286	-100.0		40.0	11.2	1495	2
1015		7.33	1284	-131.0		24.0	11.5	1495	3
1020		7.31	1285	-140.0		21	11.4	1495	4
1025		7.31	1288	-150.5		14	11.2	1495	5
1030		7.30	1285	-160.8		10	11.2	1495	6
1035		7.29	1284	-170.8		8.0	11.7	1495	7
1040		7.29	1283	-179.0		7.8	11.7	1495	8
1045		7.29	1282	-179.3		7.7	11.7	1495	9

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

PH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F -								
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
1	1L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
2	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
4	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
5	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	

SHIPPING METHOD: Courier	DATE SHIPPED: 12/21/22	AIRBILL NUMBER: NA
COC NUMBER: NA	SIGNATURE:	DATE SIGNED: 12/28/22



WATER SAMPLE LOG

PROJECT NAME: DA Southern Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW, JJ DATE: 12/20/22	BY: AW DATE: 12/30/22

SAMPLE ID: MW-22-18	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING TIME: 11:15 DATE: 12/30/22	SAMPLE TIME: 12:00 DATE: 12/30/22
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: 7.24 SU CONDUCTIVITY: 1209 umhos/cm
DEPTH TO WATER: 146.5 T/ PVC	ORP: -108.1 mV DO: NM mg/L
DEPTH TO BOTTOM: NM T/ PVC	TURBIDITY: 10.0 NTU
WELL VOLUME: NM <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY
VOLUME REMOVED: 9 <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	TEMPERATURE: 60 °C OTHER:
COLOR: Clear ODOR: none	COLOR: Clear ODOR: none
TURBIDITY: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY	FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER	FILTRATE COLOR: NA FILTRATE ODOR: NA
	QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP-
	COMMENTS: Do not work in

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
11:15	200	7.26	977	12.6	NM	20	9.7	14.65	INITIAL
11:20		7.27	1175	-76.0		11.0	11.7	14.70	1
11:25		7.25	1164	-115.8		40	11.6	14.70	2
11:30		7.25	1182	-130.9		30	11.8	14.70	3
11:35		7.24	1191	-144.2		52	11.7	14.70	4
11:40		7.24	1199	-152.5		35	11.6	14.70	5
11:45		7.24	1207	-160.0		20	12.0	14.70	6
11:50		7.24	1207	-168.0		10	12.0	14.70	7
11:55		7.24	1208	-169.1		10	11.9	14.70	8
12:00		7.24	1209	-168.1		10	12.0	14.70	9

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F -								
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
4	1L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
2	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
5	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	

SHIPPING METHOD: Courier	DATE SHIPPED: 12.21.22	AIRBILL NUMBER: NA
COC NUMBER: NA	SIGNATURE:	DATE SIGNED: 12/28/22



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW, JJ	DATE: 12/20/22

SAMPLE ID: MW 22-14	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: 12:05	DATE: 12/20/22	SAMPLE	TIME: 12:12	DATE: 12/20/22
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: 7.50	SU	CONDUCTIVITY: 1400	umhos/cm	
	ORP: -185.3	mV	DO: NM	mg/L	
DEPTH TO WATER: 14.70	T/ PVC		TURBIDITY: 5.3	NTU	
DEPTH TO BOTTOM: NM	T/ PVC		<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: NM	<input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS		TEMPERATURE: 12.9	°C	
VOLUME REMOVED: 5	<input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS		COLOR: clear	ODOR: none	
COLOR: clear	ODOR: none		FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE COLOR: NA	FILTRATE ODOR: NA	
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER			QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP-		
COMMENTS: Do not working					

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1225	200	7.93	1174	2.3	NM	15.0	9.9	14.70	INITIAL
1230		7.58	2467	-55		13.0	11.8	14.70	1
1235		7.60	1800	-130.0		7.7	12.8	14.70	2
1240		7.50	1408	-185		5.8	12.9	14.70	3
1245		7.44	1402	-185.0		5.5	12.9	14.70	4
1250		7.50	144	-185.3		5.3	12.9	14.70	5

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

PH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____								
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
4	1L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
2	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
5	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	

SHIPPING METHOD: Courier	DATE SHIPPED: 12.21.22	AIRBILL NUMBER: NA
COC NUMBER: NA	SIGNATURE:	DATE SIGNED: 12/21/22



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW, JJ DATE: 12/20/22	BY: AW DATE: 12/30/22

SAMPLE ID: MW-22-19	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: 1315	DATE: 12/20/22	SAMPLE	TIME: 1335	DATE: 12/30/22
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: 7.94	SU	CONDUCTIVITY: 995	umhos/cm	
DEPTH TO WATER: 1320 T/ PVC	ORP: -146.3	mV	DO: NM	mg/L	
DEPTH TO BOTTOM: NM T/ PVC	TURBIDITY: 4.0	NTU	<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: NM <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	TEMPERATURE: 12.7	°C	OTHER:		
VOLUME REMOVED: 4 <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	COLOR: Clear		ODOR: none		
COLOR: Clear	ODOR: none		FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE COLOR: NA		
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER			FILTRATE ODOR: NA		
			QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP-		
COMMENTS: DC not working					

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1315	200	7.85	1148	27.5	NM	8.7	11.4	1320	INITIAL
1320		7.90	2225	-850		5.0	12.5	1315	1
1325		7.55	1000	-245.8		4.5	12.6	1315	2
1330		7.56	1000	-1440		4.0	12.7	1315	3
1335		7.96	995	-146.3		4.0	12.7	1315	4
									5
									6

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____									
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
4	1 L	AMBER	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
2	125 mL	PLASTIC	B	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
3	15 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
5	40 mL	VOA	E	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
3	40 mL	VOA	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N

SHIPPING METHOD: Courier	DATE SHIPPED: 12.21.22	AIRBILL NUMBER: NA
COC NUMBER: NA	SIGNATURE:	DATE SIGNED: 12/30/22

TRC WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW <u>[Signature]</u> DATE: <u>12/27/22</u>	BY: AW DATE: <u>12/30/22</u>

SAMPLE ID: <u>MW-22-220</u>	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING TIME: <u>0705</u> DATE: <u>12/27/22</u>	SAMPLE TIME: <u>0710</u> DATE: <u>12/27/22</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: <u>7.30</u> SU CONDUCTIVITY: <u>4016</u> umhos/cm
DEPTH TO WATER: <u>24.55</u> T/ PVC	ORP: <u>-100.8</u> mV DO: <u>1.2</u> mg/L
DEPTH TO BOTTOM: <u>NM</u> T/ PVC	TURBIDITY: <u>11.0</u> NTU
WELL VOLUME: <u>NM</u> <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY
VOLUME REMOVED: <u>7</u> <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	TEMPERATURE: <u>9.1</u> °C OTHER:
COLOR: <u>clear</u> ODOR: <u>none</u>	COLOR: <u>clear</u> ODOR: <u>none</u>
TURBIDITY: <input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY	FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER	FILTRATE COLOR: <u>NA</u> FILTRATE ODOR: <u>NA</u>
	QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP-
	COMMENTS:

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
0705	20	400	268	1860	8.7	10.0	6.0	29.17	INITIAL
0710		6.41	3870	1050	3.3	11.0	8.8	30.21	1
0715		6.75	3985	1490	2.2	12.0	9.2	30.37	2
0720		7.17	4017	126.0	1.5	11.0	9.1	30.15	3
0725		7.35	4015	-100.0	1.4	11.0	9.1	30.70	4
0730		7.35	4011	-100.3	1.2	11.0	9.0	30.79	5
0735		7.36	4009	-100.5	1.2	11.0	9.0	30.85	6
0740		7.36	4016	-100.8	1.2	11.0	9.1	30.98	7
0745									8

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

PH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F -								
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
4	1 L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
2	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	

SHIPPING METHOD: <u>Gourier</u>	DATE SHIPPED: <u>12.27.22</u>	AIRBILL NUMBER: <u>NA</u>
COC NUMBER: <u>NA</u>	SIGNATURE: <u>[Signature]</u>	DATE SIGNED: <u>12/28/22</u>

2680 East Lansing Dr., East Lansing, MI 48823
 Phone (517) 332-0167 Fax (517) 332-4034
 www.meritlabs.com



REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME: SAME
 COMPANY:
 ADDRESS:
 CITY: STATE: ZIP CODE:
 PHONE NO.: E-MAIL ADDRESS:
 CITY: STATE: ZIP CODE:
 PHONE NO.: E-MAIL ADDRESS:

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications	Project Locations	Special Instructions
<input type="checkbox"/> OHIO VAP <input type="checkbox"/> DoD <input type="checkbox"/> NPDES <input type="checkbox"/> Detroit <input type="checkbox"/> Other	<input type="checkbox"/> Drinking Water <input type="checkbox"/> NPDES <input type="checkbox"/> New York	DEF Barcode Chain of Custody for TR-04

PROJECT NO./NAME:
 TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER
 DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV PEDD OTHER
 MATRIX W=WATER GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR WS=WASTE

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	COLLECTION DATE	TIME	IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives									
						NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER			
17	10/5/2														
18	11/1														

RELINQUISHED BY: SIGNATURE/Organization: DATE: TIME:
 RECEIVED BY: SIGNATURE/Organization: DATE: TIME:
 SEAL NO. INITIALS: YES NO
 SEAL NO. INITIALS: YES NO
 NOTES: TEMP. ON ARRIVAL:
 RELINQUISHED BY: SIGNATURE/Organization: DATE: TIME:
 RECEIVED BY: SIGNATURE/Organization: DATE: TIME:
 SEAL NO. INITIALS: DATE: TIME:
 SEAL NO. INITIALS: DATE: TIME:

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

2680 East Lansing Dr., East Lansing, MI 48823
 Phone (517) 332-0167 Fax (517) 332-4034
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REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME: SAME
 COMPANY: _____
 ADDRESS: _____
 CITY: _____ STATE: _____ ZIP CODE: _____
 PHONE NO.: _____ E-MAIL ADDRESS: _____

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME: TRC Axle South
 TURNAROUND TIME REQUIRED: 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____
 DELIVERABLES REQUIRED: STD LEVEL II LEVEL III LEVEL IV EDD OTHER TRC ED
 MATRIX: W=WATER GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 CODE: SL=SLUDGE DW=DRINKING WATER O=OIL WP=WPIPE A=AIR WS=WASTE

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	COLLECTION		IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives														
	DATE	TIME				NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER								
	12/22/09	1030	MW-22-12	SW	3															
		1100	FB-01	SW	1															
		0227	FB-01	SW	3															
		1006	MW-101	SW	3															
		1130	MW-103	SW	3															
		1730	MW-128	SW	3															

RELINQUISHED BY: _____ DATE: _____ TIME: _____
 SIGNATURE/Organization: _____
 RECEIVED BY: _____ DATE: _____ TIME: _____
 SIGNATURE/Organization: _____
 SEAL NO.: _____ SEAL INTACT: YES NO INITIALS: _____
 SEAL NO.: _____ SEAL INTACT: YES NO INITIALS: _____
 NOTES: _____ TEMP. ON ARRIVAL: _____



2680 East Lansing Dr., East Lansing, MI 48823
 Phone (517) 332-0167 Fax (517) 332-4034
 www.meritlabs.com

C.O.C. PAGE # 2 OF 2

145628

REPORT TO CONTACT NAME Kelly Cradsonburg **INVOICE TO** SAME

COMPANY TRC COMPANY _____

ADDRESS 1540 Sisenhauer Place ADDRESS _____

CITY Ann Arbor CITY _____ STATE MI STATE _____ ZIP CODE 48106 ZIP CODE _____

PHONE NO. 734-763-1030 PHONE NO. _____ E-MAIL ADDRESS _____ E-MAIL ADDRESS _____

PROJECT NO./NAME Water Boundary Dept 4x6 ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____

DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER IDL FAI

MATRIX CODE	GW=GROUNDWATER SL=SLUDGE	WW=WASTEWATER DW=DRINKING WATER	S=SOIL O=OIL	L=LIQUID WP=WPIPE	A=AIR W=WASTE	MATRIX	# OF BOTTLES	# Containers & Preservatives	OTHER
116						W	1		
117						W	1		
118						W	1		
119						W	1		

ANALYTES	RESULTS	REMARKS
VOC + TIC	++	
1,4-Dioxin	++	
SVOC + TIC	++	
Metals	++	
PFAS	++	
PCBs	++	
Thorium	++	
3 Alcohol	++	
Leptospira	++	

Certifications OHIO VAP Drinking Water DoD NPDES Project Locations Detroit New York Other _____

Special Instructions SEAS on
Separate 10L

RELINQUISHED BY: SIGNATURE/ORGANIZATION _____ DATE _____ TIME _____

RECEIVED BY: SIGNATURE/ORGANIZATION _____ DATE _____ TIME _____

SEAL NO. _____ SEAL INTACT YES NO INITIALS _____

SEAL NO. _____ SEAL INTACT YES NO INITIALS _____

NOTES: _____ TEMP. ON ARRIVAL _____

44 02 41

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE



REPORT TO CONTACT NAME Kelly Catsonburg **INVOICE TO** CONTACT NAME [SAME]

COMPANY TRC COMPANY [SAME]

ADDRESS 1500 Eisenhower Place ADDRESS [SAME]

CITY Ann Arbor CITY [SAME]

STATE MI STATE [SAME]

ZIP CODE 48106 ZIP CODE [SAME]

PHONE NO. [REDACTED] PHONE NO. [REDACTED]

FAX NO. [REDACTED] FAX NO. [REDACTED]

E-MAIL ADDRESS [REDACTED] E-MAIL ADDRESS [REDACTED]

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME	SAMPLER(S) - PLEASE PRINT/SIGN NAME	TURNAROUND TIME REQUIRED										CERTIFICATIONS				
		1 DAY	2 DAYS	3 DAYS	STANDARD	OTHER	DELIVERABLES REQUIRED	STD	LEVEL I	LEVEL II	LEVEL III		LEVEL IV	REDD	OTHER	
MATRIX CODE:	GW=GROUNDWATER SL=SLUDGE	WW=WASTEWATER DW=DRINKING WATER	S=SOIL O=OIL	L=LIQUID WP=WIPE	A=AIR	SD=SOLID W=WASTE	MATRIX		# OF BOTTLES		# Containers & Preservatives		Special Instructions			
MERIT LAB NO. FOR LAB USE ONLY	DATE	TIME	IDENTIFICATION-DESCRIPTION		DATE	TIME	MATRIX	# OF BOTTLES	NONE	H ₂ O	HNO ₃	H ₂ SO ₄		NaOH	MeOH	OTHER
	11/13/17	13:57	MW 22-17		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-16		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-19		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-20		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-21		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-22		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-23		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-24		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-25		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-26		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-27		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-28		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-29		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-30		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-31		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-32		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-33		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-34		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-35		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-36		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-37		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-38		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-39		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-40		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-41		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-42		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-43		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-44		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-45		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-46		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-47		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-48		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-49		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC
	11/13/17	13:57	MW 22-50		11/13/17	13:57	W	0	+	+	+	+	+	+	+	VOC + TIC

RELINQUISHED BY: SIGNATURE/ORGANIZATION [Signature] DATE 12/20/17 TIME 16:16

RECEIVED BY: SIGNATURE/ORGANIZATION [Signature] DATE 12/20/17 TIME 16:16

RELINQUISHED BY: SIGNATURE/ORGANIZATION [Signature] DATE 12/20/17 TIME 16:16

RECEIVED BY: SIGNATURE/ORGANIZATION [Signature] DATE 12/20/17 TIME 16:16

NOTES: _____

TEMP. ON ARRIVAL _____



PROJECT NAME:	DA Southern Investigation
PROJECT NUMBER:	495430.0000
PROJECT MANAGER:	Kelly Cratsenburg
SITE LOCATION:	1600 West 8 Mile Road Ferndale, MI 48167
DATES OF FIELDWORK:	12/12/22 ^{2/20/23} TO 12/23/2022 ^{3/23/23}
PURPOSE OF FIELDWORK:	Groundwater Sampling
WORK PERFORMED BY:	A. Whaley, J. Jasso

SIGNED [Signature] 3/24/23 DATE

CHECKED BY BY 4.10.23 DATE



GENERAL NOTES

PROJECT NAME: DA Southern Investigation	DATE: <u>3/24/23</u>	TIME ARRIVED: <u>Clear</u>
PROJECT NUMBER: 4954309.0001.0000	AUTHOR: JJASSO	TIME LEFT: <u>0915</u>

WEATHER		
TEMPERATURE: <u>29</u> °F	WIND: <u>15</u> MPH	VISIBILITY: <u>Clear</u>
WORK / SAMPLING PERFORMED		
WATER LEVELS		
WELLS SAMPLED		

PROBLEMS ENCOUNTERED	CORRECTIVE ACTION TAKEN

COMMUNICATION		
NAME	REPRESENTING	SUBJECT / COMMENTS

INVESTIGATION DERIVED WASTE SUMMARY		
WASTE MATRIX	QUANTITY	COMMENTS
DRUM		

SIGNED [Signature] 3/24/23 DATE
 CHECKED BY BY 4.10.23 DATE



GENERAL NOTES

PROJECT NAME: DA Southern Investigation	DATE: <u>3/22/23</u>	TIME ARRIVED: <u>0810</u>
PROJECT NUMBER: 4954309.0001.0000	AUTHOR: JJASSO	TIME LEFT: <u>1455</u>

WEATHER		
TEMPERATURE: <u>44</u> °F	WIND: <u>15</u> MPH	VISIBILITY: <u>over cast</u>

WORK / SAMPLING PERFORMED
WATER LEVELS
WELLS SAMPLED <u>MW-103, 101, Dup #1, 22-09, 22-21, 22-08</u> <u>22-07, 22-10, 22-12, 22-14, 22-13, Dup #2, 1010</u>

PROBLEMS ENCOUNTERED	CORRECTIVE ACTION TAKEN
<u>MW-102 (Dry)</u>	

COMMUNICATION		
NAME	REPRESENTING	SUBJECT / COMMENTS

INVESTIGATION DERIVED WASTE SUMMARY		
WASTE MATRIX	QUANTITY	COMMENTS
DRUM		

SIGNED: [Signature] 3/24/23 DATE
 CHECKED BY: BY 4.10.23 DATE



GENERAL NOTES

PROJECT NAME: DA Southern Investigation	DATE: <u>3/23/23</u>	TIME ARRIVED: <u>0410</u>
PROJECT NUMBER: 4954309.0001.0000	AUTHOR: JJASSO	TIME LEFT: <u>1420</u>

WEATHER		
TEMPERATURE: <u>44</u> °F	WIND: <u>15</u> MPH	VISIBILITY: <u>overcast & Rain</u>

WORK / SAMPLING PERFORMED
WATER LEVELS
WELLS SAMPLED <u>MW-22-17, Dup #3, 22-14, 22-15, MW-129</u> <u>22-18, MW-128, 22-19, 22-20, 22-22D, 22-14</u> <u>F.B. E.B.</u>

PROBLEMS ENCOUNTERED	CORRECTIVE ACTION TAKEN

COMMUNICATION		
NAME	REPRESENTING	SUBJECT / COMMENTS

INVESTIGATION DERIVED WASTE SUMMARY		
WASTE MATRIX	QUANTITY	COMMENTS
DRUM		

SIGNED [Signature] 3/24/23 DATE

CHECKED BY BY 4.10.23 DATE



EQUIPMENT SUMMARY

PROJECT NAME:	DA Southern Investigation	SAMPLER NAME:	JJASSO
PROJECT NO.:	495430.0001.0000		

WATER LEVEL MEASUREMENTS COLLECTED WITH:

HERON DIPPER-T	TRC A2
NAME AND MODEL OF INSTRUMENT	SERIAL NUMBER (IF APPLICABLE)

PRODUCT LEVEL MEASUREMENTS COLLECTED WITH:

HERON	TRC A2
NAME AND MODEL OF INSTRUMENT	SERIAL NUMBER (IF APPLICABLE)

DEPTH TO BOTTOM OF WELL MEASUREMENTS COLLECTED WITH:

HERON DIPPER-T	TRC A2
NAME AND MODEL OF INSTRUMENT	SERIAL NUMBER (IF APPLICABLE)

PURGING METHOD

BLADDER PUMP (QED SAMPLE PRO)	TRC A2
NAME AND MODEL OF PUMP OR TYPE OF BAILER	SERIAL NUMBER (IF APPLICABLE)

SAMPLING METHOD

BLADDER PUMP (QED SAMPLE PRO)	TRC A2
NAME AND MODEL OF PUMP OR TYPE OF BAILER	SERIAL NUMBER (IF APPLICABLE)

NA	NA
NAME AND MODEL OF FILTRATION DEVICE	FILTER TYPE AND SIZE

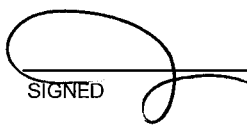
DEDICATED POLY TUBING	<input checked="" type="checkbox"/> LOW-FLOW SAMPLING EVENT
TUBING TYPE	

PURGE WATER DISPOSAL METHOD

GROUND
 DRUM
 POTW
 POLYTANK
 OTHER _____

DECONTAMINATION AND FIELD BLANK WATER SOURCE

STORE BOUGHT	STORE BOUGHT
POTABLE WATER SOURCE	DI WATER SOURCE



 SIGNED 3/28/23 DATE

 BY BY 4.10.23 DATE



WATER QUALITY METER CALIBRATION LOG

PROJECT NAME: DA Southern Investigation	MODEL: YSI 600XL	SAMPLER: JJASSO
PROJECT NO.: 495430.0001.0000	SERIAL #: TRC A2	DATE: 3/22/23

PH CALIBRATION CHECK

pH 7 (LOT #): 201834 (EXP. DATE): 9/24	pH 4 / 10 (LOT #): 261306 (EXP. DATE): 9/24	CAL. RANGE	TIME
POST-CAL. READING / STANDARD	POST-CAL. READING / STANDARD		
700 / 700	400 / 400	<input checked="" type="checkbox"/> WITHIN RANGE	0300
/	/	<input type="checkbox"/> WITHIN RANGE	
/	/	<input type="checkbox"/> WITHIN RANGE	
/	/	<input type="checkbox"/> WITHIN RANGE	

SPECIFIC CONDUCTIVITY CALIBRATION CHECK

CAL. READING (LOT #): 20K448 (EXP. DATE): 11/23	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
POST-CAL. READING / STANDARD			
1309 / 1309	20.0	<input checked="" type="checkbox"/> WITHIN RANGE	0300
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

ORP CALIBRATION CHECK

CAL. READING (LOT #): 10K 10016 (EXP. DATE): 9/24	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
POST-CAL. READING / STANDARD			
223 / 223	19.0	<input checked="" type="checkbox"/> WITHIN RANGE	0300
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

D.O. CALIBRATION CHECK

CAL. READING	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
POST-CAL. READING / SATURATED AIR			
9.03 / 9.03	19.0	<input checked="" type="checkbox"/> WITHIN RANGE	0300
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

TURBIDITY CALIBRATION CHECK

CALIBRATION READING (NTU)		CAL. RANGE	TIME
(LOT #): A1007 (EXP. DATE): 10/23	(LOT #): (EXP. DATE):		
POST-CAL. READING / STANDARD	POST-CAL. READING / STANDARD		
0 / 0	/	<input checked="" type="checkbox"/> WITHIN RANGE	0300
100 / 100	/	<input checked="" type="checkbox"/> WITHIN RANGE	0300
/	/	<input type="checkbox"/> WITHIN RANGE	
/	/	<input type="checkbox"/> WITHIN RANGE	

COMMENTS

<input type="checkbox"/> AUTOCAL SOLUTION	<input checked="" type="checkbox"/> STANDARD SOLUTION (S)
(LOT #):	LIST LOT NUMBERS AND EXPIRATION DATES UNDER CALIBRATION CHECK
(EXP. DATE):	
CALIBRATED PARAMETERS	CALIBRATION RANGES ⁽¹⁾
<input type="checkbox"/> pH	pH: +/- 0.2 S.U.
<input type="checkbox"/> COND	COND: +/- 1% OF CAL. STANDARD
<input type="checkbox"/> ORP	ORP: +/- 25 mV
<input type="checkbox"/> D.O.	D.O.: VARIES
<input type="checkbox"/> TURB	TURB: +/- 5% OF CAL. STANDARD
<input type="checkbox"/> _____	⁽¹⁾ CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE WATER QUALITY METER
<input type="checkbox"/> _____	

NOTES

PROBLEMS ENCOUNTERED

CORRECTIVE ACTIONS

SIGNED: [Signature] DATE: 3/24/23

CHECKED BY: BY 410.23 DATE: _____



WATER QUALITY METER CALIBRATION LOG

PROJECT NAME: DA Southern Investigation	MODEL: YSI 600XL	SAMPLER: JJASSO
PROJECT NO.: 495430.0001.0000	SERIAL #: TRC A2	DATE: <u>3/23/23</u>

PH CALIBRATION CHECK

pH 7 (LOT #): <u>261834</u> (EXP. DATE): <u>9/24</u>	pH 4 / 10 (LOT #): <u>261836</u> (EXP. DATE): <u>9/24</u>	CAL. RANGE	TIME
POST-CAL. READING / STANDARD	POST-CAL. READING / STANDARD		
<u>7.00 / 7.00</u>	<u>4.00 / 4.00</u>	<input checked="" type="checkbox"/> WITHIN RANGE	<u>0300</u>
/	/	<input type="checkbox"/> WITHIN RANGE	
/	/	<input type="checkbox"/> WITHIN RANGE	
/	/	<input type="checkbox"/> WITHIN RANGE	

SPECIFIC CONDUCTIVITY CALIBRATION CHECK

CAL. READING (LOT #): <u>26K498</u> (EXP. DATE): <u>11/23</u>	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
POST-CAL. READING / STANDARD			
<u>1309 / 1700</u>	<u>20C</u>	<input checked="" type="checkbox"/> WITHIN RANGE	<u>0300</u>
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

ORP CALIBRATION CHECK

CAL. READING (LOT #): <u>19K1001C</u> (EXP. DATE): <u>9/24</u>	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
POST-CAL. READING / STANDARD			
<u>223 / 223</u>	<u>19.0</u>	<input checked="" type="checkbox"/> WITHIN RANGE	<u>0300</u>
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

D.O. CALIBRATION CHECK

CAL. READING	TEMPERATURE (°CELSIUS)	CAL. RANGE	TIME
POST-CAL. READING / SATURATED AIR			
<u>9.03 / 9.03</u>	<u>19.0</u>	<input checked="" type="checkbox"/> WITHIN RANGE	<u>0300</u>
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	
/		<input type="checkbox"/> WITHIN RANGE	

TURBIDITY CALIBRATION CHECK

CALIBRATION READING (NTU)		CAL. RANGE	TIME
(LOT #): <u>A1007</u> (EXP. DATE): <u>11/23</u>	(LOT #): (EXP. DATE):		
POST-CAL. READING / STANDARD	POST-CAL. READING / STANDARD		
<u>0 / 0</u>	/	<input checked="" type="checkbox"/> WITHIN RANGE	<u>0300</u>
<u>10 / 10</u>	/	<input checked="" type="checkbox"/> WITHIN RANGE	<u>0300</u>
/	/	<input type="checkbox"/> WITHIN RANGE	
/	/	<input type="checkbox"/> WITHIN RANGE	

COMMENTS

<input type="checkbox"/> AUTOCAL SOLUTION	<input checked="" type="checkbox"/> STANDARD SOLUTION (S)
(LOT #):	LIST LOT NUMBERS AND EXPIRATION DATES UNDER CALIBRATION CHECK
(EXP. DATE):	
CALIBRATED PARAMETERS	CALIBRATION RANGES ⁽¹⁾
<input type="checkbox"/> pH	pH: +/- 0.2 S.U.
<input type="checkbox"/> COND	COND: +/- 1% OF CAL. STANDARD
<input type="checkbox"/> ORP	ORP: +/- 25 mV
<input type="checkbox"/> D.O.	D.O.: VARIES
<input type="checkbox"/> TURB	TURB: +/- 5% OF CAL. STANDARD
<input type="checkbox"/> _____	⁽¹⁾ CALIBRATION RANGES ARE SPECIFIC TO THE MODEL OF THE WATER QUALITY METER
<input type="checkbox"/> _____	

NOTES

PROBLEMS ENCOUNTERED

CORRECTIVE ACTIONS

SIGNED [Signature] 3/24/23 DATE

CHECKED BY BY 4.10.23 DATE



WATER LEVEL DATA

PROJECT NAME: DA EASTERN Boundry	DATE: 3/20/23
PROJECT NUMBER: 495430.0000.0000	AUTHOR: J JASSO

WELL LOCATION	TIME	REFERENCE	DEPTH TO WATER (FEET)	DEPTH TO BOTTOM (FEET)	DEPTH TO PRODUCT (FEET)	WATER ELEVATION
MW 113	0603	T PVC	8.69	12.55	NA	NM
MW 119	0606		6.93	9.50		
MW 120	0609		4.49	7.33		
MW 112	0706		5.00	8.78		
MW 111	0710		5.76	8.80		
MW 110	0713		6.30	9.93		
MW 109	0716		6.22	9.97		
MW 108	0722		6.62	9.90		
MW 107	0724		8.74	12.13		
MW 106	0729		7.86	12.35		
MW 121	0740		9.66	12.00		
MW 105	0750		10.67	11.51		
MW 104	0747		9.55	20.16		
MW 22-04	0801		4.88	11.73		
MW 22-05	0824		3.98	10.58		
MW 22-06	0816		5.07	11.81		
MW 22-03	0830		5.64	13.81		
MW 22-02	0836		9.28	14.86		
MW 22-01	0845	12.33	16.71			

ALL WATER LEVELS MUST INCLUDE REFERENCE POINT AND TAPE CORRECTION FACTOR (E.G., 1.1 + 0.00 T/PVC).

SIGNED [Signature] 3/24/23 DATE

CHECKED BY BY 4.10.23 DATE



WATER LEVEL DATA

PROJECT NAME: DA EASTERN Boundry		DATE: 3/10/23				
PROJECT NUMBER: 495430.0000.0000		AUTHOR: J JASSO				
WELL LOCATION	TIME	REFERENCE	DEPTH TO WATER (FEET)	DEPTH TO BOTTOM (FEET)	DEPTH TO PRODUCT (FEET)	WATER ELEVATION
MW-22-07	0813	T PVC	11.04	22.35	NA	NM
MW-22-08	0811		11.70	22.78		
MW-22-09	0910		8.80	21.30		
MW-22-10	0814		11.79	23.40		
MW-22-11	858		8.02	16.67		
MW-22-12	0823		11.78	23.44		
MW-22-13	0852		9.11	18.05		
MW-22-14	0850		11.72	21.34		
MW-22-15	0830		12.80	22.25		
MW-22-16	0828		12.73	23.14		
MW-22-17	0819		11.19	22.38		
MW-22-18	0835		12.83	23.60		
MW-22-19	0841		12.28	24.90		
MW-22-20	0843		13.28	25.25		
MW-22-21	0808		12.53	25.25		
MW-22-22D	0846		29.78	100. Plus		
MW-101	0802		8.40	12.20		
MW-103	0756		9.75	12.40		
MW-128	0838		9.97	12.95		
MW-129	0833		9.73	13.05		
MW-100	0856		8.75	12.40		
MW-101	0802	8.40	12.20			
MW-102	0800		Dry	8.20		

ALL WATER LEVELS MUST INCLUDE REFERENCE POINT AND TAPE CORRECTION FACTOR (E.G., 1.1 + 0.00 T/PVC).

SIGNED [Signature] 3/10/23 DATE

CHECKED BY [Signature] 4.10.23 DATE



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW, <u>BJ</u> DATE: <u>3/20/13</u>	BY: <u>BJ</u> DATE: <u>4.10.13</u>

SAMPLE ID: NW-103 WELL DIAMETER: 2" 4" 6" OTHER

WELL MATERIAL: PVC SS IRON GALVANIZED STEEL OTHER

SAMPLE TYPE: GW WW SW DI LEACHATE OTHER

PURGING	TIME: <u>0422</u>	DATE: <u>3/20/13</u>	SAMPLE	TIME: <u>0453</u>	DATE: <u>3/20/13</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP			PH: <u>7.60</u> SU	CONDUCTIVITY: <u>628</u> umhos/cm	
<input type="checkbox"/> BAILER			ORP: <u>-116.0</u> mV	DO: <u>1.0</u> mg/L	
DEPTH TO WATER: <u>9.75</u> T/ PVC			TURBIDITY: <u>3.9</u> NTU		
DEPTH TO BOTTOM: <u>1240</u> T/ PVC			<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: <u>NM</u> <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS			TEMPERATURE: <u>9.0</u> °C	OTHER:	
VOLUME REMOVED: <u>6</u> <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS			COLOR: <u>Clear</u>	ODOR: <u>None</u>	
COLOR: <u>Clear</u>	ODOR: <u>None</u>		FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY			FILTRATE COLOR: <u>NA</u>	FILTRATE ODOR: <u>NA</u>	
<input type="checkbox"/> NONE <input checked="" type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP-		
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER			COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
0422	200	4.4	644	175.0	9.0	26	9.3	9.75	INITIAL
0427		7.74	620	-76.0	1.1	5.0	9.1	9.80	1
0432		7.67	625	-100	1.1	4.3	9.1	9.80	2
0437		7.64	626	-115.0	1.0	3.8	9.0	9.80	3
0442		7.60	628	-115.8	1.0	3.9	9.0	9.80	4
0447		7.60	626	-115.7	1.0	4.0	9.0	9.80	5
0453		7.6	628	-116.0	1.0	3.9	9.0	9.80	6

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

PH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____								
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
3	1L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
2	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
5	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	

SHIPPING METHOD: <u>Courier</u>	DATE SHIPPED: <u>3.27.13</u>	AIRBILL NUMBER: <u>NA</u>
COC NUMBER: <u>NA</u>	SIGNATURE:	DATE SIGNED: <u>3/24/13</u>



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW, JJ	DATE: 3/24/23
	BY: BSY	DATE: 4.10.23

SAMPLE ID: MW 101	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: 0518	DATE: 3/23/23	SAMPLE	TIME: 0553	DATE: 3/23/23
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: 7.50	SU	CONDUCTIVITY: 951	umhos/cm	
	ORP: -380	mV	DO: 4.2	mg/L	
DEPTH TO WATER: 8.40	T/ PVC		TURBIDITY: 5.9	NTU	
DEPTH TO BOTTOM: 12.30	T/ PVC		<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: NM	<input type="checkbox"/> LITERS	<input type="checkbox"/> GALLONS	TEMPERATURE: 9.1	°C	
VOLUME REMOVED: 7	<input checked="" type="checkbox"/> LITERS	<input type="checkbox"/> GALLONS	COLOR: (ver)	ODOR: none	
COLOR: Brown	ODOR: none		FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY			FILTRATE COLOR: NA	FILTRATE ODOR: NA	
<input type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input checked="" type="checkbox"/> VERY			QC SAMPLE: <input type="checkbox"/> MS/MSD <input checked="" type="checkbox"/> DUP- 401		
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER	COMMENTS:				

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
0518	200	7.66	1115	-33.7	8.2	1100	7.9	8.37	INITIAL
0523		7.47	1190	-60.0	2.73	37	9.3	8.40	1
0528		7.49	1114	-56.0	3.1	7.3	9.3	8.40	2
0533		7.49	1068	-51.0	3.5	6.2	9.2	8.40	3
0538		7.49	1000	-40	4.0	5.8	9.2	8.40	4
0543		7.49	974	-38.0	4.3	6.0	9.2	8.40	5
0548		7.49	960	-38.0	4.3	6.0	9.1	8.40	6
0553		7.50	951	-38.0	4.2	5.9	9.1	8.40	7

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

PH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____									
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
6	1 L	AMBER	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
2	125 mL	PLASTIC	B	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
6	15 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
10	40 mL	VOA	E	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
6	40 mL	VOA	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N

SHIPPING METHOD: Courier	DATE SHIPPED: 3.27.23	AIRBILL NUMBER: NA
COC NUMBER: NA	SIGNATURE:	DATE SIGNED: 3/24/23



WATER SAMPLE LOG

PROJECT NAME: DA Southern Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW, (U) DATE: 3/24/23	BY: (B) DATE: 4.10.23

SAMPLE ID: MW 22-09	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: 0637	DATE: 3/22/23	SAMPLE	TIME: 0717	DATE: 3/22/23
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: 7.36	SU	CONDUCTIVITY: 1498	umhos/cm	
DEPTH TO WATER: 8.61 T/ PVC	ORP: -132.8	mV	DO: 0.05	mg/L	
DEPTH TO BOTTOM: 21.30 T/ PVC	TURBIDITY: 8.8	NTU	<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: NM <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	TEMPERATURE: 11.8	°C	OTHER:		
VOLUME REMOVED: 0 <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	COLOR: Clear		ODOR: none		
COLOR: Tanish	ODOR: none		FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY: <input type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input checked="" type="checkbox"/> VERY	FILTRATE COLOR: NA		FILTRATE ODOR: NA		
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER	QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP-		COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
0637	200	7.58	1425	-5.1	9.5	2000	8.7	8.6	INITIAL
0643		7.33	1484	-101.0	0.59	200	11.5	8.9	1
0647		7.35	1496	-112.0	0.77	32	11.6	8.9	2
0652		7.35	1502	-130.0	0.23	15.0	11.8	8.9	3
0657		7.36	1504	-130.0	0.15	11	11.8	8.9	4
0702		7.36	1491	-131.0	0.12	9.7	11.8	8.9	5
0707		7.36	1494	-131.5	0.10	8.8	11.8	8.9	6
0712		7.36	1500	-132.0	0.07	8.8	11.8	8.9	7
0717		7.36	1498	-132.3	0.05	8.8	11.8	8.9	8

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F -							
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	1 L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
1	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
3	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
5	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
3	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N

SHIPPING METHOD: Courier	DATE SHIPPED: 3.27.23	AIRBILL NUMBER: NA
COC NUMBER: NA	SIGNATURE:	DATE SIGNED: 3/24/23



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW, J DATE: 3/24/23	BY: B7 DATE: 4.10.23

SAMPLE ID: MW-22-21	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: 0750	DATE: 3/22/23	SAMPLE	TIME: 0825	DATE: 3/22/23
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: 7.54	SU	CONDUCTIVITY: 1092	umhos/cm	
DEPTH TO WATER: 12.53 T/ PVC	ORP: -121.0	mV	DO: 0.09	mg/L	
DEPTH TO BOTTOM: 25.21 T/ PVC	TURBIDITY: 7.7	NTU			
WELL VOLUME: NM <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		TEMPERATURE: 10.3	°C	OTHER:
VOLUME REMOVED: 7 <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	COLOR: Clear		COLOR:		ODOR: none
COLOR: Brownish	ODOR: none		FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY: <input type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input checked="" type="checkbox"/> VERY	FILTRATE COLOR: NA		FILTRATE ODOR: NA		
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER	QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP-		COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
0210	24	7.85	713	-26.1	9.0	1000	9.3	12.4	INITIAL
0755		7.53	1097	-86.0	0.85	75	10.3	12.6	1
0800		7.53	1102	-103.0	0.41	15.5	10.3	12.6	2
0805		7.57	1160	-110.0	0.30	13	10.1	12.6	3
0810		7.52	1096	-115.7	0.23	11.	10.1	12.6	4
0815		7.52	1084	-120.5	0.14	8.0	10.1	12.6	5
0820		7.54	1084	-121.0	0.11	7.8	10.3	12.6	6
0825		7.54	1092	-121.0	0.09	7.7	10.3	12.6	7

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____								
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
3	1 L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
1	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
5	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	

SHIPPING METHOD: Courier	DATE SHIPPED: 3.27.23	AIRBILL NUMBER: NA
COC NUMBER: NA	SIGNATURE:	DATE SIGNED: 3/24/23



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW, <u>AW</u>	DATE: <u>3/21/23</u>
	BY: <u>BY</u>	DATE: <u>4.10.23</u>

SAMPLE ID: <u>MW-22-08</u>	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: <u>0854</u>	DATE: <u>3/22/23</u>	SAMPLE	TIME: <u>0919</u>	DATE: <u>3/22/23</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: <u>7.59</u>	SU	CONDUCTIVITY: <u>1084</u>	umhos/cm	
DEPTH TO WATER: <u>11.70</u> T/ PVC	ORP: <u>-141.0</u>	mV	DO: <u>0.01</u>	mg/L	
DEPTH TO BOTTOM: <u>22.74</u> T/ PVC	TURBIDITY: <u>5.9</u>	NTU	<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: <u>NM</u> <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	TEMPERATURE: <u>10.6</u>	°C	OTHER: _____		
VOLUME REMOVED: <u>5</u> <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	COLOR: <u>clear</u>		ODOR: <u>none</u>		
COLOR: <u>cloudy</u>	ODOR: <u>none</u>		FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY: <input type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input checked="" type="checkbox"/> MODERATE <input type="checkbox"/> VERY	FILTRATE COLOR: <u>NA</u>		FILTRATE ODOR: <u>NA</u>		
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER	QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP-		COMMENTS: _____		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
<u>0854</u>	<u>200</u>	<u>7.66</u>	<u>927</u>	<u>-9.0</u>	<u>8.7</u>	<u>7.0</u>	<u>9.0</u>	<u>11.59</u>	INITIAL
<u>0859</u>		<u>7.62</u>	<u>1044</u>	<u>-104.0</u>	<u>041</u>	<u>11.3</u>	<u>10.4</u>	<u>11.60</u>	<u>1</u>
<u>0904</u>		<u>7.60</u>	<u>1069</u>	<u>-130.0</u>	<u>014</u>	<u>8.2</u>	<u>10.6</u>	<u>11.60</u>	<u>2</u>
<u>0909</u>		<u>7.60</u>	<u>1068</u>	<u>-140.0</u>	<u>005</u>	<u>6.0</u>	<u>10.6</u>	<u>11.60</u>	<u>3</u>
<u>0914</u>		<u>7.59</u>	<u>1080</u>	<u>-140.5</u>	<u>005</u>	<u>6.0</u>	<u>10.6</u>	<u>11.60</u>	<u>4</u>
<u>0919</u>		<u>7.59</u>	<u>1084</u>	<u>-141.0</u>	<u>005</u>	<u>5.9</u>	<u>10.6</u>	<u>11.60</u>	<u>5</u>

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

PH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____									
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
<u>3</u>	<u>1 L</u>	<u>AMBER</u>	<u>A</u>	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N		<u>125 mL</u>	<u>AMBER</u>	<u>A</u>	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
<u>1</u>	<u>125 mL</u>	<u>PLASTIC</u>	<u>B</u>	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
<u>3</u>	<u>15 mL</u>	<u>PLASTIC</u>	<u>A</u>	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
<u>5</u>	<u>40 mL</u>	<u>VOA</u>	<u>E</u>	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
<u>2</u>	<u>40 mL</u>	<u>VOA</u>	<u>A</u>	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N

SHIPPING METHOD: <u>Courier</u>	DATE SHIPPED: <u>3.27.23</u>	AIRBILL NUMBER: <u>NA</u>
COC NUMBER: <u>NA</u>	SIGNATURE:	DATE SIGNED: <u>3/24/23</u>



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW, JJ	DATE: 3/24/23
	BY: BS	DATE: 4/10/23

SAMPLE ID: MW-22-07	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: 0948	DATE: 3/22/23	SAMPLE	TIME: 1013	DATE: 3/22/23
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: 7.49	SU	CONDUCTIVITY: 911	umhos/cm	
DEPTH TO WATER: 1104 T/ PVC	ORP: -140.8	mV	DO: 0.08	mg/L	
DEPTH TO BOTTOM: 2235 T/ PVC	TURBIDITY: 6.9	NTU	<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: NM <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	TEMPERATURE: 10.1	°C	OTHER:		
VOLUME REMOVED: 5 <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	COLOR: clear		ODOR: none		
COLOR: cloudy	ODOR: none		FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY <input type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input checked="" type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE COLOR: NA	FILTRATE ODOR: NA	
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER			QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP-		
COMMENTS:					

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
0948	20	7.82	889	-16.5	8.0	150	9.7	1108	INITIAL
0953		7.49	862	-106.0	0.48	13.3	10.3	1116	1
0956		7.48	890	-131.0	0.15	7.8	10.4	1116	2
1003		7.48	899	-140.5	0.10	6.9	10.4	1116	3
1008		7.49	908	-140.5	0.08	7.0	10.5	1116	4
1013		7.49	911	-140.8	0.08	6.9	10.5	1116	5
									6

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

PH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____									
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
	1 L	AMBER	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
	125 mL	PLASTIC	B	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
	15 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
	40 mL	VOA	E	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
	40 mL	VOA	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N

SHIPPING METHOD: Courier	DATE SHIPPED: 3.27.23	AIRBILL NUMBER: NA
COC NUMBER: NA	SIGNATURE:	DATE SIGNED: 3/24/23



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW, <u>W</u>	DATE: <u>3/14/23</u>
	BY: <u>BY</u>	DATE: <u>4.10.23</u>

SAMPLE ID: <u>MW-22-10</u>	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: <u>1044</u>	DATE: <u>3/22/23</u>	SAMPLE	TIME: <u>1114</u>	DATE: <u>3/22/23</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: <u>7.45</u> SU	CONDUCTIVITY: <u>1323</u> umhos/cm	ORP: <u>-160.3</u> mV	DO: <u>0.13</u> mg/L	
DEPTH TO WATER: <u>11.79</u> T/ PVC	TURBIDITY: <u>8.0</u> NTU				
DEPTH TO BOTTOM: <u>2340</u> T/ PVC	<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY				
WELL VOLUME: <u>NM</u> <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	TEMPERATURE: <u>11.1</u> °C	OTHER: _____			
VOLUME REMOVED: <u>6</u> <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	COLOR: <u>clear</u>	ODOR: <u>none</u>			
COLOR: <u>clear</u>	ODOR: <u>slight</u>	FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
TURBIDITY: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		FILTRATE COLOR: <u>NA</u>		FILTRATE ODOR: <u>NA</u>	
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER		COMMENTS: _____			

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1044	200	7.52	821	-77.5	8.3	18.0	11.6	11.78	INITIAL
1049		7.49	1908	-151.0	0.45	6.4	11.3	11.83	1
1054		7.47	1496	-150.0	0.44	7.0	11.1	11.82	2
1059		7.46	1410	-150.3	0.37	7.8	11.0	11.83	3
1104		7.46	1396	-159.8	0.27	8.0	11.1	11.83	4
1109		7.45	1348	-160.0	0.16	8.0	11.1	11.83	5
1114		7.45	1323	-160.3	0.13	8.0	11.1	11.83	6

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____											
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED			NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		
3	1 L	AMBER	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N			125 mL	AMBER	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N	
1	125 mL	PLASTIC	B	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N						<input type="checkbox"/> Y	<input type="checkbox"/> N	
3	15 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N						<input type="checkbox"/> Y	<input type="checkbox"/> N	
5	40 mL	VOA	E	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N						<input type="checkbox"/> Y	<input type="checkbox"/> N	
3	40 mL	VOA	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N						<input type="checkbox"/> Y	<input type="checkbox"/> N	

SHIPPING METHOD: <u>Courier</u>	DATE SHIPPED: <u>3.27.23</u>	AIRBILL NUMBER: <u>NA</u>
COC NUMBER: <u>NA</u>	SIGNATURE:	DATE SIGNED: <u>3/24/23</u>



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW/BJ DATE: 3/24/23	BY: BV DATE: 4.10.23

SAMPLE ID: MW-22-12 WELL DIAMETER: 2" 4" 6" OTHER

WELL MATERIAL: PVC SS IRON GALVANIZED STEEL OTHER

SAMPLE TYPE: GW VVW SW DI LEACHATE OTHER

PURGING	TIME: 1147	DATE: 3/22/23	SAMPLE	TIME: 1217	DATE: 3/22/23
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: 7.41	SU	CONDUCTIVITY: 1137	umhos/cm	
DEPTH TO WATER: 11.76 T/ PVC	ORP: -1330	mV	DO: 0.31	mg/L	
DEPTH TO BOTTOM: 23.44 T/ PVC	TURBIDITY: 10.0	NTU	<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: NM <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	TEMPERATURE: 9.9	°C	OTHER:		
VOLUME REMOVED: 6 <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	COLOR: Clear		ODOR: non		
COLOR: Tanish	ODOR: slight		FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY <input type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input checked="" type="checkbox"/> VERY			FILTRATE COLOR: NA	FILTRATE ODOR: NA	
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER			QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP-		
COMMENTS:					

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1147	200	7.80	605	-58.0	9.0	1300	9.7	11.70	INITIAL
1152		7.37	1479	-140.0	035	33.5	10.2	1180	1
1157		7.37	1477	-145.3	026	26.7	10.2	1180	2
1202		7.46	1237	-147.0	028	11.7	10.0	1180	3
1207		7.42	1142	-132.8	034	10.5	9.9	1180	4
1212		7.41	1138	-132.5	037	10.0	9.9	1180	5
1217		7.41	1137	-1330	035	10.0	9.9	1180	6

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____								
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
3	1 L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
1	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
5	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	

SHIPPING METHOD: Courier DATE SHIPPED: 3.27.23 AIRBILL NUMBER: NA

COC NUMBER: NA SIGNATURE: [Signature] DATE SIGNED: 3/24/23



WATER SAMPLE LOG

PROJECT NAME: DA Southern Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW, JJ	DATE: 3/21/23
	BY: BY	DATE: 4.10.23

SAMPLE ID: MW-22-11	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: 1245	DATE: 3/22/23	SAMPLE	TIME: 1325	DATE: 3/22/23
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: 7.44	SU	CONDUCTIVITY: 783	umhos/cm	
	ORP: -1490	mV	DO: 0.0	mg/L	
DEPTH TO WATER: 802 T/ PVC	TURBIDITY: 9.0	NTU	<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
DEPTH TO BOTTOM: 16.6 T/ PVC	TEMPERATURE: 10.9	°C	OTHER:		
WELL VOLUME: NM <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	COLOR: Clear		ODOR: none		
VOLUME REMOVED: 0 <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO				
COLOR: TANISHA	ODOR: none	FILTRATE COLOR: NA			
		FILTRATE ODOR: NA			
		QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP-			
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER	COMMENTS:				

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1245	200	7.67	1165	-79.5	9.5	1700	10.3	795	INITIAL
1250		7.61	1046	-120.0	1.0	465	11.0	803	1
1255		7.56	862	-135.0	0.38	206	10.9	803	2
1300		7.54	775	-19.5	1.48	87	10.8	803	3
1305		7.48	704	-110.0	0.26	13	10.7	803	4
1310		7.45	696	-130.1	0.17	10	10.8	803	5
1315		7.45	738	-148.5	0.13	9.0	10.8	803	6
1320		7.44	767	-149.0	0.10	8.9	10.9	803	7
1325		7.44	784	-149.0	0.10	9.0	10.9	803	8

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____									
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		
3	1 L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N		
1	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N		
3	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N		
5	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N		
3	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N		

SHIPPING METHOD: Courier	DATE SHIPPED: 3.27.23	AIRBILL NUMBER: NA
COC NUMBER: NA	SIGNATURE:	DATE SIGNED: 3/24/23



WATER SAMPLE LOG

PROJECT NAME: DA Southern Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW, JJ DATE: 3/21/23	BY: BV DATE: 4/10/23

SAMPLE ID: MW-22-13	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: 1349	DATE: 3/22/23	SAMPLE	TIME: 1414	DATE: 3/22/23
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: 7.35	SU	CONDUCTIVITY: 1478	umhos/cm	
DEPTH TO WATER: 9.11 T/ PVC	ORP: -150.3	mV	DO: 6.16	mg/L	
DEPTH TO BOTTOM: 180 T/ PVC	TURBIDITY: 6.9	NTU	<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: NM <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	TEMPERATURE: 10.7	°C	OTHER:		
VOLUME REMOVED: 5 <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	COLOR: (clear)	ODOR: non	FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
COLOR: Brown	ODOR: non	FILTRATE COLOR: NA	FILTRATE ODOR: NA		
TURBIDITY: <input type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input checked="" type="checkbox"/> VERY	QC SAMPLE: <input type="checkbox"/> MS/MSD <input checked="" type="checkbox"/> DUP- 02	COMMENTS:			
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER					

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1349	200	7.53	1433	-24.8	8.5	900	10.4	9.00	INITIAL
1354		7.35	1482	-114.0	0.46	9.2	10.5	9.15	1
1359		7.35	1486	-145.0	0.10	10.5	10.6	9.15	2
1404		7.35	1479	-150.0	0.10	7.0	10.7	9.15	3
1409		7.35	1477	-150.3	0.10	6.8	10.7	9.15	4
1414		7.35	1478	-150.3	0.10	6.9	10.7	9.15	5
1414								9.15	6

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____								
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
3	1 L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
5	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	

SHIPPING METHOD: Courier	DATE SHIPPED: 3.27.23	AIRBILL NUMBER: NA
COC NUMBER: NA	SIGNATURE:	DATE SIGNED: 3/24/23



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW, JJ	DATE: 3/21/23
SAMPLE ID: MW 22-17		DATE: 4/10/23
WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER		
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER		
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER		

PURGING	TIME: 0410	DATE: 3/23/23	SAMPLE	TIME: 0440	DATE: 3/23/23
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: 7.45	SU	CONDUCTIVITY: 1135	umhos/cm	
DEPTH TO WATER: 11.19 T/ PVC	ORP: -190.0	mV	DO: 0.13	mg/L	
DEPTH TO BOTTOM: 22.38 T/ PVC	TURBIDITY: 5.1	NTU	<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: NM <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	TEMPERATURE: 10.6	°C	OTHER:		
VOLUME REMOVED: 4 <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	COLOR: Clear		ODOR: None		
COLOR: Cloudy	ODOR: None		FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY: <input type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input checked="" type="checkbox"/> MODERATE <input type="checkbox"/> VERY	FILTRATE COLOR: NA		FILTRATE ODOR: NA		
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER	QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP-		COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
0410	200	4.0	1849	134.5	9.0	6.5	11.4	11.15	INITIAL
0415		7.45	2061	-190.0	1.0	8.7	11.1	11.20	1
0420		7.47	1460	-190.0	0.31	6.3	10.6	11.20	2
0425		7.46	1140	-198.8	0.26	6.2	10.6	11.20	3
0430		7.46	1145	-190.0	0.19	5.5	10.6	11.20	4
0435		7.45	1140	-190.5	0.13	5.5	10.6	11.20	5
0440		7.45	1135	-190.0	0.13	5.5	10.6	11.20	6

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____							
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	1 L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
1	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
3	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
5	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N
3	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N

SHIPPING METHOD: Courier	DATE SHIPPED: 3.27.23	AIRBILL NUMBER: NA
COC NUMBER: NA	SIGNATURE:	DATE SIGNED: 3/24/23



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation		PREPARED		CHECKED	
PROJECT NUMBER: 495430.0001		BY: AW, JJ	DATE: 3/24/23	BY: BY	DATE: 3/10/23
SAMPLE ID: MW-22-16		WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER			
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER					
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER					
PURGING	TIME: 0505	DATE: 3/23/23	SAMPLE	TIME: 0525	DATE: 3/23/23
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER		PH: 7.36 SU		CONDUCTIVITY: 1355 umhos/cm	
DEPTH TO WATER: 12.73 T/ PVC		ORP: -169.3 mV		DO: 0.14 mg/L	
DEPTH TO BOTTOM: 23.16 T/ PVC		TURBIDITY: 6.9 NTU		<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY	
WELL VOLUME: NM <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS		TEMPERATURE: 11.4 °C		OTHER:	
VOLUME REMOVED: 6 <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS		COLOR: CLR		ODOR: none	
COLOR: cloudy		ODOR: none		FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
TURBIDITY: <input type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input checked="" type="checkbox"/> MODERATE <input type="checkbox"/> VERY		FILTRATE COLOR: NA		FILTRATE ODOR: NA	
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER		QC SAMPLE: <input type="checkbox"/> MS/MSD <input checked="" type="checkbox"/> DUP-03		COMMENTS:	

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
0505	2.0	7.76	1344	-56.0	8.7	6.0	10.9	1269	INITIAL
0510		7.40	1631	-160.0	1.5	18.1	11.4	1275	1
0515		7.38	1387	-152.0	0.44	11.8	11.3	1275	2
0520		7.37	1410	-168.0	0.33	8.7	11.3	1275	3
0525		7.36	1380	-168.0	0.25	7.0	11.4	1275	4
0530		7.36	1371	-164.0	0.17	6.9	11.4	1280	5
0535		7.36	1355	-169.3	0.14	6.9	11.4	1280	6

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

PH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____									
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
6	1 L	AMBER	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
2	125 mL	PLASTIC	B	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
6	15 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
10	40 mL	VOA	E	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
6	40 mL	VOA	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N

SHIPPING METHOD: Courier	DATE SHIPPED: 3.27.23	AIRBILL NUMBER: NA
COC NUMBER: NA	SIGNATURE:	DATE SIGNED: 3/24/23



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW/JJ	DATE: 3/14/23
	BY: BY	DATE: 4/10/23

SAMPLE ID: MW-22-15	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: 0622	DATE: 3/13/23	SAMPLE	TIME: 0652	DATE: 3/13/23
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: 7.33	SU	CONDUCTIVITY: 1109	umhos/cm	
DEPTH TO WATER: 1280 T/ PVC	ORP: -204.0	mV	DO: 0.11	mg/L	
DEPTH TO BOTTOM: 220 T/ PVC	TURBIDITY: 2.7	NTU			
WELL VOLUME: NM <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	TEMPERATURE: 10.6	°C	OTHER:		
VOLUME REMOVED: 4 <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	COLOR: clear		ODOR: none		
COLOR: clear	ODOR: none		FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY <input type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input checked="" type="checkbox"/> MODERATE <input type="checkbox"/> VERY	FILTRATE COLOR: NA		FILTRATE ODOR: NA		
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER	QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP-		COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
0622	200	7.76	647	-94.5	9.8	35.0	10.5	1280	INITIAL
0637		7.30	1431	-193.5	0.02	5.0	10.6	1275	1
0632		7.34	1132	-197.0	0.09	3.5	10.5	1275	2
0637		7.33	1109	-197.5	0.15	3.4	10.5	1275	3
0642		7.33	1107	-205.8	0.10	3.0	10.5	1275	4
0647		7.32	1110	-205.8	0.11	2.8	10.5	1275	5
0652		7.33	1109	-206.0	0.11	2.7	10.6	1275	6

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

PH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____								
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
3	1 L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
1	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
5	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	

SHIPPING METHOD: Courier	DATE SHIPPED: 3.27.23	AIRBILL NUMBER: NA
COC NUMBER: NA	SIGNATURE:	DATE SIGNED: 3/14/23



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW, <u>BJ</u>	DATE: <u>3/23/23</u>
	BY: <u>BY</u>	DATE: <u>4/10/23</u>

SAMPLE ID: <u>MW-129</u>	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: <u>0736</u>	DATE: <u>3/23/23</u>	SAMPLE	TIME: <u>0801</u>	DATE: <u>3/23/23</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: <u>7.79</u> SU	CONDUCTIVITY: <u>1155</u> umhos/cm	ORP: <u>-199.0</u> mV	DO: <u>0.6</u> mg/L	
DEPTH TO WATER: <u>9.73</u> T/ PVC	TURBIDITY: <u>6.6</u> NTU	<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			
DEPTH TO BOTTOM: <u>1305</u> T/ PVC	TEMPERATURE: <u>61</u> °C	OTHER: _____			
WELL VOLUME: <u>NM</u> <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	COLOR: <u>608</u>	ODOR: <u>NOX</u>			
VOLUME REMOVED: <u>5</u> <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO				
COLOR: <u>Brownish</u>	ODOR: <u>NOX</u>				
TURBIDITY <input type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input checked="" type="checkbox"/> VERY			FILTRATE COLOR: <u>NA</u> FILTRATE ODOR: <u>NA</u> QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP- _____		
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER			COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OF L)
<u>0736</u>	<u>200</u>	<u>8.00</u>	<u>483</u>	<u>-77.0</u>	<u>9.0</u>	<u>200</u>	<u>10.3</u>	<u>965</u>	INITIAL
<u>0741</u>		<u>7.76</u>	<u>1080</u>	<u>-147.0</u>	<u>0.8</u>	<u>25</u>	<u>10.1</u>	<u>983</u>	<u>1</u>
<u>0746</u>		<u>7.78</u>	<u>1134</u>	<u>-180.0</u>	<u>0.17</u>	<u>7.8</u>	<u>10.1</u>	<u>983</u>	<u>2</u>
<u>0751</u>		<u>7.79</u>	<u>1145</u>	<u>-198.5</u>	<u>0.10</u>	<u>6.6</u>	<u>10.1</u>	<u>983</u>	<u>3</u>
<u>0756</u>		<u>7.78</u>	<u>1150</u>	<u>-198.8</u>	<u>0.10</u>	<u>6.6</u>	<u>10.1</u>	<u>983</u>	<u>4</u>
<u>0801</u>		<u>7.79</u>	<u>1155</u>	<u>-199.0</u>	<u>0.10</u>	<u>6.6</u>	<u>10.1</u>	<u>982</u>	<u>5</u>

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

PH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____							
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
<u>3</u>	<u>1L</u>	<u>AMBER</u>	<u>A</u>	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N		<u>125 mL</u>	<u>AMBER</u>	<u>A</u>	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
<u>3</u>	<u>125 mL</u>	<u>PLASTIC</u>	<u>B</u>	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
<u>3</u>	<u>15 mL</u>	<u>PLASTIC</u>	<u>A</u>	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
<u>5</u>	<u>40 mL</u>	<u>VOA</u>	<u>E</u>	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
<u>3</u>	<u>40 mL</u>	<u>VOA</u>	<u>A</u>	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input checked="" type="checkbox"/> N

SHIPPING METHOD: <u>Courier</u>	DATE SHIPPED: <u>3.27.23</u>	AIRBILL NUMBER: <u>NA</u>
COC NUMBER: <u>NA</u>	SIGNATURE:	DATE SIGNED: <u>3/24/23</u>



WATER SAMPLE LOG

PROJECT NAME: DA Southern Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW/JJ	DATE: 2/21/23
	BY: BY	DATE: 4.10.23

SAMPLE ID: MW-22-18	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: 0833	DATE: 3/23/23	SAMPLE	TIME: 0908	DATE: 3.23.23
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: 7.25	SU	CONDUCTIVITY: 1209	umhos/cm	
DEPTH TO WATER: 1283 T/ PVC	ORP: -187.3	mV	DO: 0.10	mg/L	
DEPTH TO BOTTOM: 2360 T/ PVC	TURBIDITY: 9.8	NTU	<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: NM <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	TEMPERATURE: 10.9	°C	OTHER: -		
VOLUME REMOVED: 7 <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	COLOR: CLR		ODOR: NON		
COLOR: Clear	ODOR: NON	FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
TURBIDITY: <input type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input checked="" type="checkbox"/> VERY	FILTRATE COLOR: NA	FILTRATE ODOR: NA			
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER	QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP-	COMMENTS:			

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
0833	200	7.24	1205	-74.7	8.0	100	10.4	1270	INITIAL
0838		7.24	1209	-115.0	0.70	40	10.8	1285	1
0843		7.26	1204	-150.3	0.10	22	10.8	1285	2
0848		7.26	1206	-170.0	0.10	15.0	10.8	1285	3
0853		7.25	1205	-185.0	0.10	10	10.8	1285	4
0858		7.25	1208	-186.5	0.09	9.9	10.9	1285	5
0903		7.25	1209	-187.0	0.10	9.7	10.9	1285	6
0908		7.25	1209	-187.3	0.10	9.8	10.9	1285	7

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F -							
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	1 L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
1	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
3	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
5	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
2	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input checked="" type="checkbox"/> N

SHIPPING METHOD: Courier	DATE SHIPPED: 3.27.23	AIRBILL NUMBER: NA
COC NUMBER: NA	SIGNATURE:	DATE SIGNED: 3/24/23



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AWJJ	DATE: 3/24/23
	BY: BY	DATE: 4.10.23

SAMPLE ID: MW-128	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: 0935	DATE: 3/23/23	SAMPLE	TIME: 1000	DATE: 3/23/23
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: 7.57	SU	CONDUCTIVITY: 1196	umhos/cm	
	ORP: -70.3	mV	DO: 2.3	mg/L	
DEPTH TO WATER: 9.97 T/ PVC	TURBIDITY: 3.0	NTU			
DEPTH TO BOTTOM: 12.91 T/ PVC	<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY				
WELL VOLUME: NM <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	TEMPERATURE: 9.0	°C OTHER: -			
VOLUME REMOVED: 11 <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	COLOR: Clear	ODOR: none			
COLOR: cloudy	ODOR: none	FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
TURBIDITY <input type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input checked="" type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE COLOR: NA		
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER			FILTRATE ODOR: NA		
			QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP-		
COMMENTS:					

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
0935	200	7.57	669	-52.3	9.0	50.0	9.4	9.97	INITIAL
0940		7.27	1296	-100	1.3	7.7	9.3	100.0	1
0945		7.27	1253	-87.0	1.6	4.9	9.3	100.0	2
0950		7.27	1211	-70.0	2.2	3.0	9.2	60.0	3
0955		7.27	1300	-70.0	2.3	3.0	9.2	100.0	4
1000		7.27	1196	-70.3	2.3	3.0	9.2	100.0	5

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____								
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
3	1 L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
1	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
5	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	

SHIPPING METHOD: Courier	DATE SHIPPED: 3.27.23	AIRBILL NUMBER: NA
COC NUMBER: NA	SIGNATURE:	DATE SIGNED: 3/24/23



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW, JJ	DATE: 2/21/23
	BY: BY	DATE: 4/10/23

SAMPLE ID: mw-22-19	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: 1020	DATE: 3/23/23	SAMPLE	TIME: 1050	DATE: 3/23/23
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: 7.46	SU	CONDUCTIVITY: 1176	umhos/cm	
DEPTH TO WATER: 1228 T/ PVC	ORP: -200.3	mV	DO: 0.10	mg/L	
DEPTH TO BOTTOM: 2490 T/ PVC	TURBIDITY: 6.5	NTU	<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: NM <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	TEMPERATURE: 11.0	°C	OTHER:		
VOLUME REMOVED: 6 <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	COLOR: Clear		ODOR: none		
COLOR: cloudy	ODOR: none		FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY: <input type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input checked="" type="checkbox"/> MODERATE <input type="checkbox"/> VERY	FILTRATE COLOR: NA		FILTRATE ODOR: NA		
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER	QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP-		COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1020	200	7.71	1173	-37.1	6.6	60.0	10.0	13.10	INITIAL
1031		7.48	1101	-170.5	0.70	33	10.8	12.18	1
1036		7.47	1118	-160	0.35	18	10.9	13.18	2
1041		7.46	1170	-200.0	0.10	10	11.0	13.18	3
1046		7.46	1173	-200.0	0.10	7.8	11.0	13.18	4
1051		7.46	1175	-200.3	0.10	6.8	11.1	13.18	5
1056		7.46	1176	-200.3	0.10	6.5	11.0	13.18	6

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

PH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____												
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	1 L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					
1	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					
3	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					
5	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					
3	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					

SHIPPING METHOD: Courier	DATE SHIPPED: 3.27.23	AIRBILL NUMBER: NA
COC NUMBER: NA	SIGNATURE:	DATE SIGNED: 3/24/23



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW JJ	DATE: 3/24/23
	BY: BY	DATE: 4.10.23

SAMPLE ID: MW-22-20	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: 1153	DATE: 3/23/23	SAMPLE	TIME: 1148	DATE: 3/23/23
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: 7.57	SU	CONDUCTIVITY: 1124	umhos/cm	
DEPTH TO WATER: 1328 T/ PVC	ORP: -170.3	mV	DO: 0.20	mg/L	
DEPTH TO BOTTOM: 2525 T/ PVC	TURBIDITY: 6.5	NTU	<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: NM <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	TEMPERATURE: 11.3	°C	OTHER:		
VOLUME REMOVED: 5 <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	COLOR: Clear		ODOR: non		
COLOR: cloudy	ODOR: non	FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
TURBIDITY: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		FILTRATE COLOR: NA		FILTRATE ODOR: NA	
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER		QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP-			
COMMENTS:					

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1153	240	7.86	542	-64.3	9.0	5.0	11.1	1328	INITIAL
1158		7.58	1125	-130.0	1.2	13.0	11.1	1328	1
1133		7.57	1124	-168.5	0.43	7.8	11.2	1328	2
1138		7.57	1124	-164.8	0.24	6.8	11.3	1328	3
1143		7.57	1124	-170.0	0.20	6.7	11.3	1328	4
1148		7.57	1124	-170.3	0.20	6.5	11.3	1328	5

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

PH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____								
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
3	1 L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
1	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
3	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
5	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
3	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	

SHIPPING METHOD: Courier	DATE SHIPPED: 3.27.23	AIRBILL NUMBER: NA
COC NUMBER: NA	SIGNATURE:	DATE SIGNED: 3/24/23



WATER SAMPLE LOG

PROJECT NAME: DA Southern Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW, JJ	DATE: 3/24/23
	BY: BV	DATE: 4.10.23

SAMPLE ID: MW 22-22D	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: 1215	DATE: 3/23/23	SAMPLE	TIME: 1250	DATE: 3/23/23
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER	PH: 7.44	SU	CONDUCTIVITY: 6190	umhos/cm	
	ORP: -179.8	mV	DO: 0.14	mg/L	
DEPTH TO WATER: 29.78 T/ PVC	TURBIDITY: 10.0	NTU			
DEPTH TO BOTTOM: 100 plus PVC	<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY				
WELL VOLUME: NM <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	TEMPERATURE: 62	°C	OTHER:		
VOLUME REMOVED: 7 <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	COLOR: clear	ODOR: none			
COLOR: clear	ODOR: none	FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
TURBIDITY: <input type="checkbox"/> NONE <input checked="" type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		FILTRATE COLOR: NA	FILTRATE ODOR: NA		
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER		QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP-	COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1215	200	7.76	2860	-32.0	9.0	140	11.5	29.40	INITIAL
1220		7.43	6163	-130.5	0.97	64.5	11.4	30.0	1
1225		7.42	6170	-156.3	0.48	105.5	12.2	30.0	2
1230		7.43	6163	-173.0	0.25	196.0	12.1	30.0	3
1235		7.43	6191	-178.5	0.21	40.0	12.3	30.0	4
1240		7.44	6190	-179.0	0.19	10.0	12.1	30.0	5
1245		7.44	6192	-179.5	0.14	10.0	12.1	30.0	6
1250		7.44	6190	-179.8	0.14	10.0	12.3	30.8	7

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

PH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____								
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
3	1 L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
1	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
5	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	

SHIPPING METHOD: Courier	DATE SHIPPED: 3.27.23	AIRBILL NUMBER: NA
COC NUMBER: NA	SIGNATURE:	DATE SIGNED: 3/24/23



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW JJ	DATE: 3/24/23
	BY: BV	DATE: 4.10.23

SAMPLE ID: MW-22-14 **WELL DIAMETER:** 2" 4" 6" OTHER

WELL MATERIAL: PVC SS IRON GALVANIZED STEEL OTHER

SAMPLE TYPE: GW WW SW DI LEACHATE OTHER

PURGING	TIME: 1325	DATE: 3/23/23	SAMPLE	TIME: 1350	DATE: 3/23/23
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP			PH: 7.43	SU	CONDUCTIVITY: 2085 umhos/cm
<input type="checkbox"/> BAILER			ORP: -190.0 mV	DO: 0.10	mg/L
DEPTH TO WATER: 11.72 T/ PVC			TURBIDITY: 9.9	NTU	
DEPTH TO BOTTOM: 2130 T/ PVC			<input checked="" type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: NM <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS			TEMPERATURE: 10.4	°C	
VOLUME REMOVED: 5 <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS			COLOR: Clear	ODOR: none	
COLOR: cloudy	ODOR: none		FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY			FILTRATE COLOR: NA	FILTRATE ODOR: NA	
<input type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input checked="" type="checkbox"/> MODERATE <input type="checkbox"/> VERY			QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP-		
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER			COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
1325	20	7.79	432	-75.1	9.3	70.0	10.2	1168	INITIAL
1330		7.46	2017	-150.3	0.49	18	10.4	1171	1
1331		7.44	2199	-170.0	0.12	10	10.5	1175	2
1340		7.43	2093	-180.8	0.10	10	10.4	1175	3
1345		7.43	2079	-188.3	0.10	10	10.4	1175	4
1350		7.43	2085	-190.0	0.10	9.9	10.4	1175	5

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____								
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
3	1 L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
1	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
5	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	
3	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input type="checkbox"/> N	

SHIPPING METHOD: Courier	DATE SHIPPED: 3.27.23	AIRBILL NUMBER: NA
COC NUMBER: NA	SIGNATURE:	DATE SIGNED: 3/24/23



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW, JJ	DATE: <u>3/6/23</u>
	BY: <u>AW</u>	DATE: <u>4.10.23</u>

SAMPLE ID: <u>MW-102</u>	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME:	DATE:	SAMPLE	TIME:	DATE:
PURGE METHOD: <input checked="" type="checkbox"/> PUMP PERISTALTIC PUMP <input type="checkbox"/> BAILER			PH: _____ SU	CONDUCTIVITY: _____ umhos/cm	
DEPTH TO WATER: _____ T/ PVC			ORP: _____ mV	DO: _____ mg/L	
DEPTH TO BOTTOM: _____ T/ PVC			TURBIDITY: _____ NTU		
WELL VOLUME: <u>NM</u> <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS			<input type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
VOLUME REMOVED: <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS			TEMPERATURE: _____ °C	OTHER: _____	
COLOR: _____			COLOR: _____	ODOR: _____	
ODOR: _____			FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY <input type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE COLOR: <u>NA</u>	FILTRATE ODOR: <u>NA</u>	
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER			QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP- _____		
COMMENTS:					

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
									INITIAL
Day									

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____								
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
	1 L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	

SHIPPING METHOD: <u>Courier</u>	DATE SHIPPED: <u>NA</u>	AIRBILL NUMBER: <u>NA</u>
COC NUMBER: <u>NA</u>	SIGNATURE:	DATE SIGNED: <u>3/14/23</u>



WATER SAMPLE LOG

PROJECT NAME: DA Southerin Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW, <u>UJ</u>	DATE: <u>3/14/23</u>
	BY: <u>B1</u>	DATE: <u>4.10.23</u>

SAMPLE ID: <u>FB</u>	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME: _____	DATE: _____	SAMPLE	TIME: <u>1413</u>	DATE: <u>3/13/23</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP <input type="checkbox"/> PERISTALTIC PUMP <input type="checkbox"/> BAILER			PH: _____ SU	CONDUCTIVITY: _____ umhos/cm	
			ORP: _____ mV	DO: _____ mg/L	
DEPTH TO WATER: _____ T/ PVC			TURBIDITY: _____ NTU		
DEPTH TO BOTTOM: _____ T/ PVC			<input type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: <u>NM</u> <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS			TEMPERATURE: _____ °C	OTHER: _____	
VOLUME REMOVED: _____ <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS			COLOR: _____	ODOR: _____	
COLOR: _____	ODOR: _____		FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY			FILTRATE COLOR: <u>NA</u>	FILTRATE ODOR: <u>NA</u>	
<input type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP- _____		
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER			COMMENTS:		

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
INITIAL									

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 10 % ORP: +/- 10 % D.O.: +/- 10 % TURB: +/- 10 % or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____									
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED		NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	
	1 L	AMBER	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N
	125 mL	PLASTIC	B	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
<u>3</u>	15 mL	PLASTIC	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
	40 mL	VOA	E	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N
	40 mL	VOA	A	<input type="checkbox"/> Y	<input checked="" type="checkbox"/> N					<input type="checkbox"/> Y	<input type="checkbox"/> N

SHIPPING METHOD: <u>Courier</u>	DATE SHIPPED: <u>3.27.23</u>	AIRBILL NUMBER: <u>NA</u>
COC NUMBER: <u>NA</u>	SIGNATURE:	DATE SIGNED: <u>3/14/23</u>



WATER SAMPLE LOG

PROJECT NAME: DA Southern Investigation	PREPARED	CHECKED
PROJECT NUMBER: 495430.0001	BY: AW, JJ	DATE: <u>3/24/23</u>
	BY: <u>WY</u>	DATE: <u>4.10.23</u>

SAMPLE ID: <u>CB</u>	WELL DIAMETER: <input checked="" type="checkbox"/> 2" <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> OTHER
WELL MATERIAL: <input checked="" type="checkbox"/> PVC <input type="checkbox"/> SS <input type="checkbox"/> IRON <input type="checkbox"/> GALVANIZED STEEL <input type="checkbox"/> OTHER	
SAMPLE TYPE: <input checked="" type="checkbox"/> GW <input type="checkbox"/> WW <input type="checkbox"/> SW <input type="checkbox"/> DI <input type="checkbox"/> LEACHATE <input type="checkbox"/> OTHER	

PURGING	TIME:	DATE:	SAMPLE	TIME: <u>1415</u>	DATE: <u>3/23/23</u>
PURGE METHOD: <input checked="" type="checkbox"/> PUMP <input type="checkbox"/> BAILER	PERISTALTIC PUMP		PH: _____ SU	CONDUCTIVITY: _____ umhos/cm	
DEPTH TO WATER: _____ T/ PVC	ORP: _____ mV		DO: _____ mg/L		
DEPTH TO BOTTOM: _____ T/ PVC	TURBIDITY: _____ NTU		<input type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY		
WELL VOLUME: <u>NM</u> <input type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	TEMPERATURE: _____ °C		OTHER: _____		
VOLUME REMOVED: _____ <input checked="" type="checkbox"/> LITERS <input type="checkbox"/> GALLONS	COLOR: _____		ODOR: _____		
COLOR: _____	ODOR: _____		FILTRATE (0.45 um) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
TURBIDITY <input type="checkbox"/> NONE <input type="checkbox"/> SLIGHT <input type="checkbox"/> MODERATE <input type="checkbox"/> VERY			FILTRATE COLOR: <u>NA</u>		FILTRATE ODOR: <u>NA</u>
DISPOSAL METHOD: <input checked="" type="checkbox"/> GROUND <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER			QC SAMPLE: <input type="checkbox"/> MS/MSD <input type="checkbox"/> DUP- _____		
COMMENTS:					

TIME	PURGE RATE (ML/MIN)	PH (SU)	CONDUCTIVITY (umhos/cm)	ORP (mV)	D.O. (mg/L)	TURBIDITY (NTU)	TEMPERATURE (°C)	WATER LEVEL (FEET)	CUMULATIVE PURGE VOLUME (GAL OR L)
INITIAL									

NOTE: STABILIZATION TEST IS COMPLETE WHEN 3 SUCCESSIVE READINGS ARE WITHIN THE FOLLOWING LIMITS:

pH: +/- 0.1 COND.: +/- 10% ORP: +/- 10% D.O.: +/- 10% TURB: +/- 10% or <= 5 TEMP.: +/- 0.5°C

BOTTLES FILLED		PRESERVATIVE CODES A - NONE B - HNO3 C - H2SO4 D - NaOH E - HCL F - _____							
NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED	NUMBER	SIZE	TYPE	PRESERVATIVE	FILTERED
3	1 L	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N		125 mL	AMBER	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
	125 mL	PLASTIC	B	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
	15 mL	PLASTIC	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
	40 mL	VOA	E	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
	40 mL	VOA	A	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N					<input type="checkbox"/> Y <input checked="" type="checkbox"/> N

SHIPPING METHOD: <u>Courier</u>	DATE SHIPPED: <u>3.27.23</u>	AIRBILL NUMBER: <u>NA</u>
COC NUMBER: <u>NA</u>	SIGNATURE:	DATE SIGNED: <u>3/24/23</u>



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C.O.C. PAGE # 1 OF 1

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME: Kelly Cratsenburg
 COMPANY: TRC
 ADDRESS: 1540 Eisenhower Place
 CITY: Ann Arbor
 STATE: MI ZIP CODE: 48108
 P.O. NO.: 198396
 QUOTE NO.: 230317-03
 E-MAIL ADDRESS: kcratsenburg@trccompanies.com
 CONTACT NAME: [] SAME
 COMPANY: _____
 ADDRESS: _____
 CITY: _____ STATE: _____ ZIP CODE: _____
 PHONE NO.: _____ E-MAIL ADDRESS: _____

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	DATE		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MTRIX	BOTTLES #	NONE	H ₂ O	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)		Certifications <input type="checkbox"/> OHIO VAP <input type="checkbox"/> Drinking Water <input type="checkbox"/> DoD <input type="checkbox"/> NPDES Project Locations <input type="checkbox"/> Detroit <input type="checkbox"/> New York <input type="checkbox"/> Other _____ Special Instructions *Southern Area metals list
	DATE	TIME											VOC+SIMS & TICS, 1,4 Dioxane	SVOC + TICS	
363	645		MW-103	W	10	+	+	+	+	+	+	+	+	+	
111			DUP #01	W	10	+	+	+	+	+	+	+	+	+	
111	0553		MW-101	W	10	+	+	+	+	+	+	+	+	+	
111	0717		MW-22-09	W	10	+	+	+	+	+	+	+	+	+	
111	0525		MW-22-21	W	10	+	+	+	+	+	+	+	+	+	
111	0919		MW-22-08	W	10	+	+	+	+	+	+	+	+	+	
111	1013		MW-22-07	W	10	+	+	+	+	+	+	+	+	+	
111	1114		MW-22-10	W	10	+	+	+	+	+	+	+	+	+	
111	1217		MW-22-13	W	10	+	+	+	+	+	+	+	+	+	
111	1325		MW-22-11	W	10	+	+	+	+	+	+	+	+	+	
111			DUP #02	W	10	+	+	+	+	+	+	+	+	+	
111	1414		MW-22-13	W	10	+	+	+	+	+	+	+	+	+	

PROJECT NO./NAME: Detroit Axle Southern Area
 TURNAROUND TIME REQUIRED: 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____
 DELIVERABLES REQUIRED: STD LEVEL II LEVEL III LEVEL IV EDD OTHER TRC EDD
 MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 SL=SLUDGE DW=DRINKING WATER O=OIL WP=WPIPE A=AIR W=WASTE

RELINQUISHED BY: [Signature] DATE: 3/22/02 TIME: 1630
 RECEIVED BY: TRC DATE: 3/20/02 TIME: 1630
 RELINQUISHED BY: TRC DATE: 3/22 DATE: 800 TIME: 800
 RECEIVED BY: Jan W DATE: 3/22 DATE: 800 TIME: 800



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C.O.C. PAGE # 1 OF 7

REPORT TO		CHAIN OF CUSTODY RECORD		INVOICE TO	
CONTACT NAME Kelly Cratsenburg		CONTACT NAME <input type="checkbox"/> SAME		COMPANY	
ADDRESS 1540 Eisenhower Place		ADDRESS		STATE	
CITY Ann Arbor	STATE MI	ZIP CODE 48108	ZIP CODE		
PHONE NO.	P.O. NO. 98396	E-MAIL ADDRESS			
E-MAIL ADDRESS kcratsenburg@trccompanies.com	QUOTE NO. 230317-03	PHONE NO.			
PROJECT NO./NAME Detroit Axle Southern Area		ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)			
TURNAROUND TIME REQUIRED <input type="checkbox"/> 1 DAY <input type="checkbox"/> 2 DAYS <input checked="" type="checkbox"/> 3 DAYS <input type="checkbox"/> STANDARD <input type="checkbox"/> OTHER		CERTIFICATIONS <input type="checkbox"/> OHIO VAP <input type="checkbox"/> Drinking Water <input type="checkbox"/> DoD <input type="checkbox"/> NPDES Project Locations <input type="checkbox"/> Detroit <input type="checkbox"/> New York <input type="checkbox"/> Other _____ Special Instructions _____			
DELIVERABLES REQUIRED <input type="checkbox"/> STD <input type="checkbox"/> LEVEL II <input type="checkbox"/> LEVEL III <input type="checkbox"/> LEVEL IV <input type="checkbox"/> EDD <input checked="" type="checkbox"/> OTHER TRC EDD		# Containers & Preservatives			
MATRIX CODE:	GW=GROUNDWATER SL=SLUDGE	WW=WASTEWATER DW=DRINKING WATER	S=SOIL O=OIL	L=LIQUID WP=WIPE	SD=SOLID A=AIR W=WASTE
MERIT LAB NO. FOR LAB USE ONLY	DATE	TIME	IDENTIFICATION-DESCRIPTION		
20 YEAR	DATE	TIME	MATRIX		
707	0452		W	3	6
811	-		W	3	4
111	0557		W	3	4
111	0717		W	3	4
111	0811		W	3	4
111	0919		W	3	4
111	1013		W	3	4
111	1114		W	3	4
111	1217		W	3	4
111	1325		W	3	4
111	1414		W	3	4
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 3/20/03		TIME 16:00	
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 3/23		TIME 9:50	
RELINQUISHED BY: SIGNATURE/ORGANIZATION		DATE 3/23		TIME 9:50	
RECEIVED BY: SIGNATURE/ORGANIZATION		DATE 3/23		TIME 9:50	

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE



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C.O.C. PAGE # OF

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME: Kelly Cratsenburg
COMPANY: TRC
ADDRESS: 1540 Eisenhower Place
CITY: Ann Arbor
STATE: MI ZIP CODE: 48108
PHONE NO.: FAX NO.
P.O. NO.: 148396
E-MAIL ADDRESS: kcratsenburg@trcompanies.com
QUOTE NO.: 230317-03

PROJECT NO./NAME: Detroit Axle Southern Area
ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

TURNAROUND TIME REQUIRED: 1 DAY 2 DAYS 3 DAYS STANDARD OTHER
DELIVERABLES REQUIRED: STD LEVEL I LEVEL II LEVEL III LEVEL IV EDD OTHER TRC EDD
MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIFE A=AIR W=WASTE
OTHER: H2O, HCl, HNO3, NaOH, MeOH, OTHER

W/100-01	02	03	04	05	06	07	08	09	10	11	12
MATRIX	# OF BOTTLES	IDENTIFICATION-DESCRIPTION	DATE	TIME	YEAR	20	19	18	17	16	15
W	10	MW-22-17	3/23/17	0440	17						
W	10	DUP 403									
W	5	MW-22-16		0535	16						
W	10	MW-22-15		0630	15						
W	10	MW-22-14		0801	14						
W	10	MW-22-13		0906	13						
W	10	MW-22-12		1020	12						
W	10	MW-22-11		1056	11						
W	10	MW-22-10		1148	10						
W	10	MW-22-09		1250	09						
W	10	MW-22-08		1330	08						

RELINQUISHED BY: [Signature] DATE: 3/23/17 TIME: 1530
RECEIVED BY: [Signature] DATE: 3/27/17 TIME: 2133
SEAL NO.: INITIALS: NO. OF INITIALS: NO. OF INITIALS:
SEAL INTACT YES/NO: SEAL INTACT YES/NO:
NOTES: TEMP. ON ARRIVAL: 2.9



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C.O.C. PAGE # _____ OF _____

REPORT TO		CHAIN OF CUSTODY RECORD		INVOICE TO																																																																																												
CONTACT NAME Kelly Cratsenburg		CONTACT NAME <input type="checkbox"/> SAME		COMPANY																																																																																												
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E-MAIL ADDRESS kcratsenburg@trccompanies.com		SAMPLER(S) - PLEASE PRINT/SIGN NAME		ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)																																																																																												
PROJECT NO./NAME Detroit Axle Southern Area		TURNAROUND TIME REQUIRED <input type="checkbox"/> 1 DAY <input type="checkbox"/> 2 DAYS <input checked="" type="checkbox"/> 3 DAYS <input type="checkbox"/> STANDARD <input type="checkbox"/> OTHER		Certifications <input type="checkbox"/> OHIO VAP <input type="checkbox"/> Drinking Water <input type="checkbox"/> DoD <input type="checkbox"/> NPDES Project Locations <input type="checkbox"/> Detroit <input type="checkbox"/> New York <input type="checkbox"/> Other _____ Special Instructions _____																																																																																												
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MERIT LAB NO.	DATE	TIME	IDENTIFICATION-DESCRIPTION			MATRIX	# OF BOTTLES	OTHER																																																																																								
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PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Appendix C

Laboratory Analytical Data



Analytical Laboratory Report

Report ID: S43388.01(01)
Generated on 01/24/2023

Report to
Attention: Kelly Cratsenburg
TRC
1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: 734-412-5424 FAX:
Email: KCratsenburg@trccompanies.com

Additional Contacts: Vince Buening

Report produced by
Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S43388.01-S43388.15
Project: Detroit Axle Southern RCRA Invest. 495430.0001
Collected Date(s): 12/12/2022
Submitted Date/Time: 12/13/2022 15:10
Sampled by: H. Schnaidt / Brian Yelen
P.O. #: 193431

Table of Contents

- Cover Page (Page 1)
- General Report Notes (Page 2)
- Report Narrative (Page 2)
- Laboratory Certifications (Page 3)
- Qualifier Descriptions (Page 3)
- Glossary of Abbreviations (Page 3)
- Method Summary (Page 4)
- Sample Summary (Page 5)

Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
SM2540B	Standard Method 2540 B 2015
SW3050B	SW 846 Method 3050B Revision 2 December 1996
SW3546	SW 846 Method 3546 Revision 0 February 2007
SW5035A	SW 846 Method 5035A Revision 1 July 2002
SW5035A/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5035A Revision 1 July 2002
SW6020A	SW 846 Method 6020A Revision 1 February 2007
SW7471B	SW 846 Method 7471B Revision 2 February 2007
SW8082A	SW 846 Method 8082A Revision 1 February 2007
SW8260B - SIM	SW 846 Method 8260B Revision 2 December 1996 SIMs
SW8270D	SW 846 Method 8270D Revision 4 February 2007



Analytical Laboratory Report

Sample Summary (15 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S43388.01	AOC10-TP01-N	Soil	12/12/22 11:35
S43388.02	AOC10-TP01-S	Soil	12/12/22 11:54
S43388.03	AOC10-TP01-E	Soil	12/12/22 12:02
S43388.04	AOC10-TP01-W	Soil	12/12/22 12:02
S43388.05	AOC10-TP01-B	Soil	12/12/22 12:30
S43388.06	DUP-01S	Soil	12/12/22 00:01
S43388.07	AOC10-TP02-E	Soil	12/12/22 13:35
S43388.08	AOC10-TP02-W	Soil	12/12/22 14:40
S43388.09	AOC10-TP02-S	Soil	12/12/22 14:06
S43388.10	AOC10-TP02-N	Soil	12/12/22 14:06
S43388.11	AOC10-TP02-B	Soil	12/12/22 14:28
S43388.12	DUP-02S	Soil	12/12/22 00:01
S43388.13	AOC7-MW-22-08 (2-3)	Soil	12/12/22 11:55
S43388.14	AOC7-MW-22-09 (2-4)	Soil	12/12/22 12:30
S43388.15	AOC7-MW-22-09 (8-10)	Soil	12/12/22 13:00



Analytical Laboratory Report

Lab Sample ID: S43388.01

Sample Tag: AOC10-TP01-N

Collected Date/Time: 12/12/2022 11:35

Matrix: Soil

COC Reference: 158704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.6	IR
3	4oz Glass	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 08:55	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 12:30	TAW	
Extraction, PCB*	Completed	SW3546	12/15/22 15:00	TAW	
Sample wt. (g) / Methanol (ml)*	12.300/12	SW5035A	12/14/22 10:03	BDO	
Mercury Digestion	Completed	SW7471B	12/14/22 13:58	CTV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 17:32, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 11:10, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,900	1.0		mg/kg	245	7429-90-5		
Antimony	Not detected	0.50		mg/kg	245	7440-36-0		
Arsenic	1.17	0.20		mg/kg	245	7440-38-2		
Barium	9.55	1.0		mg/kg	245	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	245	7440-41-7		
Boron	Not detected	2.0		mg/kg	245	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	245	7440-43-9		
Chromium	8.73	0.50		mg/kg	245	7440-47-3		
Cobalt	1.02	0.50		mg/kg	245	7440-48-4		
Copper	7.65	0.50		mg/kg	245	7440-50-8		
Iron	2,530	1.0		mg/kg	245	7439-89-6		
Lead	11.5	0.30		mg/kg	245	7439-92-1		
Manganese	133	0.50		mg/kg	245	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	245	7439-98-7		
Nickel	1.63	0.50		mg/kg	245	7440-02-0		
Selenium	Not detected	0.40		mg/kg	245	7782-49-2		
Silver	Not detected	0.20		mg/kg	245	7440-22-4		
Strontium	5.99	0.50		mg/kg	245	7440-24-6		
Thallium	Not detected	0.20		mg/kg	245	7440-28-0		
Tin	Not detected	2.0		mg/kg	245	7440-31-5		
Titanium	55.3	1.0		mg/kg	245	7440-32-6		
Vanadium	5.52	0.50		mg/kg	245	7440-62-2		
Zinc	16.6	0.50		mg/kg	245	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43388.01 (continued)

Sample Tag: AOC10-TP01-N

Method: SW6020A, Run Date: 12/19/22 10:03, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	5,180	20		mg/kg	245	7440-70-2		
Magnesium	662	20		mg/kg	245	7439-95-4		
Potassium	347	20		mg/kg	245	7440-09-7		
Sodium	Not detected	20		mg/kg	245	7440-23-5		

Method: SW7471B, Run Date: 12/14/22 15:11, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.165	0.050		mg/kg	65	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/19/22 12:47, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 21:56, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	580	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	1,440	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	4,830	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	5,450	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	4,480	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	1,270	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	4,200	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	5,820	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	570	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43388.01 (continued)

Sample Tag: AOC10-TP01-N

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 21:56, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	12,140	330		ug/kg	6	206-44-0		
Fluorene	590	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	1,430	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	8,710	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	9,980	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/23/22 21:56, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Phenanthrene	Found			ug/kg	6	85-01-8		
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Anthracene	Found			ug/kg	6	120-12-7		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/25/22 23:50, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	55.1	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 06:14, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	55.1			



Analytical Laboratory Report

Lab Sample ID: S43388.01 (continued)

Sample Tag: AOC10-TP01-N

Method: SW8260B - SIM, Run Date: 12/15/22 16:44, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	55.1	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	55.1	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 06:14, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	55.1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	55.1	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	55.1	107-13-1		
2-Butanone (MEK)	Not detected	830		ug/kg	55.1	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	55.1	75-71-8		
Chloromethane	Not detected	300		ug/kg	55.1	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	55.1	75-01-4		
Bromomethane	Not detected	200		ug/kg	55.1	74-83-9		
Chloroethane	Not detected	300		ug/kg	55.1	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	55.1	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	55.1	75-35-4		
Methylene chloride	Not detected	100		ug/kg	55.1	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	55.1	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	55.1	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	55.1	156-59-2		
Chloroform	Not detected	60		ug/kg	55.1	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	55.1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	55.1	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	55.1	56-23-5		
Benzene	Not detected	60		ug/kg	55.1	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	55.1	107-06-2		
Trichloroethene	Not detected	60		ug/kg	55.1	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	55.1	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	55.1	75-27-4		
Dibromomethane	Not detected	300		ug/kg	55.1	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	55.1	10061-01-5		
Toluene	Not detected	60		ug/kg	55.1	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	55.1	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	55.1	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	55.1	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	55.1	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	55.1	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	55.1	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	55.1	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	55.1	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	55.1			
o-Xylene	Not detected	60		ug/kg	55.1	95-47-6		
Styrene	Not detected	60		ug/kg	55.1	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	55.1	98-82-8		
Bromoform	Not detected	100		ug/kg	55.1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	55.1	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	55.1	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	55.1	103-65-1		
Bromobenzene	Not detected	100		ug/kg	55.1	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43388.01 (continued)

Sample Tag: AOC10-TP01-N

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 06:14, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	55.1	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	55.1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	55.1	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	55.1	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	55.1	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	55.1	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	55.1	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	55.1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	55.1	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	55.1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	360		ug/kg	55.1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	360		ug/kg	55.1	87-61-6		
Naphthalene	Not detected	300		ug/kg	55.1	91-20-3		
Acrolein	Not detected	60		ug/kg	55.1	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	55.1	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	55.1	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	55.1	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	55.1	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	55.1	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	55.1	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	55.1	76-13-1		

Other / Misc.

Method: , Run Date: 12/19/22 15:46, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/21/22 19:32, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43388.02

Sample Tag: AOC10-TP01-S

Collected Date/Time: 12/12/2022 11:54

Matrix: Soil

COC Reference: 158704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.6	IR
3	4oz Glass	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 08:55	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 12:30	TAW	
Extraction, PCB*	Completed	SW3546	12/15/22 15:00	TAW	
Sample wt. (g) / Methanol (ml)*	9.268/10	SW5035A	12/14/22 10:03	BDO	
Mercury Digestion	Completed	SW7471B	12/14/22 13:58	CTV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 17:32, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	93	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 11:12, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,930	1.0		mg/kg	304	7429-90-5		
Antimony	Not detected	0.50		mg/kg	304	7440-36-0		
Arsenic	0.88	0.20		mg/kg	304	7440-38-2		
Barium	17.5	1.0		mg/kg	304	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	304	7440-41-7		
Boron	Not detected	2.0		mg/kg	304	7440-42-8		
Cadmium	0.21	0.20		mg/kg	304	7440-43-9		
Chromium	5.03	0.50		mg/kg	304	7440-47-3		
Cobalt	0.89	0.50		mg/kg	304	7440-48-4		
Copper	5.09	0.50		mg/kg	304	7440-50-8		
Iron	1,790	1.0		mg/kg	304	7439-89-6		
Lead	19.5	0.30		mg/kg	304	7439-92-1		
Manganese	63.9	0.50		mg/kg	304	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	304	7439-98-7		
Nickel	2.58	0.50		mg/kg	304	7440-02-0		
Selenium	Not detected	0.40		mg/kg	304	7782-49-2		
Silver	0.33	0.20		mg/kg	304	7440-22-4		
Strontium	13.5	0.50		mg/kg	304	7440-24-6		
Thallium	Not detected	0.20		mg/kg	304	7440-28-0		
Tin	Not detected	2.0		mg/kg	304	7440-31-5		
Titanium	48.6	1.0		mg/kg	304	7440-32-6		
Vanadium	4.88	0.50		mg/kg	304	7440-62-2		
Zinc	22.5	0.50		mg/kg	304	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43388.02 (continued)

Sample Tag: AOC10-TP01-S

Method: SW6020A, Run Date: 12/19/22 10:15, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	7,420	20		mg/kg	304	7440-70-2		
Magnesium	1,290	20		mg/kg	304	7439-95-4		
Potassium	174	20		mg/kg	304	7440-09-7		
Sodium	27.2	20		mg/kg	304	7440-23-5		

Method: SW7471B, Run Date: 12/14/22 15:14, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.340	0.050		mg/kg	58	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/19/22 12:58, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/27/22 20:49, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	1,230	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	1,290	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	1,070	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	520	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	1,260	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	1,320	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43388.02 (continued)

Sample Tag: AOC10-TP01-S

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/27/22 20:49, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	2,750	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	500	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	1,450	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	2,300	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/23/22 22:27, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Phenanthrene	Found			ug/kg	6	85-01-8		
Pyrene	Found			ug/kg	6	129-00-0		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Anthracene	Found			ug/kg	6	120-12-7		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 00:15, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	61.8	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 06:38, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	61.8			



Analytical Laboratory Report

Lab Sample ID: S43388.02 (continued)

Sample Tag: AOC10-TP01-S

Method: SW8260B - SIM, Run Date: 12/15/22 17:05, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	61.8	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	61.8	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 06:38, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	61.8	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	61.8	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	61.8	107-13-1		
2-Butanone (MEK)	Not detected	930		ug/kg	61.8	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	61.8	75-71-8		
Chloromethane	Not detected	300		ug/kg	61.8	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	61.8	75-01-4		
Bromomethane	Not detected	200		ug/kg	61.8	74-83-9		
Chloroethane	Not detected	300		ug/kg	61.8	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	61.8	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	61.8	75-35-4		
Methylene chloride	Not detected	100		ug/kg	61.8	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	61.8	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	61.8	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	61.8	156-59-2		
Chloroform	Not detected	60		ug/kg	61.8	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	61.8	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	61.8	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	61.8	56-23-5		
Benzene	Not detected	60		ug/kg	61.8	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	61.8	107-06-2		
Trichloroethene	Not detected	60		ug/kg	61.8	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	61.8	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	61.8	75-27-4		
Dibromomethane	Not detected	300		ug/kg	61.8	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	61.8	10061-01-5		
Toluene	Not detected	60		ug/kg	61.8	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	61.8	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	61.8	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	61.8	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	61.8	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	61.8	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	61.8	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	61.8	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	61.8	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	61.8			
o-Xylene	Not detected	60		ug/kg	61.8	95-47-6		
Styrene	Not detected	60		ug/kg	61.8	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	61.8	98-82-8		
Bromoform	Not detected	100		ug/kg	61.8	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	61.8	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	61.8	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	61.8	103-65-1		
Bromobenzene	Not detected	100		ug/kg	61.8	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43388.02 (continued)

Sample Tag: AOC10-TP01-S

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 06:38, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	61.8	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	61.8	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	61.8	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	61.8	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	61.8	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	61.8	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	61.8	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	61.8	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	61.8	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	61.8	104-51-8		
1,2,4-Trichlorobenzene	Not detected	410		ug/kg	61.8	120-82-1		
1,2,3-Trichlorobenzene	Not detected	410		ug/kg	61.8	87-61-6		
Naphthalene	Not detected	300		ug/kg	61.8	91-20-3		
Acrolein	Not detected	60		ug/kg	61.8	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	61.8	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	61.8	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	61.8	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	61.8	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	61.8	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	61.8	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	61.8	76-13-1		

Other / Misc.

Method: , Run Date: 12/19/22 16:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/21/22 19:50, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43388.03

Sample Tag: AOC10-TP01-E

Collected Date/Time: 12/12/2022 12:02

Matrix: Soil

COC Reference: 158704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.6	IR
3	4oz Glass	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 08:55	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 12:30	TAW	
Extraction, PCB*	Completed	SW3546	12/15/22 15:00	TAW	
Sample wt. (g) / Methanol (ml)*	13.637/13	SW5035A	12/14/22 10:03	BDO	
Mercury Digestion	Completed	SW7471B	12/14/22 13:58	CTV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 17:32, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	93	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 11:15, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,520	1.0		mg/kg	289	7429-90-5		
Antimony	Not detected	0.50		mg/kg	289	7440-36-0		
Arsenic	0.59	0.20		mg/kg	289	7440-38-2		
Barium	8.64	1.0		mg/kg	289	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	289	7440-41-7		
Boron	Not detected	2.0		mg/kg	289	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	289	7440-43-9		
Chromium	2.26	0.50		mg/kg	289	7440-47-3		
Cobalt	0.71	0.50		mg/kg	289	7440-48-4		
Copper	2.12	0.50		mg/kg	289	7440-50-8		
Iron	1,380	1.0		mg/kg	289	7439-89-6		
Lead	3.12	0.30		mg/kg	289	7439-92-1		
Manganese	74.2	0.50		mg/kg	289	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	289	7439-98-7		
Nickel	1.27	0.50		mg/kg	289	7440-02-0		
Selenium	Not detected	0.40		mg/kg	289	7782-49-2		
Silver	Not detected	0.20		mg/kg	289	7440-22-4		
Strontium	2.41	0.50		mg/kg	289	7440-24-6		
Thallium	Not detected	0.20		mg/kg	289	7440-28-0		
Tin	Not detected	2.0		mg/kg	289	7440-31-5		
Titanium	62.1	1.0		mg/kg	289	7440-32-6		
Vanadium	2.72	0.50		mg/kg	289	7440-62-2		
Zinc	5.19	0.50		mg/kg	289	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43388.03 (continued)

Sample Tag: AOC10-TP01-E

Method: SW6020A, Run Date: 12/19/22 10:18, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	982	20		mg/kg	289	7440-70-2		
Magnesium	265	20		mg/kg	289	7439-95-4		
Potassium	84.8	20		mg/kg	289	7440-09-7		
Sodium	Not detected	20		mg/kg	289	7440-23-5		

Method: SW7471B, Run Date: 12/14/22 15:18, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	66	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/19/22 13:10, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 14:24, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	Not detected	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43388.03 (continued)

Sample Tag: AOC10-TP01-E

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 14:24, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	Not detected	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	Not detected	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	Not detected	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/23/22 14:24, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Phenanthrene	Found			ug/kg	6	85-01-8		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 00:39, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	55	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 07:02, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	55			

Method: SW8260B - SIM, Run Date: 12/15/22 17:26, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	55	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	55	123-91-1		



Analytical Laboratory Report

Lab Sample ID: S43388.03 (continued)

Sample Tag: AOC10-TP01-E

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 07:02, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	55	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	55	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	55	107-13-1		
2-Butanone (MEK)	Not detected	830		ug/kg	55	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	55	75-71-8		
Chloromethane	Not detected	300		ug/kg	55	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	55	75-01-4		
Bromomethane	Not detected	200		ug/kg	55	74-83-9		
Chloroethane	Not detected	300		ug/kg	55	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	55	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	55	75-35-4		
Methylene chloride	Not detected	100		ug/kg	55	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	55	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	55	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	55	156-59-2		
Chloroform	Not detected	60		ug/kg	55	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	55	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	55	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	55	56-23-5		
Benzene	Not detected	60		ug/kg	55	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	55	107-06-2		
Trichloroethene	Not detected	60		ug/kg	55	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	55	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	55	75-27-4		
Dibromomethane	Not detected	300		ug/kg	55	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	55	10061-01-5		
Toluene	Not detected	60		ug/kg	55	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	55	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	55	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	55	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	55	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	55	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	55	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	55	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	55	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	55			
o-Xylene	Not detected	60		ug/kg	55	95-47-6		
Styrene	Not detected	60		ug/kg	55	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	55	98-82-8		
Bromoform	Not detected	100		ug/kg	55	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	55	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	55	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	55	103-65-1		
Bromobenzene	Not detected	100		ug/kg	55	108-86-1		
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	55	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	55	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	55	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	55	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	55	99-87-6		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43388.03 (continued)

Sample Tag: AOC10-TP01-E

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 07:02, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3-Dichlorobenzene	Not detected	100		ug/kg	55	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	55	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	55	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	55	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	55	104-51-8		
1,2,4-Trichlorobenzene	Not detected	360		ug/kg	55	120-82-1		
1,2,3-Trichlorobenzene	Not detected	360		ug/kg	55	87-61-6		
Naphthalene	Not detected	300		ug/kg	55	91-20-3		
Acrolein	Not detected	60		ug/kg	55	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	55	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	55	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	55	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	55	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	55	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	55	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	55	76-13-1		

Other / Misc.

Method: , Run Date: 12/19/22 16:29, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/21/22 19:53, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43388.04

Sample Tag: AOC10-TP01-W

Collected Date/Time: 12/12/2022 12:02

Matrix: Soil

COC Reference: 158704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.6	IR
3	4oz Glass	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 08:55	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 12:30	TAW	
Extraction, PCB*	Completed	SW3546	12/15/22 15:00	TAW	
Sample wt. (g) / Methanol (ml)*	11.896/11	SW5035A	12/14/22 10:03	BDO	
Mercury Digestion	Completed	SW7471B	12/14/22 13:58	CTV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 17:32, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 11:17, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,410	1.0		mg/kg	294	7429-90-5		
Antimony	Not detected	0.50		mg/kg	294	7440-36-0		
Arsenic	0.65	0.20		mg/kg	294	7440-38-2		
Barium	6.56	1.0		mg/kg	294	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	294	7440-41-7		
Boron	Not detected	2.0		mg/kg	294	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	294	7440-43-9		
Chromium	2.58	0.50		mg/kg	294	7440-47-3		
Cobalt	0.66	0.50		mg/kg	294	7440-48-4		
Copper	2.02	0.50		mg/kg	294	7440-50-8		
Iron	2,220	1.0		mg/kg	294	7439-89-6		
Lead	3.33	0.30		mg/kg	294	7439-92-1		
Manganese	67.4	0.50		mg/kg	294	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	294	7439-98-7		
Nickel	1.11	0.50		mg/kg	294	7440-02-0		
Selenium	Not detected	0.40		mg/kg	294	7782-49-2		
Silver	Not detected	0.20		mg/kg	294	7440-22-4		
Strontium	2.08	0.50		mg/kg	294	7440-24-6		
Thallium	Not detected	0.20		mg/kg	294	7440-28-0		
Tin	Not detected	2.0		mg/kg	294	7440-31-5		
Titanium	64.1	1.0		mg/kg	294	7440-32-6		
Vanadium	5.07	0.50		mg/kg	294	7440-62-2		
Zinc	4.54	0.50		mg/kg	294	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43388.04 (continued)

Sample Tag: AOC10-TP01-W

Method: SW6020A, Run Date: 12/19/22 10:20, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	863	20		mg/kg	294	7440-70-2		
Magnesium	223	20		mg/kg	294	7439-95-4		
Potassium	79.0	20		mg/kg	294	7440-09-7		
Sodium	Not detected	20		mg/kg	294	7440-23-5		

Method: SW7471B, Run Date: 12/14/22 15:21, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	63	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/19/22 13:22, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 14:54, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	390	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	380	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	370	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	440	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43388.04 (continued)

Sample Tag: AOC10-TP01-W

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 14:54, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	910	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	520	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	730	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/23/22 14:54, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Phenanthrene	Found			ug/kg	6	85-01-8		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Benzo(ghi)perylene	Found			ug/kg	6	191-24-2		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 01:03, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	51.3	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 07:27, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	51.3			



Analytical Laboratory Report

Lab Sample ID: S43388.04 (continued)

Sample Tag: AOC10-TP01-W

Method: SW8260B - SIM, Run Date: 12/15/22 17:46, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	51.3	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	51.3	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 07:27, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	51.3	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	51.3	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	51.3	107-13-1		
2-Butanone (MEK)	Not detected	770		ug/kg	51.3	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	51.3	75-71-8		
Chloromethane	Not detected	300		ug/kg	51.3	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	51.3	75-01-4		
Bromomethane	Not detected	200		ug/kg	51.3	74-83-9		
Chloroethane	Not detected	300		ug/kg	51.3	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	51.3	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	51.3	75-35-4		
Methylene chloride	Not detected	100		ug/kg	51.3	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	51.3	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	51.3	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	51.3	156-59-2		
Chloroform	Not detected	50		ug/kg	51.3	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	51.3	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	51.3	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	51.3	56-23-5		
Benzene	Not detected	50		ug/kg	51.3	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	51.3	107-06-2		
Trichloroethene	Not detected	50		ug/kg	51.3	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	51.3	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	51.3	75-27-4		
Dibromomethane	Not detected	300		ug/kg	51.3	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	51.3	10061-01-5		
Toluene	Not detected	50		ug/kg	51.3	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	51.3	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	51.3	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	51.3	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	51.3	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	51.3	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	51.3	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	51.3	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	51.3	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	51.3			
o-Xylene	Not detected	50		ug/kg	51.3	95-47-6		
Styrene	Not detected	50		ug/kg	51.3	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	51.3	98-82-8		
Bromoform	Not detected	100		ug/kg	51.3	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	51.3	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	51.3	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	51.3	103-65-1		
Bromobenzene	Not detected	100		ug/kg	51.3	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43388.04 (continued)

Sample Tag: AOC10-TP01-W

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 07:27, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	51.3	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	51.3	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	51.3	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	51.3	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	51.3	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	51.3	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	51.3	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	51.3	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	51.3	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	51.3	104-51-8		
1,2,4-Trichlorobenzene	Not detected	340		ug/kg	51.3	120-82-1		
1,2,3-Trichlorobenzene	Not detected	340		ug/kg	51.3	87-61-6		
Naphthalene	Not detected	300		ug/kg	51.3	91-20-3		
Acrolein	Not detected	50		ug/kg	51.3	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	51.3	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	51.3	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	51.3	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	51.3	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	51.3	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	51.3	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	51.3	76-13-1		

Other / Misc.

Method: , Run Date: 12/19/22 16:50, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/21/22 19:56, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43388.05

Sample Tag: AOC10-TP01-B

Collected Date/Time: 12/12/2022 12:30

Matrix: Soil

COC Reference: 158704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.6	IR
3	4oz Glass	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 08:55	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 12:30	TAW	
Extraction, PCB*	Completed	SW3546	12/15/22 15:00	TAW	
Sample wt. (g) / Methanol (ml)*	11.543/11	SW5035A	12/14/22 10:03	BDO	
Mercury Digestion	Completed	SW7471B	12/14/22 13:58	CTV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 17:32, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 11:20, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	970	1.0		mg/kg	296	7429-90-5		
Antimony	Not detected	0.50		mg/kg	296	7440-36-0		
Arsenic	0.56	0.20		mg/kg	296	7440-38-2		
Barium	7.22	1.0		mg/kg	296	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	296	7440-41-7		
Boron	Not detected	2.0		mg/kg	296	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	296	7440-43-9		
Chromium	1.79	0.50		mg/kg	296	7440-47-3		
Cobalt	0.79	0.50		mg/kg	296	7440-48-4		
Copper	1.32	0.50		mg/kg	296	7440-50-8		
Iron	1,300	1.0		mg/kg	296	7439-89-6		
Lead	1.38	0.30		mg/kg	296	7439-92-1		
Manganese	47.8	0.50		mg/kg	296	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	296	7439-98-7		
Nickel	1.41	0.50		mg/kg	296	7440-02-0		
Selenium	Not detected	0.40		mg/kg	296	7782-49-2		
Silver	Not detected	0.20		mg/kg	296	7440-22-4		
Strontium	2.52	0.50		mg/kg	296	7440-24-6		
Thallium	Not detected	0.20		mg/kg	296	7440-28-0		
Tin	Not detected	2.0		mg/kg	296	7440-31-5		
Titanium	23.2	1.0		mg/kg	296	7440-32-6		
Vanadium	2.23	0.50		mg/kg	296	7440-62-2		
Zinc	4.52	0.50		mg/kg	296	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43388.05 (continued)

Sample Tag: AOC10-TP01-B

Method: SW6020A, Run Date: 12/19/22 10:24, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	1,590	20		mg/kg	296	7440-70-2		
Magnesium	278	20		mg/kg	296	7439-95-4		
Potassium	106	20		mg/kg	296	7440-09-7		
Sodium	Not detected	20		mg/kg	296	7440-23-5		

Method: SW7471B, Run Date: 12/14/22 15:24, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	57	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/19/22 13:35, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 12/23/22 15:24, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	6			

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 15:24, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	Not detected	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		



Analytical Laboratory Report

Lab Sample ID: S43388.05 (continued)

Sample Tag: AOC10-TP01-B

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 15:24, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	Not detected	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	Not detected	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	Not detected	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 01:27, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	52.8	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 07:51, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	52.8			

Method: SW8260B - SIM, Run Date: 12/15/22 18:06, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	52.8	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	52.8	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 07:51, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	52.8	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	52.8	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	52.8	107-13-1		



Analytical Laboratory Report

Lab Sample ID: S43388.05 (continued)

Sample Tag: AOC10-TP01-B

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 07:51, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2-Butanone (MEK)	Not detected	790		ug/kg	52.8	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	52.8	75-71-8		
Chloromethane	Not detected	300		ug/kg	52.8	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	52.8	75-01-4		
Bromomethane	Not detected	200		ug/kg	52.8	74-83-9		
Chloroethane	Not detected	300		ug/kg	52.8	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	52.8	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	52.8	75-35-4		
Methylene chloride	Not detected	100		ug/kg	52.8	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	52.8	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	52.8	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	52.8	156-59-2		
Chloroform	Not detected	50		ug/kg	52.8	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	52.8	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	52.8	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	52.8	56-23-5		
Benzene	Not detected	50		ug/kg	52.8	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	52.8	107-06-2		
Trichloroethene	Not detected	50		ug/kg	52.8	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	52.8	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	52.8	75-27-4		
Dibromomethane	Not detected	300		ug/kg	52.8	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	52.8	10061-01-5		
Toluene	Not detected	50		ug/kg	52.8	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	52.8	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	52.8	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	52.8	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	52.8	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	52.8	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	52.8	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	52.8	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	52.8	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	52.8			
o-Xylene	Not detected	50		ug/kg	52.8	95-47-6		
Styrene	Not detected	50		ug/kg	52.8	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	52.8	98-82-8		
Bromoform	Not detected	100		ug/kg	52.8	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	52.8	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	52.8	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	52.8	103-65-1		
Bromobenzene	Not detected	100		ug/kg	52.8	108-86-1		
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	52.8	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	52.8	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	52.8	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	52.8	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	52.8	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	52.8	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	52.8	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	52.8	95-50-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43388.05 (continued)

Sample Tag: AOC10-TP01-B

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 07:51, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	52.8	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	52.8	104-51-8		
1,2,4-Trichlorobenzene	Not detected	350		ug/kg	52.8	120-82-1		
1,2,3-Trichlorobenzene	Not detected	350		ug/kg	52.8	87-61-6		
Naphthalene	Not detected	300		ug/kg	52.8	91-20-3		
Acrolein	Not detected	50		ug/kg	52.8	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	52.8	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	52.8	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	52.8	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	52.8	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	52.8	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	52.8	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	52.8	76-13-1		

Other / Misc.

Method: , Run Date: 12/19/22 17:11, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/21/22 20:00, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43388.06

Sample Tag: DUP-01S

Collected Date/Time: 12/12/2022 00:01

Matrix: Soil

COC Reference: 158704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.6	IR
3	4oz Glass	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 08:55	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 12:30	TAW	
Extraction, PCB*	Completed	SW3546	12/15/22 15:00	TAW	
Sample wt. (g) / Methanol (ml)*	11.615/11	SW5035A	12/14/22 10:03	BDO	
Mercury Digestion	Completed	SW7471B	12/14/22 13:58	CTV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 17:32, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 11:22, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,970	1.0		mg/kg	307	7429-90-5		
Antimony	Not detected	0.50		mg/kg	307	7440-36-0		
Arsenic	1.13	0.20		mg/kg	307	7440-38-2		
Barium	14.1	1.0		mg/kg	307	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	307	7440-41-7		
Boron	Not detected	2.0		mg/kg	307	7440-42-8		
Cadmium	0.22	0.20		mg/kg	307	7440-43-9		
Chromium	6.86	0.50		mg/kg	307	7440-47-3		
Cobalt	0.81	0.50		mg/kg	307	7440-48-4		
Copper	4.20	0.50		mg/kg	307	7440-50-8		
Iron	2,020	1.0		mg/kg	307	7439-89-6		
Lead	14.3	0.30		mg/kg	307	7439-92-1		
Manganese	74.4	0.50		mg/kg	307	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	307	7439-98-7		
Nickel	1.73	0.50		mg/kg	307	7440-02-0		
Selenium	Not detected	0.40		mg/kg	307	7782-49-2		
Silver	Not detected	0.20		mg/kg	307	7440-22-4		
Strontium	6.29	0.50		mg/kg	307	7440-24-6		
Thallium	Not detected	0.20		mg/kg	307	7440-28-0		
Tin	Not detected	2.0		mg/kg	307	7440-31-5		
Titanium	54.5	1.0		mg/kg	307	7440-32-6		
Vanadium	4.54	0.50		mg/kg	307	7440-62-2		
Zinc	18.5	0.50		mg/kg	307	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43388.06 (continued)

Sample Tag: DUP-01S

Method: SW6020A, Run Date: 12/19/22 10:27, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	4,910	20		mg/kg	307	7440-70-2		
Magnesium	796	20		mg/kg	307	7439-95-4		
Potassium	112	20		mg/kg	307	7440-09-7		
Sodium	Not detected	20		mg/kg	307	7440-23-5		

Method: SW7471B, Run Date: 12/14/22 16:10, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.161	0.050		mg/kg	60	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/19/22 14:26, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 21:26, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	730	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	860	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	730	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	780	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	800	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43388.06 (continued)

Sample Tag: DUP-01S

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 21:26, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	1,390	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	500	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	1,270	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/23/22 21:26, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene*	Found			ug/kg	6			
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Phenanthrene	Found			ug/kg	6	85-01-8		
Indeno(1,2,3-cd)pyrene	Found			ug/kg	6	193-39-5		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 01:51, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	53.6	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 08:15, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	53.6			



Analytical Laboratory Report

Lab Sample ID: S43388.06 (continued)

Sample Tag: DUP-01S

Method: SW8260B - SIM, Run Date: 12/15/22 18:27, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	53.6	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	53.6	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 08:15, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	53.6	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	53.6	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	53.6	107-13-1		
2-Butanone (MEK)	Not detected	800		ug/kg	53.6	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	53.6	75-71-8		
Chloromethane	Not detected	300		ug/kg	53.6	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	53.6	75-01-4		
Bromomethane	Not detected	200		ug/kg	53.6	74-83-9		
Chloroethane	Not detected	300		ug/kg	53.6	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	53.6	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	53.6	75-35-4		
Methylene chloride	Not detected	100		ug/kg	53.6	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	53.6	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	53.6	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	53.6	156-59-2		
Chloroform	Not detected	50		ug/kg	53.6	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	53.6	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	53.6	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	53.6	56-23-5		
Benzene	Not detected	50		ug/kg	53.6	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	53.6	107-06-2		
Trichloroethene	Not detected	50		ug/kg	53.6	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	53.6	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	53.6	75-27-4		
Dibromomethane	Not detected	300		ug/kg	53.6	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	53.6	10061-01-5		
Toluene	Not detected	50		ug/kg	53.6	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	53.6	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	53.6	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	53.6	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	53.6	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	53.6	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	53.6	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	53.6	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	53.6	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	53.6			
o-Xylene	Not detected	50		ug/kg	53.6	95-47-6		
Styrene	Not detected	50		ug/kg	53.6	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	53.6	98-82-8		
Bromoform	Not detected	100		ug/kg	53.6	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	53.6	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	53.6	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	53.6	103-65-1		
Bromobenzene	Not detected	100		ug/kg	53.6	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43388.06 (continued)

Sample Tag: DUP-01S

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 08:15, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	53.6	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	53.6	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	53.6	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	53.6	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	53.6	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	53.6	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	53.6	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	53.6	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	53.6	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	53.6	104-51-8		
1,2,4-Trichlorobenzene	Not detected	350		ug/kg	53.6	120-82-1		
1,2,3-Trichlorobenzene	Not detected	350		ug/kg	53.6	87-61-6		
Naphthalene	Not detected	300		ug/kg	53.6	91-20-3		
Acrolein	Not detected	50		ug/kg	53.6	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	53.6	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	53.6	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	53.6	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	53.6	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	53.6	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	53.6	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	53.6	76-13-1		

Other / Misc.

Method: , Run Date: 12/19/22 17:32, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/21/22 20:03, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43388.07

Sample Tag: AOC10-TP02-E

Collected Date/Time: 12/12/2022 13:35

Matrix: Soil

COC Reference: 158704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.6	IR
3	4oz Glass	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 08:55	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 12:30	TAW	
Extraction, PCB*	Completed	SW3546	12/15/22 15:00	TAW	
Sample wt. (g) / Methanol (ml)*	10.976/10	SW5035A	12/14/22 10:03	BDO	
Mercury Digestion	Completed	SW7471B	12/14/22 13:58	CTV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 17:32, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	97	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 11:24, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	964	1.0		mg/kg	279	7429-90-5		
Antimony	Not detected	0.50		mg/kg	279	7440-36-0		
Arsenic	0.58	0.20		mg/kg	279	7440-38-2		
Barium	8.62	1.0		mg/kg	279	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	279	7440-41-7		
Boron	Not detected	2.0		mg/kg	279	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	279	7440-43-9		
Chromium	1.96	0.50		mg/kg	279	7440-47-3		
Cobalt	0.63	0.50		mg/kg	279	7440-48-4		
Copper	2.13	0.50		mg/kg	279	7440-50-8		
Iron	1,250	1.0		mg/kg	279	7439-89-6		
Lead	3.64	0.30		mg/kg	279	7439-92-1		
Manganese	54.2	0.50		mg/kg	279	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	279	7439-98-7		
Nickel	1.65	0.50		mg/kg	279	7440-02-0		
Selenium	Not detected	0.40		mg/kg	279	7782-49-2		
Silver	Not detected	0.20		mg/kg	279	7440-22-4		
Strontium	16.8	0.50		mg/kg	279	7440-24-6		
Thallium	Not detected	0.20		mg/kg	279	7440-28-0		
Tin	Not detected	2.0		mg/kg	279	7440-31-5		
Titanium	20.0	1.0		mg/kg	279	7440-32-6		
Vanadium	2.77	0.50		mg/kg	279	7440-62-2		
Zinc	8.54	0.50		mg/kg	279	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43388.07 (continued)

Sample Tag: AOC10-TP02-E

Method: SW6020A, Run Date: 12/19/22 10:29, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	16,900	20		mg/kg	279	7440-70-2		
Magnesium	3,970	20		mg/kg	279	7439-95-4		
Potassium	98.9	20		mg/kg	279	7440-09-7		
Sodium	Not detected	20		mg/kg	279	7440-23-5		

Method: SW7471B, Run Date: 12/14/22 16:13, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	61	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/19/22 14:50, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 15:55, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	420	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	360	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	360	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	430	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43388.07 (continued)

Sample Tag: AOC10-TP02-E

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 15:55, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	960	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	590	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	770	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/23/22 15:55, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Phenanthrene	Found			ug/kg	6	85-01-8		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(ghi)perylene	Found			ug/kg	6	191-24-2		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 02:16, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	200		ug/kg	48.5	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 08:40, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	48.5			



Analytical Laboratory Report

Lab Sample ID: S43388.07 (continued)

Sample Tag: AOC10-TP02-E

Method: SW8260B - SIM, Run Date: 12/15/22 18:48, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	2		ug/kg	48.5	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	48.5	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 08:40, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	48.5	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	48.5	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	48.5	107-13-1		
2-Butanone (MEK)	Not detected	730		ug/kg	48.5	78-93-3		
Dichlorodifluoromethane	Not detected	200		ug/kg	48.5	75-71-8		
Chloromethane	Not detected	200		ug/kg	48.5	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	48.5	75-01-4		
Bromomethane	Not detected	200		ug/kg	48.5	74-83-9		
Chloroethane	Not detected	200		ug/kg	48.5	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	48.5	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	48.5	75-35-4		
Methylene chloride	Not detected	100		ug/kg	48.5	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	48.5	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	48.5	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	48.5	156-59-2		
Chloroform	Not detected	50		ug/kg	48.5	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	48.5	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	2,000		ug/kg	48.5	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	48.5	56-23-5		
Benzene	Not detected	50		ug/kg	48.5	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	48.5	107-06-2		
Trichloroethene	Not detected	50		ug/kg	48.5	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	48.5	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	48.5	75-27-4		
Dibromomethane	Not detected	200		ug/kg	48.5	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	48.5	10061-01-5		
Toluene	Not detected	50		ug/kg	48.5	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	48.5	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	48.5	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	48.5	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	48.5	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	48.5	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	48.5	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	48.5	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	48.5	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	48.5			
o-Xylene	Not detected	50		ug/kg	48.5	95-47-6		
Styrene	Not detected	50		ug/kg	48.5	100-42-5		
Isopropylbenzene	Not detected	200		ug/kg	48.5	98-82-8		
Bromoform	Not detected	100		ug/kg	48.5	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	48.5	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	48.5	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	48.5	103-65-1		
Bromobenzene	Not detected	100		ug/kg	48.5	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43388.07 (continued)

Sample Tag: AOC10-TP02-E

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 08:40, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	48.5	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	48.5	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	48.5	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	48.5	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	48.5	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	48.5	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	48.5	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	48.5	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	48.5	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	48.5	104-51-8		
1,2,4-Trichlorobenzene	Not detected	320		ug/kg	48.5	120-82-1		
1,2,3-Trichlorobenzene	Not detected	320		ug/kg	48.5	87-61-6		
Naphthalene	Not detected	200		ug/kg	48.5	91-20-3		
Acrolein	Not detected	50		ug/kg	48.5	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	48.5	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	48.5	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	48.5	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	48.5	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	48.5	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	48.5	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	48.5	76-13-1		

Other / Misc.

Method: , Run Date: 12/19/22 17:53, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/21/22 20:07, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43388.08

Sample Tag: AOC10-TP02-W

Collected Date/Time: 12/12/2022 14:40

Matrix: Soil

COC Reference: 158704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.6	IR
3	4oz Glass	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 08:55	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 12:30	TAW	
Extraction, PCB*	Completed	SW3546	12/15/22 15:00	TAW	
Sample wt. (g) / Methanol (ml)*	11.464/11	SW5035A	12/14/22 10:03	BDO	
Mercury Digestion	Completed	SW7471B	12/14/22 13:58	CTV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 17:32, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 11:26, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,700	1.0		mg/kg	301	7429-90-5		
Antimony	Not detected	0.50		mg/kg	301	7440-36-0		
Arsenic	0.46	0.20		mg/kg	301	7440-38-2		
Barium	9.87	1.0		mg/kg	301	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	301	7440-41-7		
Boron	Not detected	2.0		mg/kg	301	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	301	7440-43-9		
Chromium	2.54	0.50		mg/kg	301	7440-47-3		
Cobalt	0.72	0.50		mg/kg	301	7440-48-4		
Copper	2.12	0.50		mg/kg	301	7440-50-8		
Iron	1,350	1.0		mg/kg	301	7439-89-6		
Lead	5.68	0.30		mg/kg	301	7439-92-1		
Manganese	39.9	0.50		mg/kg	301	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	301	7439-98-7		
Nickel	1.67	0.50		mg/kg	301	7440-02-0		
Selenium	Not detected	0.40		mg/kg	301	7782-49-2		
Silver	Not detected	0.20		mg/kg	301	7440-22-4		
Strontium	4.36	0.50		mg/kg	301	7440-24-6		
Thallium	Not detected	0.20		mg/kg	301	7440-28-0		
Tin	Not detected	2.0		mg/kg	301	7440-31-5		
Titanium	35.5	1.0		mg/kg	301	7440-32-6		
Vanadium	3.22	0.50		mg/kg	301	7440-62-2		
Zinc	7.11	0.50		mg/kg	301	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43388.08 (continued)

Sample Tag: AOC10-TP02-W

Method: SW6020A, Run Date: 12/19/22 10:32, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	2,950	20		mg/kg	301	7440-70-2		
Magnesium	603	20		mg/kg	301	7439-95-4		
Potassium	101	20		mg/kg	301	7440-09-7		
Sodium	Not detected	20		mg/kg	301	7440-23-5		

Method: SW7471B, Run Date: 12/14/22 16:17, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.767	0.050		mg/kg	55	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/19/22 15:01, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 16:25, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	340	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	360	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43388.08 (continued)

Sample Tag: AOC10-TP02-W

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 16:25, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	720	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	340	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	640	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/23/22 16:25, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Phenanthrene	Found			ug/kg	6	85-01-8		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Benzo(ghi)perylene	Found			ug/kg	6	191-24-2		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 02:40, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	53.1	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 09:04, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	53.1			



Analytical Laboratory Report

Lab Sample ID: S43388.08 (continued)

Sample Tag: AOC10-TP02-W

Method: SW8260B - SIM, Run Date: 12/15/22 19:08, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	53.1	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	53.1	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 09:04, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	53.1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	53.1	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	53.1	107-13-1		
2-Butanone (MEK)	Not detected	800		ug/kg	53.1	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	53.1	75-71-8		
Chloromethane	Not detected	300		ug/kg	53.1	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	53.1	75-01-4		
Bromomethane	Not detected	200		ug/kg	53.1	74-83-9		
Chloroethane	Not detected	300		ug/kg	53.1	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	53.1	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	53.1	75-35-4		
Methylene chloride	Not detected	100		ug/kg	53.1	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	53.1	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	53.1	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	53.1	156-59-2		
Chloroform	Not detected	50		ug/kg	53.1	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	53.1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	53.1	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	53.1	56-23-5		
Benzene	Not detected	50		ug/kg	53.1	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	53.1	107-06-2		
Trichloroethene	Not detected	50		ug/kg	53.1	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	53.1	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	53.1	75-27-4		
Dibromomethane	Not detected	300		ug/kg	53.1	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	53.1	10061-01-5		
Toluene	Not detected	50		ug/kg	53.1	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	53.1	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	53.1	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	53.1	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	53.1	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	53.1	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	53.1	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	53.1	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	53.1	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	53.1			
o-Xylene	Not detected	50		ug/kg	53.1	95-47-6		
Styrene	Not detected	50		ug/kg	53.1	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	53.1	98-82-8		
Bromoform	Not detected	100		ug/kg	53.1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	53.1	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	53.1	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	53.1	103-65-1		
Bromobenzene	Not detected	100		ug/kg	53.1	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43388.08 (continued)

Sample Tag: AOC10-TP02-W

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 09:04, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	53.1	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	53.1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	53.1	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	53.1	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	53.1	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	53.1	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	53.1	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	53.1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	53.1	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	53.1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	350		ug/kg	53.1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	350		ug/kg	53.1	87-61-6		
Naphthalene	Not detected	300		ug/kg	53.1	91-20-3		
Acrolein	Not detected	50		ug/kg	53.1	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	53.1	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	53.1	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	53.1	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	53.1	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	53.1	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	53.1	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	53.1	76-13-1		

Other / Misc.

Method: , Run Date: 12/19/22 18:14, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/21/22 20:10, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43388.09

Sample Tag: AOC10-TP02-S

Collected Date/Time: 12/12/2022 14:06

Matrix: Soil

COC Reference: 158704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.6	IR
3	4oz Glass	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 08:55	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 12:30	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 12:00	TAW	
Sample wt. (g) / Methanol (ml)*	11.050/11	SW5035A	12/14/22 10:03	BDO	
Mercury Digestion	Completed	SW7471B	12/14/22 13:58	CTV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 17:32, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	96	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 11:28, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,110	1.0		mg/kg	301	7429-90-5		
Antimony	Not detected	0.50		mg/kg	301	7440-36-0		
Arsenic	0.71	0.20		mg/kg	301	7440-38-2		
Barium	11.6	1.0		mg/kg	301	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	301	7440-41-7		
Boron	Not detected	2.0		mg/kg	301	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	301	7440-43-9		
Chromium	2.18	0.50		mg/kg	301	7440-47-3		
Cobalt	0.76	0.50		mg/kg	301	7440-48-4		
Copper	3.31	0.50		mg/kg	301	7440-50-8		
Iron	1,430	1.0		mg/kg	301	7439-89-6		
Lead	4.23	0.30		mg/kg	301	7439-92-1		
Manganese	54.2	0.50		mg/kg	301	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	301	7439-98-7		
Nickel	2.81	0.50		mg/kg	301	7440-02-0		
Selenium	Not detected	0.40		mg/kg	301	7782-49-2		
Silver	Not detected	0.20		mg/kg	301	7440-22-4		
Strontium	13.3	0.50		mg/kg	301	7440-24-6		
Thallium	Not detected	0.20		mg/kg	301	7440-28-0		
Tin	Not detected	2.0		mg/kg	301	7440-31-5		
Titanium	24.8	1.0		mg/kg	301	7440-32-6		
Vanadium	4.25	0.50		mg/kg	301	7440-62-2		
Zinc	9.94	0.50		mg/kg	301	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43388.09 (continued)

Sample Tag: AOC10-TP02-S

Method: SW6020A, Run Date: 12/19/22 10:34, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	15,100	20		mg/kg	301	7440-70-2		
Magnesium	3,770	20		mg/kg	301	7439-95-4		
Potassium	117	20		mg/kg	301	7440-09-7		
Sodium	21.9	20		mg/kg	301	7440-23-5		

Method: SW7471B, Run Date: 12/14/22 16:20, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.101	0.050		mg/kg	60	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/19/22 16:35, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 16:55, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	Not detected	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43388.09 (continued)

Sample Tag: AOC10-TP02-S

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 16:55, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	610	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	390	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	540	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/23/22 16:55, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Phenanthrene	Found			ug/kg	6	85-01-8		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(ghi)perylene	Found			ug/kg	6	191-24-2		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 03:04, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	53.9	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 09:28, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	53.9			



Analytical Laboratory Report

Lab Sample ID: S43388.09 (continued)

Sample Tag: AOC10-TP02-S

Method: SW8260B - SIM, Run Date: 12/15/22 19:29, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	53.9	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	53.9	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 09:28, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	53.9	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	53.9	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	53.9	107-13-1		
2-Butanone (MEK)	Not detected	810		ug/kg	53.9	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	53.9	75-71-8		
Chloromethane	Not detected	300		ug/kg	53.9	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	53.9	75-01-4		
Bromomethane	Not detected	200		ug/kg	53.9	74-83-9		
Chloroethane	Not detected	300		ug/kg	53.9	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	53.9	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	53.9	75-35-4		
Methylene chloride	Not detected	100		ug/kg	53.9	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	53.9	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	53.9	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	53.9	156-59-2		
Chloroform	Not detected	50		ug/kg	53.9	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	53.9	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	53.9	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	53.9	56-23-5		
Benzene	Not detected	50		ug/kg	53.9	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	53.9	107-06-2		
Trichloroethene	Not detected	50		ug/kg	53.9	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	53.9	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	53.9	75-27-4		
Dibromomethane	Not detected	300		ug/kg	53.9	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	53.9	10061-01-5		
Toluene	Not detected	50		ug/kg	53.9	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	53.9	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	53.9	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	53.9	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	53.9	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	53.9	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	53.9	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	53.9	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	53.9	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	53.9			
o-Xylene	Not detected	50		ug/kg	53.9	95-47-6		
Styrene	Not detected	50		ug/kg	53.9	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	53.9	98-82-8		
Bromoform	Not detected	100		ug/kg	53.9	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	53.9	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	53.9	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	53.9	103-65-1		
Bromobenzene	Not detected	100		ug/kg	53.9	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43388.09 (continued)

Sample Tag: AOC10-TP02-S

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 09:28, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	53.9	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	53.9	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	53.9	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	53.9	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	53.9	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	53.9	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	53.9	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	53.9	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	53.9	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	53.9	104-51-8		
1,2,4-Trichlorobenzene	Not detected	360		ug/kg	53.9	120-82-1		
1,2,3-Trichlorobenzene	Not detected	360		ug/kg	53.9	87-61-6		
Naphthalene	Not detected	300		ug/kg	53.9	91-20-3		
Acrolein	Not detected	50		ug/kg	53.9	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	53.9	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	53.9	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	53.9	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	53.9	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	53.9	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	53.9	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	53.9	76-13-1		

Other / Misc.

Method: , Run Date: 12/19/22 18:36, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/21/22 20:14, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43388.10

Sample Tag: AOC10-TP02-N

Collected Date/Time: 12/12/2022 14:06

Matrix: Soil

COC Reference: 158704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.6	IR
3	4oz Glass	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 08:55	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 12:30	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 12:00	TAW	
Sample wt. (g) / Methanol (ml)*	11.183/11	SW5035A	12/14/22 10:03	BDO	
Mercury Digestion	Completed	SW7471B	12/14/22 13:58	CTV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 17:32, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	97	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 11:30, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,050	1.0		mg/kg	294	7429-90-5		
Antimony	Not detected	0.50		mg/kg	294	7440-36-0		
Arsenic	0.42	0.20		mg/kg	294	7440-38-2		
Barium	8.28	1.0		mg/kg	294	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	294	7440-41-7		
Boron	Not detected	2.0		mg/kg	294	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	294	7440-43-9		
Chromium	1.88	0.50		mg/kg	294	7440-47-3		
Cobalt	0.60	0.50		mg/kg	294	7440-48-4		
Copper	2.13	0.50		mg/kg	294	7440-50-8		
Iron	1,120	1.0		mg/kg	294	7439-89-6		
Lead	3.10	0.30		mg/kg	294	7439-92-1		
Manganese	37.5	0.50		mg/kg	294	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	294	7439-98-7		
Nickel	1.58	0.50		mg/kg	294	7440-02-0		
Selenium	Not detected	0.40		mg/kg	294	7782-49-2		
Silver	Not detected	0.20		mg/kg	294	7440-22-4		
Strontium	8.67	0.50		mg/kg	294	7440-24-6		
Thallium	Not detected	0.20		mg/kg	294	7440-28-0		
Tin	Not detected	2.0		mg/kg	294	7440-31-5		
Titanium	20.1	1.0		mg/kg	294	7440-32-6		
Vanadium	2.60	0.50		mg/kg	294	7440-62-2		
Zinc	7.30	0.50		mg/kg	294	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43388.10 (continued)

Sample Tag: AOC10-TP02-N

Method: SW6020A, Run Date: 12/19/22 10:37, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	8,890	20		mg/kg	294	7440-70-2		
Magnesium	2,020	20		mg/kg	294	7439-95-4		
Potassium	94.8	20		mg/kg	294	7440-09-7		
Sodium	Not detected	20		mg/kg	294	7440-23-5		

Method: SW7471B, Run Date: 12/14/22 16:23, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.088	0.050		mg/kg	61	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/19/22 16:49, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 17:25, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	Not detected	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43388.10 (continued)

Sample Tag: AOC10-TP02-N

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 17:25, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	460	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	Not detected	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	410	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/23/22 17:25, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Phenanthrene	Found			ug/kg	6	85-01-8		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
4,7-Dichloroquinoline*	Found			ug/kg	6			
Benzo(ghi)perylene	Found			ug/kg	6	191-24-2		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 03:28, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	52.2	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 09:52, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	52.2			



Analytical Laboratory Report

Lab Sample ID: S43388.10 (continued)

Sample Tag: AOC10-TP02-N

Method: SW8260B - SIM, Run Date: 12/15/22 19:49, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	52.2	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	52.2	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 09:52, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	52.2	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	52.2	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	52.2	107-13-1		
2-Butanone (MEK)	Not detected	780		ug/kg	52.2	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	52.2	75-71-8		
Chloromethane	Not detected	300		ug/kg	52.2	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	52.2	75-01-4		
Bromomethane	Not detected	200		ug/kg	52.2	74-83-9		
Chloroethane	Not detected	300		ug/kg	52.2	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	52.2	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	52.2	75-35-4		
Methylene chloride	Not detected	100		ug/kg	52.2	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	52.2	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	52.2	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	52.2	156-59-2		
Chloroform	Not detected	50		ug/kg	52.2	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	52.2	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	52.2	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	52.2	56-23-5		
Benzene	Not detected	50		ug/kg	52.2	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	52.2	107-06-2		
Trichloroethene	Not detected	50		ug/kg	52.2	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	52.2	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	52.2	75-27-4		
Dibromomethane	Not detected	300		ug/kg	52.2	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	52.2	10061-01-5		
Toluene	Not detected	50		ug/kg	52.2	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	52.2	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	52.2	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	52.2	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	52.2	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	52.2	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	52.2	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	52.2	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	52.2	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	52.2			
o-Xylene	Not detected	50		ug/kg	52.2	95-47-6		
Styrene	Not detected	50		ug/kg	52.2	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	52.2	98-82-8		
Bromoform	Not detected	100		ug/kg	52.2	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	52.2	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	52.2	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	52.2	103-65-1		
Bromobenzene	Not detected	100		ug/kg	52.2	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43388.10 (continued)

Sample Tag: AOC10-TP02-N

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 09:52, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	52.2	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	52.2	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	52.2	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	52.2	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	52.2	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	52.2	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	52.2	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	52.2	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	52.2	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	52.2	104-51-8		
1,2,4-Trichlorobenzene	Not detected	340		ug/kg	52.2	120-82-1		
1,2,3-Trichlorobenzene	Not detected	340		ug/kg	52.2	87-61-6		
Naphthalene	Not detected	300		ug/kg	52.2	91-20-3		
Acrolein	Not detected	50		ug/kg	52.2	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	52.2	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	52.2	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	52.2	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	52.2	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	52.2	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	52.2	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	52.2	76-13-1		

Other / Misc.

Method: , Run Date: 12/19/22 18:57, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/21/22 20:17, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43388.11

Sample Tag: AOC10-TP02-B

Collected Date/Time: 12/12/2022 14:28

Matrix: Soil

COC Reference: 158704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.6	IR
3	4oz Glass	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 08:55	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 12:30	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 12:00	TAW	
Sample wt. (g) / Methanol (ml)*	12.418/12	SW5035A	12/14/22 10:03	BDO	
Mercury Digestion	Completed	SW7471B	12/14/22 13:58	CTV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 18:30, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	90	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 12:03, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,330	1.0		mg/kg	304	7429-90-5		
Antimony	Not detected	0.50		mg/kg	304	7440-36-0		
Arsenic	0.39	0.20		mg/kg	304	7440-38-2		
Barium	20.9	1.0		mg/kg	304	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	304	7440-41-7		
Boron	Not detected	2.0		mg/kg	304	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	304	7440-43-9		
Chromium	11.1	0.50		mg/kg	304	7440-47-3		
Cobalt	0.73	0.50		mg/kg	304	7440-48-4		
Copper	21.2	0.50		mg/kg	304	7440-50-8		
Iron	1,600	1.0		mg/kg	304	7439-89-6		
Lead	18.2	0.30		mg/kg	304	7439-92-1		
Manganese	22.1	0.50		mg/kg	304	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	304	7439-98-7		
Nickel	2.19	0.50		mg/kg	304	7440-02-0		
Selenium	Not detected	0.40		mg/kg	304	7782-49-2		
Silver	0.93	0.20		mg/kg	304	7440-22-4		
Strontium	3.01	0.50		mg/kg	304	7440-24-6		
Thallium	Not detected	0.20		mg/kg	304	7440-28-0		
Tin	Not detected	2.0		mg/kg	304	7440-31-5		
Titanium	22.0	1.0		mg/kg	304	7440-32-6		
Vanadium	4.08	0.50		mg/kg	304	7440-62-2		
Zinc	30.0	0.50		mg/kg	304	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43388.11 (continued)

Sample Tag: AOC10-TP02-B

Method: SW6020A, Run Date: 12/19/22 10:53, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	733	20		mg/kg	304	7440-70-2		
Magnesium	352	20		mg/kg	304	7439-95-4		
Potassium	126	20		mg/kg	304	7440-09-7		
Sodium	Not detected	20		mg/kg	304	7440-23-5		

Method: SW7471B, Run Date: 12/14/22 16:56, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	7.118	0.050		mg/kg	1180	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/19/22 17:01, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 12/23/22 17:55, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	6			

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 17:55, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	Not detected	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		



Analytical Laboratory Report

Lab Sample ID: S43388.11 (continued)

Sample Tag: AOC10-TP02-B

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 17:55, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	Not detected	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	Not detected	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	Not detected	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 03:52, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	59.2	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 10:16, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	59.2			

Method: SW8260B - SIM, Run Date: 12/15/22 20:10, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	59.2	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	59.2	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 10:16, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	59.2	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	59.2	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	59.2	107-13-1		



Analytical Laboratory Report

Lab Sample ID: S43388.11 (continued)

Sample Tag: AOC10-TP02-B

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 10:16, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2-Butanone (MEK)	Not detected	890		ug/kg	59.2	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	59.2	75-71-8		
Chloromethane	Not detected	300		ug/kg	59.2	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	59.2	75-01-4		
Bromomethane	Not detected	200		ug/kg	59.2	74-83-9		
Chloroethane	Not detected	300		ug/kg	59.2	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	59.2	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	59.2	75-35-4		
Methylene chloride	Not detected	100		ug/kg	59.2	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	59.2	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	59.2	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	59.2	156-59-2		
Chloroform	Not detected	60		ug/kg	59.2	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	59.2	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	59.2	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	59.2	56-23-5		
Benzene	Not detected	60		ug/kg	59.2	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	59.2	107-06-2		
Trichloroethene	Not detected	60		ug/kg	59.2	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	59.2	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	59.2	75-27-4		
Dibromomethane	Not detected	300		ug/kg	59.2	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	59.2	10061-01-5		
Toluene	Not detected	60		ug/kg	59.2	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	59.2	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	59.2	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	59.2	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	59.2	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	59.2	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	59.2	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	59.2	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	59.2	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	59.2			
o-Xylene	Not detected	60		ug/kg	59.2	95-47-6		
Styrene	Not detected	60		ug/kg	59.2	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	59.2	98-82-8		
Bromoform	Not detected	100		ug/kg	59.2	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	59.2	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	59.2	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	59.2	103-65-1		
Bromobenzene	Not detected	100		ug/kg	59.2	108-86-1		
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	59.2	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	59.2	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	59.2	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	59.2	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	59.2	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	59.2	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	59.2	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	59.2	95-50-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43388.11 (continued)

Sample Tag: AOC10-TP02-B

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 10:16, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	59.2	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	59.2	104-51-8		
1,2,4-Trichlorobenzene	Not detected	390		ug/kg	59.2	120-82-1		
1,2,3-Trichlorobenzene	Not detected	390		ug/kg	59.2	87-61-6		
Naphthalene	Not detected	300		ug/kg	59.2	91-20-3		
Acrolein	Not detected	60		ug/kg	59.2	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	59.2	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	59.2	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	59.2	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	59.2	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	59.2	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	59.2	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	59.2	76-13-1		

Other / Misc.

Method: , Run Date: 12/19/22 19:18, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/20/22 19:59, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43388.12

Sample Tag: DUP-02S

Collected Date/Time: 12/12/2022 00:01

Matrix: Soil

COC Reference: 158704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.6	IR
3	4oz Glass	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 08:55	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 12:30	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 12:00	TAW	
Sample wt. (g) / Methanol (ml)*	10.828/10	SW5035A	12/14/22 10:03	BDO	
Mercury Digestion	Completed	SW7471B	12/14/22 13:58	CTV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 18:30, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	97	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 12:05, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,170	1.0		mg/kg	296	7429-90-5		
Antimony	Not detected	0.50		mg/kg	296	7440-36-0		
Arsenic	0.66	0.20		mg/kg	296	7440-38-2		
Barium	14.5	1.0		mg/kg	296	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	296	7440-41-7		
Boron	Not detected	2.0		mg/kg	296	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	296	7440-43-9		
Chromium	2.23	0.50		mg/kg	296	7440-47-3		
Cobalt	0.72	0.50		mg/kg	296	7440-48-4		
Copper	2.94	0.50		mg/kg	296	7440-50-8		
Iron	1,530	1.0		mg/kg	296	7439-89-6		
Lead	9.70	0.30		mg/kg	296	7439-92-1		
Manganese	80.4	0.50		mg/kg	296	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	296	7439-98-7		
Nickel	1.93	0.50		mg/kg	296	7440-02-0		
Selenium	Not detected	0.40		mg/kg	296	7782-49-2		
Silver	Not detected	0.20		mg/kg	296	7440-22-4		
Strontium	17.2	0.50		mg/kg	296	7440-24-6		
Thallium	Not detected	0.20		mg/kg	296	7440-28-0		
Tin	Not detected	2.0		mg/kg	296	7440-31-5		
Titanium	22.5	1.0		mg/kg	296	7440-32-6		
Vanadium	2.98	0.50		mg/kg	296	7440-62-2		
Zinc	10.5	0.50		mg/kg	296	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43388.12 (continued)

Sample Tag: DUP-02S

Method: SW6020A, Run Date: 12/19/22 10:55, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	17,300	20		mg/kg	296	7440-70-2		
Magnesium	4,080	20		mg/kg	296	7439-95-4		
Potassium	126	20		mg/kg	296	7440-09-7		
Sodium	24.4	20		mg/kg	296	7440-23-5		

Method: SW7471B, Run Date: 12/14/22 16:36, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	62	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/19/22 17:13, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 18:26, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	Not detected	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43388.12 (continued)

Sample Tag: DUP-02S

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 18:26, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	Not detected	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	Not detected	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	Not detected	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/23/22 18:26, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Indeno(1,2,3-cd)pyrene	Found			ug/kg	6	193-39-5		
Benzo(ghi)perylene	Found			ug/kg	6	191-24-2		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 04:17, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	200		ug/kg	49.2	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 10:41, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	49.2			



Analytical Laboratory Report

Lab Sample ID: S43388.12 (continued)

Sample Tag: DUP-02S

Method: SW8260B - SIM, Run Date: 12/15/22 20:30, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	2		ug/kg	49.2	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	49.2	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 10:41, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	49.2	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	49.2	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	49.2	107-13-1		
2-Butanone (MEK)	Not detected	740		ug/kg	49.2	78-93-3		
Dichlorodifluoromethane	Not detected	200		ug/kg	49.2	75-71-8		
Chloromethane	Not detected	200		ug/kg	49.2	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	49.2	75-01-4		
Bromomethane	Not detected	200		ug/kg	49.2	74-83-9		
Chloroethane	Not detected	200		ug/kg	49.2	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	49.2	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	49.2	75-35-4		
Methylene chloride	Not detected	100		ug/kg	49.2	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	49.2	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	49.2	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	49.2	156-59-2		
Chloroform	Not detected	50		ug/kg	49.2	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	49.2	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	2,000		ug/kg	49.2	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	49.2	56-23-5		
Benzene	Not detected	50		ug/kg	49.2	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	49.2	107-06-2		
Trichloroethene	Not detected	50		ug/kg	49.2	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	49.2	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	49.2	75-27-4		
Dibromomethane	Not detected	200		ug/kg	49.2	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	49.2	10061-01-5		
Toluene	Not detected	50		ug/kg	49.2	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	49.2	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	49.2	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	49.2	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	49.2	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	49.2	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	49.2	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	49.2	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	49.2	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	49.2			
o-Xylene	Not detected	50		ug/kg	49.2	95-47-6		
Styrene	Not detected	50		ug/kg	49.2	100-42-5		
Isopropylbenzene	Not detected	200		ug/kg	49.2	98-82-8		
Bromoform	Not detected	100		ug/kg	49.2	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	49.2	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	49.2	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	49.2	103-65-1		
Bromobenzene	Not detected	100		ug/kg	49.2	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43388.12 (continued)

Sample Tag: DUP-02S

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 10:41, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	49.2	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	49.2	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	49.2	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	49.2	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	49.2	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	49.2	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	49.2	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	49.2	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	49.2	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	49.2	104-51-8		
1,2,4-Trichlorobenzene	Not detected	320		ug/kg	49.2	120-82-1		
1,2,3-Trichlorobenzene	Not detected	320		ug/kg	49.2	87-61-6		
Naphthalene	Not detected	200		ug/kg	49.2	91-20-3		
Acrolein	Not detected	50		ug/kg	49.2	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	49.2	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	49.2	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	49.2	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	49.2	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	49.2	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	49.2	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	49.2	76-13-1		

Other / Misc.

Method: , Run Date: 12/19/22 19:39, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/20/22 20:16, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43388.13

Sample Tag: AOC7-MW-22-08 (2-3)

Collected Date/Time: 12/12/2022 11:55

Matrix: Soil

COC Reference: 158707

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.6	IR
4	4oz Glass	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 08:55	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 12:30	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 12:00	TAW	
Sample wt. (g) / Methanol (ml)*	12.584/12	SW5035A	12/14/22 10:03	BDO	
Mercury Digestion	Completed	SW7471B	12/14/22 13:58	CTV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 18:30, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	93	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 12:07, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,880	1.0		mg/kg	307	7429-90-5		
Antimony	Not detected	0.50		mg/kg	307	7440-36-0		
Arsenic	1.08	0.20		mg/kg	307	7440-38-2		
Barium	26.9	1.0		mg/kg	307	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	307	7440-41-7		
Boron	Not detected	2.0		mg/kg	307	7440-42-8		
Cadmium	0.35	0.20		mg/kg	307	7440-43-9		
Chromium	3.74	0.50		mg/kg	307	7440-47-3		
Cobalt	0.90	0.50		mg/kg	307	7440-48-4		
Copper	4.90	0.50		mg/kg	307	7440-50-8		
Iron	1,890	1.0		mg/kg	307	7439-89-6		
Lead	51.7	0.30		mg/kg	307	7439-92-1		
Manganese	74.7	0.50		mg/kg	307	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	307	7439-98-7		
Nickel	2.43	0.50		mg/kg	307	7440-02-0		
Selenium	Not detected	0.40		mg/kg	307	7782-49-2		
Silver	Not detected	0.20		mg/kg	307	7440-22-4		
Strontium	24.3	0.50		mg/kg	307	7440-24-6		
Thallium	Not detected	0.20		mg/kg	307	7440-28-0		
Tin	Not detected	2.0		mg/kg	307	7440-31-5		
Titanium	48.7	1.0		mg/kg	307	7440-32-6		
Vanadium	3.98	0.50		mg/kg	307	7440-62-2		
Zinc	42.9	0.50		mg/kg	307	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43388.13 (continued)

Sample Tag: AOC7-MW-22-08 (2-3)

Method: SW6020A, Run Date: 12/19/22 10:56, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	20,900	20		mg/kg	307	7440-70-2		
Magnesium	3,010	20		mg/kg	307	7439-95-4		
Potassium	187	20		mg/kg	307	7440-09-7		
Sodium	37.7	20		mg/kg	307	7440-23-5		

Method: SW7471B, Run Date: 12/14/22 16:40, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	1.230	0.050		mg/kg	57	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/19/22 17:25, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/27/22 21:20, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	480	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	1,950	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	2,200	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	1,920	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	730	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	2,040	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	2,190	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43388.13 (continued)

Sample Tag: AOC7-MW-22-08 (2-3)

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/27/22 21:20, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	4,490	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	740	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	2,220	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	3,750	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/23/22 22:57, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Phenanthrene	Found			ug/kg	6	85-01-8		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Indeno(1,2,3-cd)pyrene	Found			ug/kg	6	193-39-5		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 04:40, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	55	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 11:05, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	55			



Analytical Laboratory Report

Lab Sample ID: S43388.13 (continued)

Sample Tag: AOC7-MW-22-08 (2-3)

Method: SW8260B - SIM, Run Date: 12/15/22 20:51, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	55	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	55	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 11:05, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	55	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	55	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	55	107-13-1		
2-Butanone (MEK)	Not detected	830		ug/kg	55	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	55	75-71-8		
Chloromethane	Not detected	300		ug/kg	55	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	55	75-01-4		
Bromomethane	Not detected	200		ug/kg	55	74-83-9		
Chloroethane	Not detected	300		ug/kg	55	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	55	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	55	75-35-4		
Methylene chloride	Not detected	100		ug/kg	55	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	55	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	55	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	55	156-59-2		
Chloroform	Not detected	60		ug/kg	55	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	55	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	55	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	55	56-23-5		
Benzene	Not detected	60		ug/kg	55	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	55	107-06-2		
Trichloroethene	Not detected	60		ug/kg	55	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	55	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	55	75-27-4		
Dibromomethane	Not detected	300		ug/kg	55	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	55	10061-01-5		
Toluene	Not detected	60		ug/kg	55	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	55	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	55	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	55	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	55	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	55	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	55	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	55	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	55	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	55			
o-Xylene	Not detected	60		ug/kg	55	95-47-6		
Styrene	Not detected	60		ug/kg	55	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	55	98-82-8		
Bromoform	Not detected	100		ug/kg	55	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	55	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	55	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	55	103-65-1		
Bromobenzene	Not detected	100		ug/kg	55	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43388.13 (continued)

Sample Tag: AOC7-MW-22-08 (2-3)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 11:05, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	55	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	55	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	55	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	55	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	55	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	55	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	55	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	55	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	55	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	55	104-51-8		
1,2,4-Trichlorobenzene	Not detected	360		ug/kg	55	120-82-1		
1,2,3-Trichlorobenzene	Not detected	360		ug/kg	55	87-61-6		
Naphthalene	Not detected	300		ug/kg	55	91-20-3		
Acrolein	Not detected	60		ug/kg	55	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	55	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	55	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	55	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	55	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	55	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	55	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	55	76-13-1		

Other / Misc.

Method: , Run Date: 12/19/22 20:00, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/20/22 20:20, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/20/22 18:25, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43388.14

Sample Tag: AOC7-MW-22-09 (2-4)

Collected Date/Time: 12/12/2022 12:30

Matrix: Soil

COC Reference: 158707

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.6	IR
4	4oz Glass	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 08:55	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 12:30	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 12:00	TAW	
Sample wt. (g) / Methanol (ml)*	13.238/13	SW5035A	12/14/22 10:03	BDO	
Mercury Digestion	Completed	SW7471B	12/14/22 13:58	CTV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 18:30, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 12:09, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,020	1.0		mg/kg	301	7429-90-5		
Antimony	Not detected	0.50		mg/kg	301	7440-36-0		
Arsenic	0.51	0.20		mg/kg	301	7440-38-2		
Barium	7.22	1.0		mg/kg	301	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	301	7440-41-7		
Boron	Not detected	2.0		mg/kg	301	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	301	7440-43-9		
Chromium	1.95	0.50		mg/kg	301	7440-47-3		
Cobalt	0.72	0.50		mg/kg	301	7440-48-4		
Copper	1.81	0.50		mg/kg	301	7440-50-8		
Iron	1,360	1.0		mg/kg	301	7439-89-6		
Lead	2.60	0.30		mg/kg	301	7439-92-1		
Manganese	81.4	0.50		mg/kg	301	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	301	7439-98-7		
Nickel	1.84	0.50		mg/kg	301	7440-02-0		
Selenium	Not detected	0.40		mg/kg	301	7782-49-2		
Silver	Not detected	0.20		mg/kg	301	7440-22-4		
Strontium	20.1	0.50		mg/kg	301	7440-24-6		
Thallium	Not detected	0.20		mg/kg	301	7440-28-0		
Tin	Not detected	2.0		mg/kg	301	7440-31-5		
Titanium	24.6	1.0		mg/kg	301	7440-32-6		
Vanadium	2.66	0.50		mg/kg	301	7440-62-2		
Zinc	7.12	0.50		mg/kg	301	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43388.14 (continued)

Sample Tag: AOC7-MW-22-09 (2-4)

Method: SW6020A, Run Date: 12/19/22 10:57, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	23,600	20		mg/kg	301	7440-70-2		
Magnesium	5,700	20		mg/kg	301	7439-95-4		
Potassium	186	20		mg/kg	301	7440-09-7		
Sodium	45.2	20		mg/kg	301	7440-23-5		

Method: SW7471B, Run Date: 12/14/22 16:43, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	55	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/19/22 17:37, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 18:56, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	600	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	480	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	500	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	530	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	650	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43388.14 (continued)

Sample Tag: AOC7-MW-22-09 (2-4)

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 18:56, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	1,380	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	730	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	1,180	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/23/22 18:56, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Phenanthrene	Found			ug/kg	6	85-01-8		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Benzo(ghi)perylene	Found			ug/kg	6	191-24-2		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 05:04, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	54.3	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 11:29, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	54.3			



Analytical Laboratory Report

Lab Sample ID: S43388.14 (continued)

Sample Tag: AOC7-MW-22-09 (2-4)

Method: SW8260B - SIM, Run Date: 12/15/22 21:12, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	54.3	96-12-8		
1,4-Dioxane*	Not detected	70		ug/kg	54.3	123-91-1	X	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 11:29, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	54.3	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	54.3	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	54.3	107-13-1		
2-Butanone (MEK)	Not detected	810		ug/kg	54.3	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	54.3	75-71-8		
Chloromethane	Not detected	300		ug/kg	54.3	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	54.3	75-01-4		
Bromomethane	Not detected	200		ug/kg	54.3	74-83-9		
Chloroethane	Not detected	300		ug/kg	54.3	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	54.3	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	54.3	75-35-4		
Methylene chloride	Not detected	100		ug/kg	54.3	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	54.3	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	54.3	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	54.3	156-59-2		
Chloroform	Not detected	50		ug/kg	54.3	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	54.3	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	54.3	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	54.3	56-23-5		
Benzene	Not detected	50		ug/kg	54.3	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	54.3	107-06-2		
Trichloroethene	Not detected	50		ug/kg	54.3	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	54.3	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	54.3	75-27-4		
Dibromomethane	Not detected	300		ug/kg	54.3	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	54.3	10061-01-5		
Toluene	Not detected	50		ug/kg	54.3	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	54.3	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	54.3	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	54.3	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	54.3	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	54.3	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	54.3	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	54.3	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	54.3	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	54.3			
o-Xylene	Not detected	50		ug/kg	54.3	95-47-6		
Styrene	Not detected	50		ug/kg	54.3	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	54.3	98-82-8		
Bromoform	Not detected	100		ug/kg	54.3	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	54.3	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	54.3	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	54.3	103-65-1		

X-Elevated reporting limit due to matrix interference

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43388.14 (continued)

Sample Tag: AOC7-MW-22-09 (2-4)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 11:29, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Bromobenzene	Not detected	100		ug/kg	54.3	108-86-1		
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	54.3	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	54.3	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	54.3	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	54.3	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	54.3	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	54.3	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	54.3	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	54.3	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	54.3	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	54.3	104-51-8		
1,2,4-Trichlorobenzene	Not detected	360		ug/kg	54.3	120-82-1		
1,2,3-Trichlorobenzene	Not detected	360		ug/kg	54.3	87-61-6		
Naphthalene	Not detected	300		ug/kg	54.3	91-20-3		
Acrolein	Not detected	50		ug/kg	54.3	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	54.3	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	54.3	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	54.3	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	54.3	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	54.3	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	54.3	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	54.3	76-13-1		

Other / Misc.

Method: , Run Date: 12/19/22 20:21, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/20/22 20:23, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/20/22 18:49, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43388.15

Sample Tag: AOC7-MW-22-09 (8-10)

Collected Date/Time: 12/12/2022 13:00

Matrix: Soil

COC Reference: 158707

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.6	IR
4	4oz Glass	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 08:55	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 12:30	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 12:00	TAW	
Sample wt. (g) / Methanol (ml)*	8.926/10	SW5035A	12/14/22 10:03	BDO	
Mercury Digestion	Completed	SW7471B	12/14/22 13:58	CTV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 18:30, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	88	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 12:11, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	7,050	1.0		mg/kg	334	7429-90-5		
Antimony	Not detected	0.50		mg/kg	334	7440-36-0		
Arsenic	5.19	0.20		mg/kg	334	7440-38-2		
Barium	183	1.0		mg/kg	334	7440-39-3		
Beryllium	0.59	0.20		mg/kg	334	7440-41-7		
Boron	21.8	2.0		mg/kg	334	7440-42-8		
Cadmium	2.14	0.20		mg/kg	334	7440-43-9		
Chromium	15.3	0.50		mg/kg	334	7440-47-3		
Cobalt	2.49	0.50		mg/kg	334	7440-48-4		
Copper	16.1	0.50		mg/kg	334	7440-50-8		
Iron	4,750	1.0		mg/kg	334	7439-89-6		
Lead	73.7	0.30		mg/kg	334	7439-92-1		
Manganese	247	0.50		mg/kg	334	7439-96-5		
Molybdenum	1.81	0.50		mg/kg	334	7439-98-7		
Nickel	6.79	0.50		mg/kg	334	7440-02-0		
Selenium	0.43	0.40		mg/kg	334	7782-49-2		
Silver	0.79	0.20		mg/kg	334	7440-22-4		
Strontium	108	0.50		mg/kg	334	7440-24-6		
Thallium	Not detected	0.20		mg/kg	334	7440-28-0		
Tin	Not detected	2.0		mg/kg	334	7440-31-5		
Titanium	217	1.0		mg/kg	334	7440-32-6		
Vanadium	17.5	0.50		mg/kg	334	7440-62-2		
Zinc	177	0.50		mg/kg	334	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43388.15 (continued)

Sample Tag: AOC7-MW-22-09 (8-10)

Method: SW6020A, Run Date: 12/19/22 10:58, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	67,300	20		mg/kg	334	7440-70-2		
Magnesium	7,740	20		mg/kg	334	7439-95-4		
Potassium	1,880	20		mg/kg	334	7440-09-7		
Sodium	487	20		mg/kg	334	7440-23-5		

Method: SW7471B, Run Date: 12/14/22 17:00, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	2.968	0.050		mg/kg	700	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/19/22 17:49, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/27/22 21:50, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	910	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	2,240	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	7,600	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	8,640	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	7,550	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	2,350	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	7,670	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	3,830	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	9,110	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	1,010	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43388.15 (continued)

Sample Tag: AOC7-MW-22-09 (8-10)

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/27/22 21:50, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	17,620	330		ug/kg	6	206-44-0		
Fluorene	820	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	2,580	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	9,100	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	14,650	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/23/22 23:27, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Phenanthrene	Found			ug/kg	6	85-01-8		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Butyl benzyl phthalate	Found			ug/kg	6	85-68-7		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 05:29, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	400		ug/kg	70.5	108-20-3		

Method: SW8260B - SIM, Run Date: 12/15/22 21:33, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	4		ug/kg	70.5	96-12-8		
1,4-Dioxane*	Not detected	70		ug/kg	70.5	123-91-1		



Analytical Laboratory Report

Lab Sample ID: S43388.15 (continued)

Sample Tag: AOC7-MW-22-09 (8-10)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 11:53, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	70.5	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	300		ug/kg	70.5	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	70.5	107-13-1		
2-Butanone (MEK)	Not detected	1,100		ug/kg	70.5	78-93-3		
Dichlorodifluoromethane	Not detected	400		ug/kg	70.5	75-71-8		
Chloromethane	Not detected	400		ug/kg	70.5	74-87-3		
Vinyl chloride	Not detected	70		ug/kg	70.5	75-01-4		
Bromomethane	Not detected	300		ug/kg	70.5	74-83-9		
Chloroethane	Not detected	400		ug/kg	70.5	75-00-3		
Trichlorofluoromethane	500	100		ug/kg	70.5	75-69-4		
1,1-Dichloroethene	Not detected	70		ug/kg	70.5	75-35-4		
Methylene chloride	Not detected	100		ug/kg	70.5	75-09-2		
trans-1,2-Dichloroethene	Not detected	70		ug/kg	70.5	156-60-5		
1,1-Dichloroethane	Not detected	70		ug/kg	70.5	75-34-3		
cis-1,2-Dichloroethene	Not detected	70		ug/kg	70.5	156-59-2		
Chloroform	Not detected	70		ug/kg	70.5	67-66-3		
1,1,1-Trichloroethane	Not detected	70		ug/kg	70.5	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	4,000		ug/kg	70.5	108-10-1		
Carbon tetrachloride	Not detected	70		ug/kg	70.5	56-23-5		
Benzene	Not detected	70		ug/kg	70.5	71-43-2		
1,2-Dichloroethane	Not detected	70		ug/kg	70.5	107-06-2		
Trichloroethene	Not detected	70		ug/kg	70.5	79-01-6		
1,2-Dichloropropane	Not detected	70		ug/kg	70.5	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	70.5	75-27-4		
Dibromomethane	Not detected	400		ug/kg	70.5	74-95-3		
cis-1,3-Dichloropropene	Not detected	70		ug/kg	70.5	10061-01-5		
Toluene	Not detected	70		ug/kg	70.5	108-88-3		
trans-1,3-Dichloropropene	Not detected	70		ug/kg	70.5	10061-02-6		
1,1,2-Trichloroethane	Not detected	70		ug/kg	70.5	79-00-5		
Tetrachloroethene	Not detected	70		ug/kg	70.5	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	70.5	124-48-1		
1,2-Dibromoethane	Not detected	30		ug/kg	70.5	106-93-4	M	
Chlorobenzene	Not detected	70		ug/kg	70.5	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	70.5	630-20-6		
Ethylbenzene	Not detected	70		ug/kg	70.5	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	70.5			
o-Xylene	Not detected	70		ug/kg	70.5	95-47-6		
Styrene	Not detected	70		ug/kg	70.5	100-42-5		
Isopropylbenzene	Not detected	400		ug/kg	70.5	98-82-8		
Bromoform	Not detected	100		ug/kg	70.5	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	70		ug/kg	70.5	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	70.5	96-18-4		
n-Propylbenzene	Not detected	70		ug/kg	70.5	103-65-1		
Bromobenzene	Not detected	100		ug/kg	70.5	108-86-1		
1,3,5-Trimethylbenzene	Not detected	70		ug/kg	70.5	108-67-8		
tert-Butylbenzene	Not detected	70		ug/kg	70.5	98-06-6		
1,2,4-Trimethylbenzene	Not detected	70		ug/kg	70.5	95-63-6		
sec-Butylbenzene	Not detected	70		ug/kg	70.5	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	70.5	99-87-6		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43388.15 (continued)

Sample Tag: AOC7-MW-22-09 (8-10)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 11:53, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3-Dichlorobenzene	Not detected	100		ug/kg	70.5	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	70.5	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	70.5	95-50-1		
1,2,3-Trimethylbenzene	Not detected	70		ug/kg	70.5	526-73-8		
n-Butylbenzene	Not detected	70		ug/kg	70.5	104-51-8		
1,2,4-Trichlorobenzene	Not detected	470		ug/kg	70.5	120-82-1		
1,2,3-Trichlorobenzene	Not detected	470		ug/kg	70.5	87-61-6		
Naphthalene	900	400		ug/kg	70.5	91-20-3		
Acrolein	Not detected	70		ug/kg	70.5	107-02-8		
2-Chlorotoluene	Not detected	70		ug/kg	70.5	95-49-8		
4-Chlorotoluene	Not detected	70		ug/kg	70.5	106-43-4		
1,3-Dichloropropane	Not detected	70		ug/kg	70.5	142-28-9		
1,1-Dichloropropene	Not detected	70		ug/kg	70.5	563-58-6		
2,2-Dichloropropane	Not detected	70		ug/kg	70.5	594-20-7		
Hexachlorobutadiene	Not detected	70		ug/kg	70.5	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	70		ug/kg	70.5	76-13-1		

TICs Volatiles, Method: SW5035A/8260C, Run Date: 12/18/22 11:53, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Completed			ug/kg	70.5			
Methyl Acetate	Found			ug/kg	70.5	79-20-9		
Nonane*	Found			ug/kg	70.5			
Decane*	Found			ug/kg	70.5	124-18-5		
2-Methylnaphthalene	Found			ug/kg	70.5	91-57-6		
1-Methylnaphthalene	Found			ug/kg	70.5	90-12-0		

Other / Misc.

Method: , Run Date: 12/19/22 20:42, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/20/22 19:13, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.

Merit Laboratories Login Checklist

Lab Set ID:S43388

Client:TRC (TRC)

Project: Detroit Axle Southern RCRA Invest. 495430.0001

Submitted: 12/13/2022 15:10 Login User: MMC

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place

Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Selection	Description	Note
Sample Receiving		
01.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples are received at 4C +/- 2C Thermometer # IR 5.4
02.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Received on ice/ cooling process begun
03.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples shipped
04.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples left in 24 hr. drop box
05.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Are there custody seals/tape or is the drop box locked
Chain of Custody		
06.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC adequately filled out
07.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC signed and relinquished to the lab
08.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sample tag on bottles match COC
09.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Subcontracting needed? Subcontracted to: eurofins
Preservation		
10.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Do sample have correct chemical preservation
11.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Completed pH checks on preserved samples? (no VOAs)
12.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Did any samples need to be preserved in the lab?
Bottle Conditions		
13.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	All bottles intact
14.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Appropriate analytical bottles are used
15.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Merit bottles used
16.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sufficient sample volume received
17.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples require laboratory filtration
18.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples submitted within holding time
19.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Do water VOC or TOX bottles contain headspace

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____



2680 East Lansing Dr., East Lansing, MI 48823
 Phone (517) 332-0167 Fax (517) 332-4034
 www.meritlabs.com

C.O.C. PAGE # _____ OF _____ 158704

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME: K. Cratsenburg
 COMPANY: TFC
 ADDRESS: 1540 Eisenhower Place
 CITY: Ann Arbor STATE: MI ZIP CODE: 48108
 PHONE NO.: _____ CELL NO.: _____ P.O. NO.: 495430001
 E-MAIL ADDRESS: Kcratsenburg@tfccompanies.com QUOTE NO.: _____

CONTACT NAME: _____ SAME
 COMPANY: _____
 ADDRESS: _____
 CITY: _____ STATE: _____ ZIP CODE: _____
 PHONE NO.: _____ E-MAIL ADDRESS: _____

PROJECT NO./NAME: 495430-0001 Detroit Axle Southern RCRA Forest SAMPLER(S) - PLEASE PRINT/SIGN NAME: H. Schmidt
 TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____
 DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER TFC EDD

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

MATRIX W=WATER GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 CODE: SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR WS=WASTE

# Containers & Preservatives		Certifications	
		<input type="checkbox"/> OHIO VAP	<input type="checkbox"/> Drinking Water
		<input type="checkbox"/> DoD	<input type="checkbox"/> NPDES
		Project Locations	
		<input type="checkbox"/> Detroit	<input type="checkbox"/> New York
		<input type="checkbox"/> Other _____	
		Special Instructions	

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	COLLECTION		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	VOCs + TICs + 1,4 Dioxane + 5 PAHs	5 VOCs + TICs	Metals *	3 PFAS	PCBs	Theobromine	3 alcohols
	DATE	TIME																	
43388/43389	12/12/22	1135	AOC10 - TPO1 - N	S	9	7					2		X	X	X	X	X	X	X
.02		1154	AOC10 - TPO1 - S										X	X	X	X	X	X	X
.03		1202	AOC10 - TPO1 - E										X	X	X	X	X	X	X
.04		1202	AOC10 - TPO1 - W										X	X	X	X	X	X	X
.05		1230	AOC10 - TPO1 - B										X	X	X	X	X	X	X
.06		—	Dup - 01s										X	X	X	X	X	X	X
.07		1335	AOC10 - TPO2										X	X	X	X	X	X	X
.08		1440	AOC10 - TPO2										X	X	X	X	X	X	X
.09		1406	AOC10 - TPO2										X	X	X	X	X	X	X
.10		1406	AOC10 - TPO2										X	X	X	X	X	X	X
.11		1428	AOC10 - TPO2										X	X	X	X	X	X	X
.12		—	Dup - 02s										X	X	X	X	X	X	X

* SEE PROJECT SCOPE

RELINQUISHED BY: H. Schmidt Sampler DATE: 12/12/22 TIME: 1500
 RECEIVED BY: Sample pickup pt. DATE: 12/12/22 TIME: 1500
 RELINQUISHED BY: B Yalen DATE: 12/13/22 TIME: 1245
 RECEIVED BY: Tariak Meerstee DATE: 12/13/22 TIME: 1215

RELINQUISHED BY: Tariak Meerstee DATE: 12/13/22 TIME: 1510
 RECEIVED BY: M Dilbeck DATE: 12/13/22 TIME: 1510
 SEAL NO. SEAL INTACT YES NO INITIALS _____
 SEAL NO. SEAL INTACT YES NO INITIALS _____
 NOTES: TEMP. ON ARRIVAL: 5.4

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE



REPORT TO **CHAIN OF CUSTODY RECORD** **INVOICE TO**

CONTACT NAME **KCRATSENBURG**
 COMPANY **TRC**
 ADDRESS **1540 EISENHOWER PL**
 CITY **ANN ARBOR** STATE **MI** ZIP CODE **48108**
 PHONE NO. _____ CELL NO. _____ P.O. NO. **495430.0001**
 E-MAIL ADDRESS **Kcratsenburgetre.companies.com** QUOTE NO. _____

CONTACT NAME _____ SAME
 COMPANY _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP CODE _____
 PHONE NO. _____ E-MAIL ADDRESS _____

PROJECT NO./NAME **DETROIT AXLE** SAMPLER(S) - PLEASE PRINT/SIGN NAME **B. YELEN**
 TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____
 DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER **TRC EDD**

MATRIX W=WATER GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 CODE: SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR WS=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	COLLECTION		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives																				
	DATE	TIME				NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER														
43388/43389.13	2.12.22	1155	AOC7-MW-22-08(2-3)	S	9	7																				
.14		1230	AOC7-MW-22-09(2-4)																							
.15		1300	AOC7-MW-22-09(8-10)																							
43389.16		1510	AOC9-MW-22-10(2-4)																							
.17		1520	AOC9-MW-22-10(8-10)																							

VOC+TICS 1,4 D	SUCC+TICS	METALS *	31 PFAS	PBB	THORIUM	3 ALCOHOLS
X	X	X	X	X	X	X
X	X	X	X	X	X	X
X	X	X	X	X	X	X
X	X	X	X	X	X	X
X	X	X	X	X	X	X

Certifications
 OHIO VAP Drinking Water
 DoD NPDES
 Project Locations
 Detroit New York
 Other _____
 Special Instructions

* SEE PROJECT SCOPE

RELINQUISHED BY: **B. YELEN** *Sampler DATE **12.13.22** TIME **12:15**
 SIGNATURE/ORGANIZATION _____
 RECEIVED BY: **Tarrah Allershan** DATE **12/13/22** TIME **12:15**
 SIGNATURE/ORGANIZATION _____

RELINQUISHED BY: **Tarrah Allershan** DATE **12/13/22** TIME **15:10**
 SIGNATURE/ORGANIZATION _____
 RECEIVED BY: **M. Orlato** DATE **12/13/22** TIME **1510**
 SIGNATURE/ORGANIZATION _____

SEAL NO. _____ SEAL INTACT YES NO INITIALS _____
 SEAL NO. _____ SEAL INTACT YES NO INITIALS _____

NOTES: TEMP. ON ARRIVAL **5.4**



Analytical Laboratory Report

Report ID: S43389.01(01)
Generated on 01/17/2023

Report to
Attention: Kelly Cratsenburg
TRC
1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: 734-412-5424 FAX:
Email: KCratsenburg@trccompanies.com

Additional Contacts: Vince Buening

Report produced by
Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S43389.01-S43389.17
Project: Detroit Axle Southern RCRA Invest. 495430.0001
Collected Date(s): 12/12/2022
Submitted Date/Time: 12/13/2022 15:10
Sampled by: H. Schnaidt
P.O. #: 193431

Table of Contents

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Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

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Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched

Method Summary

Method	Version
ASTM D7968-17M	ASTM Method D7968 - 17 Modified (Isotopic Dilution)
SM2540B	Standard Method 2540 B 2015

Parameter Summary

Parameter	Synonym	Cas #
PFBA	Perfluorobutanoic Acid	375-22-4
PFPeA	Perfluoropentanoic Acid	2706-90-3
4:2 FTSA	4:2 Fluorotelomer Sulfonic Acid	757124-72-4
PFHxA	Perfluorohexanoic Acid	307-24-4
PFBS	Perfluorobutane sulfonic Acid	375-73-5
PFHpA	Perfluoroheptanoic Acid	375-85-9
PFPeS	Perfluoropentane Sulfonic Acid	2706-91-4
6:2 FTSA	6:2 Fluorotelomer Sulfonic Acid	27619-97-2
PFOA	Perfluorooctanoic Acid	335-67-1
PFHxS	Perfluorohexane Sulfonic Acid	355-46-4
PFHxS-LN	Perfluorohexane Sulfonic Acid - LN	355-46-4-LN
PFHxS-BR	Perfluorohexane Sulfonic Acid - BR	355-46-4-BR
PFNA	Perfluorononanoic Acid	375-95-1
8:2 FTSA	8:2 Fluorotelomer Sulfonic Acid	39108-34-4
PFHpS	Perfluoroheptane Sulfonic Acid	375-92-8
PFDA	Perfluorodecanoic Acid	335-76-2
N-MeFOSAA	N-methyl perfluorooctanesulfonamidoacetic acid	2355-31-9
EtFOSAA	N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	2991-50-6
PFOS	Perfluorooctane Sulfonic Acid	1763-23-1
PFOS-LN	Perfluorooctane Sulfonic Acid - LN	1763-23-1-LN
PFOS-BR	Perfluorooctane Sulfonic Acid - BR	1763-23-1-BR
PFUnDA	Perfluoroundecanoic Acid	2058-94-8
PFNS	Perfluorononane Sulfonic Acid	68259-12-1
PFDoDA	Perfluorododecanoic Acid	307-55-1
PFDS	Perfluorodecane Sulfonic Acid	335-77-3
PFTTrDA	Perfluorotridecanoic Acid	72629-94-8
FOSA	Perfluorooctane Sulfonamide	754-91-6
PFTeDA	Perfluorotetradecanoic Acid	376-06-7
11Cl-PF3OUdS	11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	763051-92-9
9Cl-PF3ONS	9-chlorohexadecafluoro-3-oxanone1-sulfonic acid	756426-58-1
ADONA	4,8-dioxa-3H-perfluorononanoic acid	919005-14-4
HFPO-DA	Hexafluoropropylene oxide dimer	13252-13-6
PFECBS	Perfluoro-4-ethylcyclohexanesulfonate	67584-42-3
PFBSA	Perfluorobutanesulfonamide	30334-69-1
PFHxSA	Perfluorohexanesulfonamide	41997-13-1



Analytical Laboratory Report

Sample Summary (17 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S43389.01	AOC10-TP01-N	Soil	12/12/22 11:35
S43389.02	AOC10-TP01-S	Soil	12/12/22 11:54
S43389.03	AOC10-TP01-E	Soil	12/12/22 12:02
S43389.04	AOC10-TP01-W	Soil	12/12/22 12:02
S43389.05	AOC10-TP01-B	Soil	12/12/22 12:30
S43389.06	DUP-01S	Soil	12/12/22 00:01
S43389.07	AOC10-TP01-E	Soil	12/12/22 13:35
S43389.08	AOC10-TP01-W	Soil	12/12/22 14:40
S43389.09	AOC10-TP01-S	Soil	12/12/22 14:06
S43389.10	AOC10-TP01-N	Soil	12/12/22 14:06
S43389.11	AOC10-TP01-B	Soil	12/12/22 14:28
S43389.12	DUP-02S	Soil	12/12/22 00:01
S43389.13	AOC7-MW-22-08 (2-3)	Soil	12/12/22 11:55
S43389.14	AOC7-MW-22-09 (2-4)	Soil	12/12/22 12:30
S43389.15	AOC7-MW-22-09 (8-10)	Soil	12/12/22 13:00
S43389.16	AOC7-MW-22-10 (2-4)	Soil	12/12/22 15:10
S43389.17	AOC7-MW-22-10 (8-10)	Soil	12/12/22 15:20



Analytical Laboratory Report

Lab Sample ID: S43389.01

Sample Tag: AOC10-TP01-N

Collected Date/Time: 12/12/2022 11:35

Matrix: Soil

COC Reference: 158704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.6	IR
1	250ml Plastic	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.86/6.56/10	ASTM D7968-17M	12/19/22 10:00	KCV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 18:30, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 02:30, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	64		ng/kg	3.19	375-22-4		
PFPeA*	Not detected	32		ng/kg	3.19	2706-90-3		
4:2 FTSA*	Not detected	32		ng/kg	3.19	757124-72-4		
PFHxA*	Not detected	32		ng/kg	3.19	307-24-4		
PFBS*	Not detected	32		ng/kg	3.19	375-73-5		
PFHpA*	Not detected	32		ng/kg	3.19	375-85-9		
PFPeS*	Not detected	32		ng/kg	3.19	2706-91-4		
6:2 FTSA*	Not detected	32		ng/kg	3.19	27619-97-2		
PFOA*	Not detected	32		ng/kg	3.19	335-67-1		
PFHxS*	Not detected	32		ng/kg	3.19	355-46-4		
PFHxS-LN*	Not detected	32		ng/kg	3.19	355-46-4-LN		
PFHxS-BR*	Not detected	32		ng/kg	3.19	355-46-4-BR		
PFNA*	Not detected	32		ng/kg	3.19	375-95-1		
8:2 FTSA*	Not detected	32		ng/kg	3.19	39108-34-4		
PFHpS*	Not detected	32		ng/kg	3.19	375-92-8		
PFDA*	Not detected	32		ng/kg	3.19	335-76-2		
N-MeFOSAA*	Not detected	32		ng/kg	3.19	2355-31-9		
EtFOSAA*	Not detected	32		ng/kg	3.19	2991-50-6		
PFOS*	44	32		ng/kg	3.19	1763-23-1		
PFOS-LN*	Not detected	32		ng/kg	3.19	1763-23-1-LN		
PFOS-BR*	Not detected	32		ng/kg	3.19	1763-23-1-BR		
PFUnDA*	Not detected	32		ng/kg	3.19	2058-94-8		
PFNS*	Not detected	32		ng/kg	3.19	68259-12-1		
PFDODA*	Not detected	32		ng/kg	3.19	307-55-1		
PFDS*	Not detected	32		ng/kg	3.19	335-77-3		
PFTTrDA*	Not detected	32		ng/kg	3.19	72629-94-8		
FOSA*	Not detected	32		ng/kg	3.19	754-91-6		
PFTeDA*	Not detected	32		ng/kg	3.19	376-06-7		
11Cl-PF3OUdS*	Not detected	32		ng/kg	3.19	763051-92-9		
9Cl-PF3ONS*	Not detected	32		ng/kg	3.19	756426-58-1		
ADONA*	Not detected	32		ng/kg	3.19	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43389.01 (continued)

Sample Tag: AOC10-TP01-N

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 02:30, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	32		ng/kg	3.19	13252-13-6		
PFECHS*	Not detected	32		ng/kg	3.19	67584-42-3		
PFBSA*	Not detected	32		ng/kg	3.19	30334-69-1		
PFHxSA*	Not detected	32		ng/kg	3.19	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43389.02

Sample Tag: AOC10-TP01-S

Collected Date/Time: 12/12/2022 11:54

Matrix: Soil

COC Reference: 158704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.6	IR
1	250ml Plastic	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.16/6.50/10	ASTM D7968-17M	12/19/22 10:00	KCV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 18:30, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 03:29, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	110		ng/kg	5.34	375-22-4		
PFPeA*	Not detected	53		ng/kg	5.34	2706-90-3		
4:2 FTSA*	Not detected	53		ng/kg	5.34	757124-72-4		
PFHxA*	Not detected	53		ng/kg	5.34	307-24-4		
PFBS*	Not detected	53		ng/kg	5.34	375-73-5		
PFHpA*	Not detected	53		ng/kg	5.34	375-85-9		
PFPeS*	Not detected	53		ng/kg	5.34	2706-91-4		
6:2 FTSA*	Not detected	53		ng/kg	5.34	27619-97-2		
PFOA*	Not detected	53		ng/kg	5.34	335-67-1		
PFHxS*	Not detected	53		ng/kg	5.34	355-46-4		
PFHxS-LN*	Not detected	53		ng/kg	5.34	355-46-4-LN		
PFHxS-BR*	Not detected	53		ng/kg	5.34	355-46-4-BR		
PFNA*	Not detected	53		ng/kg	5.34	375-95-1		
8:2 FTSA*	Not detected	53		ng/kg	5.34	39108-34-4		
PFHpS*	Not detected	53		ng/kg	5.34	375-92-8		
PFDA*	Not detected	53		ng/kg	5.34	335-76-2		
N-MeFOSAA*	Not detected	53		ng/kg	5.34	2355-31-9		
EtFOSAA*	Not detected	53		ng/kg	5.34	2991-50-6		
PFOS*	360	53		ng/kg	5.34	1763-23-1		
PFOS-LN*	250	53		ng/kg	5.34	1763-23-1-LN		
PFOS-BR*	110	53		ng/kg	5.34	1763-23-1-BR		
PFUnDA*	Not detected	53		ng/kg	5.34	2058-94-8		
PFNS*	Not detected	53		ng/kg	5.34	68259-12-1		
PFDODA*	Not detected	53		ng/kg	5.34	307-55-1		
PFDS*	Not detected	53		ng/kg	5.34	335-77-3		
PFTTrDA*	Not detected	53		ng/kg	5.34	72629-94-8		
FOSA*	Not detected	53		ng/kg	5.34	754-91-6		
PFTeDA*	Not detected	53		ng/kg	5.34	376-06-7		
11Cl-PF3OUdS*	Not detected	53		ng/kg	5.34	763051-92-9		
9Cl-PF3ONS*	Not detected	53		ng/kg	5.34	756426-58-1		
ADONA*	Not detected	53		ng/kg	5.34	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43389.02 (continued)

Sample Tag: AOC10-TP01-S

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 03:29, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	53		ng/kg	5.34	13252-13-6		
PFECHS*	Not detected	53		ng/kg	5.34	67584-42-3		
PFBSA*	Not detected	53		ng/kg	5.34	30334-69-1		
PFHxSA*	Not detected	53		ng/kg	5.34	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43389.03

Sample Tag: AOC10-TP01-E

Collected Date/Time: 12/12/2022 12:02

Matrix: Soil

COC Reference: 158704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.6	IR
1	250ml Plastic	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.26/6.50/10	ASTM D7968-17M	12/19/22 10:00	KCV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 18:30, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 03:48, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	77		ng/kg	3.85	375-22-4		
PFPeA*	Not detected	39		ng/kg	3.85	2706-90-3		
4:2 FTSA*	Not detected	39		ng/kg	3.85	757124-72-4		
PFHxA*	Not detected	39		ng/kg	3.85	307-24-4		
PFBS*	Not detected	39		ng/kg	3.85	375-73-5		
PFHpA*	Not detected	39		ng/kg	3.85	375-85-9		
PFPeS*	Not detected	39		ng/kg	3.85	2706-91-4		
6:2 FTSA*	Not detected	39		ng/kg	3.85	27619-97-2		
PFOA*	Not detected	39		ng/kg	3.85	335-67-1		
PFHxS*	Not detected	39		ng/kg	3.85	355-46-4		
PFHxS-LN*	Not detected	39		ng/kg	3.85	355-46-4-LN		
PFHxS-BR*	Not detected	39		ng/kg	3.85	355-46-4-BR		
PFNA*	Not detected	39		ng/kg	3.85	375-95-1		
8:2 FTSA*	Not detected	39		ng/kg	3.85	39108-34-4		
PFHpS*	Not detected	39		ng/kg	3.85	375-92-8		
PFDA*	Not detected	39		ng/kg	3.85	335-76-2		
N-MeFOSAA*	Not detected	39		ng/kg	3.85	2355-31-9		
EtFOSAA*	Not detected	39		ng/kg	3.85	2991-50-6		
PFOS*	Not detected	39		ng/kg	3.85	1763-23-1		
PFOS-LN*	Not detected	39		ng/kg	3.85	1763-23-1-LN		
PFOS-BR*	Not detected	39		ng/kg	3.85	1763-23-1-BR		
PFUnDA*	Not detected	39		ng/kg	3.85	2058-94-8		
PFNS*	Not detected	39		ng/kg	3.85	68259-12-1		
PFDODA*	Not detected	39		ng/kg	3.85	307-55-1		
PFDS*	Not detected	39		ng/kg	3.85	335-77-3		
PFTTrDA*	Not detected	39		ng/kg	3.85	72629-94-8		
FOSA*	Not detected	39		ng/kg	3.85	754-91-6		
PFTeDA*	Not detected	39		ng/kg	3.85	376-06-7		
11Cl-PF3OUdS*	Not detected	39		ng/kg	3.85	763051-92-9		
9Cl-PF3ONS*	Not detected	39		ng/kg	3.85	756426-58-1		
ADONA*	Not detected	39		ng/kg	3.85	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43389.03 (continued)

Sample Tag: AOC10-TP01-E

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 03:48, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	39		ng/kg	3.85	13252-13-6		
PFECHS*	Not detected	39		ng/kg	3.85	67584-42-3		
PFBSA*	Not detected	39		ng/kg	3.85	30334-69-1		
PFHxSA*	Not detected	39		ng/kg	3.85	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43389.04

Sample Tag: AOC10-TP01-W

Collected Date/Time: 12/12/2022 12:02

Matrix: Soil

COC Reference: 158704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.6	IR
1	250ml Plastic	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.23/6.49/10	ASTM D7968-17M	12/19/22 10:00	KCV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 18:30, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 04:08, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	78		ng/kg	3.88	375-22-4		
PFPeA*	Not detected	39		ng/kg	3.88	2706-90-3		
4:2 FTSA*	Not detected	39		ng/kg	3.88	757124-72-4		
PFHxA*	Not detected	39		ng/kg	3.88	307-24-4		
PFBS*	Not detected	39		ng/kg	3.88	375-73-5		
PFHpA*	Not detected	39		ng/kg	3.88	375-85-9		
PFPeS*	Not detected	39		ng/kg	3.88	2706-91-4		
6:2 FTSA*	Not detected	39		ng/kg	3.88	27619-97-2		
PFOA*	Not detected	39		ng/kg	3.88	335-67-1		
PFHxS*	Not detected	39		ng/kg	3.88	355-46-4		
PFHxS-LN*	Not detected	39		ng/kg	3.88	355-46-4-LN		
PFHxS-BR*	Not detected	39		ng/kg	3.88	355-46-4-BR		
PFNA*	Not detected	39		ng/kg	3.88	375-95-1		
8:2 FTSA*	Not detected	39		ng/kg	3.88	39108-34-4		
PFHpS*	Not detected	39		ng/kg	3.88	375-92-8		
PFDA*	Not detected	39		ng/kg	3.88	335-76-2		
N-MeFOSAA*	Not detected	39		ng/kg	3.88	2355-31-9		
EtFOSAA*	Not detected	39		ng/kg	3.88	2991-50-6		
PFOS*	Not detected	39		ng/kg	3.88	1763-23-1		
PFOS-LN*	Not detected	39		ng/kg	3.88	1763-23-1-LN		
PFOS-BR*	Not detected	39		ng/kg	3.88	1763-23-1-BR		
PFUnDA*	Not detected	39		ng/kg	3.88	2058-94-8		
PFNS*	Not detected	39		ng/kg	3.88	68259-12-1		
PFDODA*	Not detected	39		ng/kg	3.88	307-55-1		
PFDS*	Not detected	39		ng/kg	3.88	335-77-3		
PFTTrDA*	Not detected	39		ng/kg	3.88	72629-94-8		
FOSA*	Not detected	39		ng/kg	3.88	754-91-6		
PFTeDA*	Not detected	39		ng/kg	3.88	376-06-7		
11Cl-PF3OUdS*	Not detected	39		ng/kg	3.88	763051-92-9		
9Cl-PF3ONS*	Not detected	39		ng/kg	3.88	756426-58-1		
ADONA*	Not detected	39		ng/kg	3.88	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43389.04 (continued)

Sample Tag: AOC10-TP01-W

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 04:08, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	39		ng/kg	3.88	13252-13-6		
PFECHS*	Not detected	39		ng/kg	3.88	67584-42-3		
PFBSA*	Not detected	39		ng/kg	3.88	30334-69-1		
PFHxSA*	Not detected	39		ng/kg	3.88	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43389.05

Sample Tag: AOC10-TP01-B

Collected Date/Time: 12/12/2022 12:30

Matrix: Soil

COC Reference: 158704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.6	IR
1	250ml Plastic	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.08/6.49/10	ASTM D7968-17M	12/19/22 10:00	KCV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 18:30, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 04:27, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	81		ng/kg	4.06	375-22-4		
PFPeA*	Not detected	41		ng/kg	4.06	2706-90-3		
4:2 FTSA*	Not detected	41		ng/kg	4.06	757124-72-4		
PFHxA*	Not detected	41		ng/kg	4.06	307-24-4		
PFBS*	Not detected	41		ng/kg	4.06	375-73-5		
PFHpA*	Not detected	41		ng/kg	4.06	375-85-9		
PFPeS*	Not detected	41		ng/kg	4.06	2706-91-4		
6:2 FTSA*	Not detected	41		ng/kg	4.06	27619-97-2		
PFOA*	110	41		ng/kg	4.06	335-67-1		
PFHxS*	Not detected	41		ng/kg	4.06	355-46-4		
PFHxS-LN*	Not detected	41		ng/kg	4.06	355-46-4-LN		
PFHxS-BR*	Not detected	41		ng/kg	4.06	355-46-4-BR		
PFNA*	Not detected	41		ng/kg	4.06	375-95-1		
8:2 FTSA*	Not detected	41		ng/kg	4.06	39108-34-4		
PFHpS*	Not detected	41		ng/kg	4.06	375-92-8		
PFDA*	Not detected	41		ng/kg	4.06	335-76-2		
N-MeFOSAA*	Not detected	41		ng/kg	4.06	2355-31-9		
EtFOSAA*	Not detected	41		ng/kg	4.06	2991-50-6		
PFOS*	54	41		ng/kg	4.06	1763-23-1		
PFOS-LN*	Not detected	41		ng/kg	4.06	1763-23-1-LN		
PFOS-BR*	Not detected	41		ng/kg	4.06	1763-23-1-BR		
PFUnDA*	Not detected	41		ng/kg	4.06	2058-94-8		
PFNS*	Not detected	41		ng/kg	4.06	68259-12-1		
PFDODA*	Not detected	41		ng/kg	4.06	307-55-1		
PFDS*	Not detected	41		ng/kg	4.06	335-77-3		
PFTTrDA*	Not detected	41		ng/kg	4.06	72629-94-8		
FOSA*	Not detected	41		ng/kg	4.06	754-91-6		
PFTeDA*	Not detected	41		ng/kg	4.06	376-06-7		
11Cl-PF3OUdS*	Not detected	41		ng/kg	4.06	763051-92-9		
9Cl-PF3ONS*	Not detected	41		ng/kg	4.06	756426-58-1		
ADONA*	Not detected	41		ng/kg	4.06	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43389.05 (continued)

Sample Tag: AOC10-TP01-B

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 04:27, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	41		ng/kg	4.06	13252-13-6		
PFECHS*	Not detected	41		ng/kg	4.06	67584-42-3		
PFBSA*	Not detected	41		ng/kg	4.06	30334-69-1		
PFHxSA*	Not detected	41		ng/kg	4.06	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43389.06

Sample Tag: DUP-01S

Collected Date/Time: 12/12/2022 00:01

Matrix: Soil

COC Reference: 158704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.6	IR
1	250ml Plastic	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.01/6.54/10	ASTM D7968-17M	12/19/22 10:00	KCV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 18:30, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 04:47, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	86		ng/kg	4.31	375-22-4		
PFPeA*	Not detected	43		ng/kg	4.31	2706-90-3		
4:2 FTSA*	Not detected	43		ng/kg	4.31	757124-72-4		
PFHxA*	Not detected	43		ng/kg	4.31	307-24-4		
PFBS*	Not detected	43		ng/kg	4.31	375-73-5		
PFHpA*	Not detected	43		ng/kg	4.31	375-85-9		
PFPeS*	Not detected	43		ng/kg	4.31	2706-91-4		
6:2 FTSA*	Not detected	43		ng/kg	4.31	27619-97-2		
PFOA*	Not detected	43		ng/kg	4.31	335-67-1		
PFHxS*	Not detected	43		ng/kg	4.31	355-46-4		
PFHxS-LN*	Not detected	43		ng/kg	4.31	355-46-4-LN		
PFHxS-BR*	Not detected	43		ng/kg	4.31	355-46-4-BR		
PFNA*	Not detected	43		ng/kg	4.31	375-95-1		
8:2 FTSA*	Not detected	43		ng/kg	4.31	39108-34-4		
PFHpS*	Not detected	43		ng/kg	4.31	375-92-8		
PFDA*	Not detected	43		ng/kg	4.31	335-76-2		
N-MeFOSAA*	Not detected	43		ng/kg	4.31	2355-31-9		
EtFOSAA*	Not detected	43		ng/kg	4.31	2991-50-6		
PFOS*	Not detected	43		ng/kg	4.31	1763-23-1		
PFOS-LN*	Not detected	43		ng/kg	4.31	1763-23-1-LN		
PFOS-BR*	Not detected	43		ng/kg	4.31	1763-23-1-BR		
PFUnDA*	Not detected	43		ng/kg	4.31	2058-94-8		
PFNS*	Not detected	43		ng/kg	4.31	68259-12-1		
PFDODA*	Not detected	43		ng/kg	4.31	307-55-1		
PFDS*	Not detected	43		ng/kg	4.31	335-77-3		
PFTTrDA*	Not detected	43		ng/kg	4.31	72629-94-8		
FOSA*	Not detected	43		ng/kg	4.31	754-91-6		
PFTeDA*	Not detected	43		ng/kg	4.31	376-06-7		
11Cl-PF3OUdS*	Not detected	43		ng/kg	4.31	763051-92-9		
9Cl-PF3ONS*	Not detected	43		ng/kg	4.31	756426-58-1		
ADONA*	Not detected	43		ng/kg	4.31	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43389.06 (continued)

Sample Tag: DUP-01S

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 04:47, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	43		ng/kg	4.31	13252-13-6		
PFECHS*	Not detected	43		ng/kg	4.31	67584-42-3		
PFBSA*	Not detected	43		ng/kg	4.31	30334-69-1		
PFHxSA*	Not detected	43		ng/kg	4.31	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43389.07

Sample Tag: AOC10-TP01-E

Collected Date/Time: 12/12/2022 13:35

Matrix: Soil

COC Reference: 158704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.6	IR
1	250ml Plastic	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.72/6.48/10	ASTM D7968-17M	12/19/22 10:00	KCV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 18:30, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	96	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 05:06, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	93		ng/kg	4.65	375-22-4		
PFPeA*	Not detected	47		ng/kg	4.65	2706-90-3		
4:2 FTSA*	Not detected	47		ng/kg	4.65	757124-72-4		
PFHxA*	Not detected	47		ng/kg	4.65	307-24-4		
PFBS*	Not detected	47		ng/kg	4.65	375-73-5		
PFHpA*	Not detected	47		ng/kg	4.65	375-85-9		
PFPeS*	Not detected	47		ng/kg	4.65	2706-91-4		
6:2 FTSA*	Not detected	47		ng/kg	4.65	27619-97-2		
PFOA*	57	47		ng/kg	4.65	335-67-1		
PFHxS*	Not detected	47		ng/kg	4.65	355-46-4		
PFHxS-LN*	Not detected	47		ng/kg	4.65	355-46-4-LN		
PFHxS-BR*	Not detected	47		ng/kg	4.65	355-46-4-BR		
PFNA*	Not detected	47		ng/kg	4.65	375-95-1		
8:2 FTSA*	Not detected	47		ng/kg	4.65	39108-34-4		
PFHpS*	Not detected	47		ng/kg	4.65	375-92-8		
PFDA*	Not detected	47		ng/kg	4.65	335-76-2		
N-MeFOSAA*	Not detected	47		ng/kg	4.65	2355-31-9		
EtFOSAA*	Not detected	47		ng/kg	4.65	2991-50-6		
PFOS*	Not detected	47		ng/kg	4.65	1763-23-1		
PFOS-LN*	Not detected	47		ng/kg	4.65	1763-23-1-LN		
PFOS-BR*	Not detected	47		ng/kg	4.65	1763-23-1-BR		
PFUnDA*	Not detected	47		ng/kg	4.65	2058-94-8		
PFNS*	Not detected	47		ng/kg	4.65	68259-12-1		
PFDODA*	Not detected	47		ng/kg	4.65	307-55-1		
PFDS*	Not detected	47		ng/kg	4.65	335-77-3		
PFTTrDA*	Not detected	47		ng/kg	4.65	72629-94-8		
FOSA*	Not detected	47		ng/kg	4.65	754-91-6		
PFTeDA*	Not detected	47		ng/kg	4.65	376-06-7		
11Cl-PF3OUdS*	Not detected	47		ng/kg	4.65	763051-92-9		
9Cl-PF3ONS*	Not detected	47		ng/kg	4.65	756426-58-1		
ADONA*	Not detected	47		ng/kg	4.65	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43389.07 (continued)

Sample Tag: AOC10-TP01-E

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 05:06, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	47		ng/kg	4.65	13252-13-6		
PFECHS*	Not detected	47		ng/kg	4.65	67584-42-3		
PFBSA*	Not detected	47		ng/kg	4.65	30334-69-1		
PFHxSA*	Not detected	47		ng/kg	4.65	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43389.08

Sample Tag: AOC10-TP01-W

Collected Date/Time: 12/12/2022 14:40

Matrix: Soil

COC Reference: 158704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.6	IR
1	250ml Plastic	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.91/6.49/10	ASTM D7968-17M	12/19/22 10:00	KCV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 18:30, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	96	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 05:26, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	86		ng/kg	4.3	375-22-4		
PFPeA*	Not detected	43		ng/kg	4.3	2706-90-3		
4:2 FTSA*	Not detected	43		ng/kg	4.3	757124-72-4		
PFHxA*	Not detected	43		ng/kg	4.3	307-24-4		
PFBS*	Not detected	43		ng/kg	4.3	375-73-5		
PFHpA*	Not detected	43		ng/kg	4.3	375-85-9		
PFPeS*	Not detected	43		ng/kg	4.3	2706-91-4		
6:2 FTSA*	Not detected	43		ng/kg	4.3	27619-97-2		
PFOA*	Not detected	43		ng/kg	4.3	335-67-1		
PFHxS*	Not detected	43		ng/kg	4.3	355-46-4		
PFHxS-LN*	Not detected	43		ng/kg	4.3	355-46-4-LN		
PFHxS-BR*	Not detected	43		ng/kg	4.3	355-46-4-BR		
PFNA*	Not detected	43		ng/kg	4.3	375-95-1		
8:2 FTSA*	Not detected	43		ng/kg	4.3	39108-34-4		
PFHpS*	Not detected	43		ng/kg	4.3	375-92-8		
PFDA*	Not detected	43		ng/kg	4.3	335-76-2		
N-MeFOSAA*	Not detected	43		ng/kg	4.3	2355-31-9		
EtFOSAA*	Not detected	43		ng/kg	4.3	2991-50-6		
PFOS*	Not detected	43		ng/kg	4.3	1763-23-1		
PFOS-LN*	Not detected	43		ng/kg	4.3	1763-23-1-LN		
PFOS-BR*	Not detected	43		ng/kg	4.3	1763-23-1-BR		
PFUnDA*	Not detected	43		ng/kg	4.3	2058-94-8		
PFNS*	Not detected	43		ng/kg	4.3	68259-12-1		
PFDODA*	Not detected	43		ng/kg	4.3	307-55-1		
PFDS*	Not detected	43		ng/kg	4.3	335-77-3		
PFTTrDA*	Not detected	43		ng/kg	4.3	72629-94-8		
FOSA*	Not detected	43		ng/kg	4.3	754-91-6		
PFTeDA*	Not detected	43		ng/kg	4.3	376-06-7		
11Cl-PF3OUdS*	Not detected	43		ng/kg	4.3	763051-92-9		
9Cl-PF3ONS*	Not detected	43		ng/kg	4.3	756426-58-1		
ADONA*	Not detected	43		ng/kg	4.3	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43389.08 (continued)

Sample Tag: AOC10-TP01-W

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 05:26, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	43		ng/kg	4.3	13252-13-6		
PFECHS*	Not detected	43		ng/kg	4.3	67584-42-3		
PFBSA*	Not detected	43		ng/kg	4.3	30334-69-1		
PFHxSA*	Not detected	43		ng/kg	4.3	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43389.09

Sample Tag: AOC10-TP01-S

Collected Date/Time: 12/12/2022 14:06

Matrix: Soil

COC Reference: 158704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.6	IR
1	250ml Plastic	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.45/6.52/10	ASTM D7968-17M	12/19/22 10:00	KCV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 18:30, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	96	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 05:45, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	110		ng/kg	5.4	375-22-4		
PFPeA*	Not detected	54		ng/kg	5.4	2706-90-3		
4:2 FTSA*	Not detected	54		ng/kg	5.4	757124-72-4		
PFHxA*	Not detected	54		ng/kg	5.4	307-24-4		
PFBS*	Not detected	54		ng/kg	5.4	375-73-5		
PFHpA*	Not detected	54		ng/kg	5.4	375-85-9		
PFPeS*	Not detected	54		ng/kg	5.4	2706-91-4		
6:2 FTSA*	Not detected	54		ng/kg	5.4	27619-97-2		
PFOA*	Not detected	54		ng/kg	5.4	335-67-1		
PFHxS*	Not detected	54		ng/kg	5.4	355-46-4		
PFHxS-LN*	Not detected	54		ng/kg	5.4	355-46-4-LN		
PFHxS-BR*	Not detected	54		ng/kg	5.4	355-46-4-BR		
PFNA*	Not detected	54		ng/kg	5.4	375-95-1		
8:2 FTSA*	Not detected	54		ng/kg	5.4	39108-34-4		
PFHpS*	Not detected	54		ng/kg	5.4	375-92-8		
PFDA*	Not detected	54		ng/kg	5.4	335-76-2		
N-MeFOSAA*	Not detected	54		ng/kg	5.4	2355-31-9		
EtFOSAA*	Not detected	54		ng/kg	5.4	2991-50-6		
PFOS*	54	54		ng/kg	5.4	1763-23-1		
PFOS-LN*	Not detected	54		ng/kg	5.4	1763-23-1-LN		
PFOS-BR*	Not detected	54		ng/kg	5.4	1763-23-1-BR		
PFUnDA*	Not detected	54		ng/kg	5.4	2058-94-8		
PFNS*	Not detected	54		ng/kg	5.4	68259-12-1		
PFDODA*	Not detected	54		ng/kg	5.4	307-55-1		
PFDS*	Not detected	54		ng/kg	5.4	335-77-3		
PFTTrDA*	Not detected	54		ng/kg	5.4	72629-94-8		
FOSA*	Not detected	54		ng/kg	5.4	754-91-6		
PFTeDA*	Not detected	54		ng/kg	5.4	376-06-7		
11Cl-PF3OUdS*	Not detected	54		ng/kg	5.4	763051-92-9		
9Cl-PF3ONS*	Not detected	54		ng/kg	5.4	756426-58-1		
ADONA*	Not detected	54		ng/kg	5.4	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43389.09 (continued)

Sample Tag: AOC10-TP01-S

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 05:45, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	54		ng/kg	5.4	13252-13-6		
PFECHS*	Not detected	54		ng/kg	5.4	67584-42-3		
PFBSA*	Not detected	54		ng/kg	5.4	30334-69-1		
PFHxSA*	Not detected	54		ng/kg	5.4	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43389.10

Sample Tag: AOC10-TP01-N

Collected Date/Time: 12/12/2022 14:06

Matrix: Soil

COC Reference: 158704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.6	IR
1	250ml Plastic	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.64/6.58/10	ASTM D7968-17M	12/19/22 10:00	KCV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 18:30, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	96	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 06:05, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	100		ng/kg	5.06	375-22-4		
PFPeA*	Not detected	51		ng/kg	5.06	2706-90-3		
4:2 FTSA*	Not detected	51		ng/kg	5.06	757124-72-4		
PFHxA*	Not detected	51		ng/kg	5.06	307-24-4		
PFBS*	Not detected	51		ng/kg	5.06	375-73-5		
PFHpA*	Not detected	51		ng/kg	5.06	375-85-9		
PFPeS*	Not detected	51		ng/kg	5.06	2706-91-4		
6:2 FTSA*	Not detected	51		ng/kg	5.06	27619-97-2		
PFOA*	Not detected	51		ng/kg	5.06	335-67-1		
PFHxS*	Not detected	51		ng/kg	5.06	355-46-4		
PFHxS-LN*	Not detected	51		ng/kg	5.06	355-46-4-LN		
PFHxS-BR*	Not detected	51		ng/kg	5.06	355-46-4-BR		
PFNA*	Not detected	51		ng/kg	5.06	375-95-1		
8:2 FTSA*	Not detected	51		ng/kg	5.06	39108-34-4		
PFHpS*	Not detected	51		ng/kg	5.06	375-92-8		
PFDA*	Not detected	51		ng/kg	5.06	335-76-2		
N-MeFOSAA*	Not detected	51		ng/kg	5.06	2355-31-9		
EtFOSAA*	Not detected	51		ng/kg	5.06	2991-50-6		
PFOS*	100	51		ng/kg	5.06	1763-23-1		
PFOS-LN*	74	51		ng/kg	5.06	1763-23-1-LN		
PFOS-BR*	Not detected	51		ng/kg	5.06	1763-23-1-BR		
PFUnDA*	Not detected	51		ng/kg	5.06	2058-94-8		
PFNS*	Not detected	51		ng/kg	5.06	68259-12-1		
PFDODA*	Not detected	51		ng/kg	5.06	307-55-1		
PFDS*	Not detected	51		ng/kg	5.06	335-77-3		
PFTTrDA*	Not detected	51		ng/kg	5.06	72629-94-8		
FOSA*	Not detected	51		ng/kg	5.06	754-91-6		
PFTeDA*	Not detected	51		ng/kg	5.06	376-06-7		
11Cl-PF3OUdS*	Not detected	51		ng/kg	5.06	763051-92-9		
9Cl-PF3ONS*	Not detected	51		ng/kg	5.06	756426-58-1		
ADONA*	Not detected	51		ng/kg	5.06	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43389.10 (continued)

Sample Tag: AOC10-TP01-N

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 06:05, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	51		ng/kg	5.06	13252-13-6		
PFECHS*	Not detected	51		ng/kg	5.06	67584-42-3		
PFBSA*	Not detected	51		ng/kg	5.06	30334-69-1		
PFHxSA*	Not detected	51		ng/kg	5.06	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43389.11

Sample Tag: AOC10-TP01-B

Collected Date/Time: 12/12/2022 14:28

Matrix: Soil

COC Reference: 158704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.6	IR
1	250ml Plastic	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.89/6.55/10	ASTM D7968-17M	12/19/22 10:00	KCV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 18:30, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	92	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 06:24, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	65		ng/kg	3.25	375-22-4		
PFPeA*	Not detected	33		ng/kg	3.25	2706-90-3		
4:2 FTSA*	Not detected	33		ng/kg	3.25	757124-72-4		
PFHxA*	Not detected	33		ng/kg	3.25	307-24-4		
PFBS*	Not detected	33		ng/kg	3.25	375-73-5		
PFHpA*	Not detected	33		ng/kg	3.25	375-85-9		
PFPeS*	Not detected	33		ng/kg	3.25	2706-91-4		
6:2 FTSA*	Not detected	33		ng/kg	3.25	27619-97-2		
PFOA*	Not detected	33		ng/kg	3.25	335-67-1		
PFHxS*	Not detected	33		ng/kg	3.25	355-46-4		
PFHxS-LN*	Not detected	33		ng/kg	3.25	355-46-4-LN		
PFHxS-BR*	Not detected	33		ng/kg	3.25	355-46-4-BR		
PFNA*	Not detected	33		ng/kg	3.25	375-95-1		
8:2 FTSA*	Not detected	33		ng/kg	3.25	39108-34-4		
PFHpS*	Not detected	33		ng/kg	3.25	375-92-8		
PFDA*	Not detected	33		ng/kg	3.25	335-76-2		
N-MeFOSAA*	Not detected	33		ng/kg	3.25	2355-31-9		
EtFOSAA*	Not detected	33		ng/kg	3.25	2991-50-6		
PFOS*	35	33		ng/kg	3.25	1763-23-1		
PFOS-LN*	Not detected	33		ng/kg	3.25	1763-23-1-LN		
PFOS-BR*	Not detected	33		ng/kg	3.25	1763-23-1-BR		
PFUnDA*	Not detected	33		ng/kg	3.25	2058-94-8		
PFNS*	Not detected	33		ng/kg	3.25	68259-12-1		
PFDODA*	Not detected	33		ng/kg	3.25	307-55-1		
PFDS*	Not detected	33		ng/kg	3.25	335-77-3		
PFTTrDA*	Not detected	33		ng/kg	3.25	72629-94-8		
FOSA*	Not detected	33		ng/kg	3.25	754-91-6		
PFTeDA*	Not detected	33		ng/kg	3.25	376-06-7		
11Cl-PF3OUdS*	Not detected	33		ng/kg	3.25	763051-92-9		
9Cl-PF3ONS*	Not detected	33		ng/kg	3.25	756426-58-1		
ADONA*	Not detected	33		ng/kg	3.25	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43389.11 (continued)

Sample Tag: AOC10-TP01-B

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 06:24, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	33		ng/kg	3.25	13252-13-6		
PFECHS*	Not detected	33		ng/kg	3.25	67584-42-3		
PFBSA*	Not detected	33		ng/kg	3.25	30334-69-1		
PFHxSA*	Not detected	33		ng/kg	3.25	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43389.12

Sample Tag: DUP-02S

Collected Date/Time: 12/12/2022 00:01

Matrix: Soil

COC Reference: 158704

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.6	IR
1	250ml Plastic	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.66/6.46/10	ASTM D7968-17M	12/19/22 10:00	KCV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 18:30, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 06:44, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	96		ng/kg	4.78	375-22-4		
PFPeA*	Not detected	48		ng/kg	4.78	2706-90-3		
4:2 FTSA*	Not detected	48		ng/kg	4.78	757124-72-4		
PFHxA*	Not detected	48		ng/kg	4.78	307-24-4		
PFBS*	Not detected	48		ng/kg	4.78	375-73-5		
PFHpA*	Not detected	48		ng/kg	4.78	375-85-9		
PFPeS*	Not detected	48		ng/kg	4.78	2706-91-4		
6:2 FTSA*	Not detected	48		ng/kg	4.78	27619-97-2		
PFOA*	Not detected	48		ng/kg	4.78	335-67-1		
PFHxS*	Not detected	48		ng/kg	4.78	355-46-4		
PFHxS-LN*	Not detected	48		ng/kg	4.78	355-46-4-LN		
PFHxS-BR*	Not detected	48		ng/kg	4.78	355-46-4-BR		
PFNA*	Not detected	48		ng/kg	4.78	375-95-1		
8:2 FTSA*	Not detected	48		ng/kg	4.78	39108-34-4		
PFHpS*	Not detected	48		ng/kg	4.78	375-92-8		
PFDA*	Not detected	48		ng/kg	4.78	335-76-2		
N-MeFOSAA*	Not detected	48		ng/kg	4.78	2355-31-9		
EtFOSAA*	Not detected	48		ng/kg	4.78	2991-50-6		
PFOS*	Not detected	48		ng/kg	4.78	1763-23-1		
PFOS-LN*	Not detected	48		ng/kg	4.78	1763-23-1-LN		
PFOS-BR*	Not detected	48		ng/kg	4.78	1763-23-1-BR		
PFUnDA*	Not detected	48		ng/kg	4.78	2058-94-8		
PFNS*	Not detected	48		ng/kg	4.78	68259-12-1		
PFDODA*	Not detected	48		ng/kg	4.78	307-55-1		
PFDS*	Not detected	48		ng/kg	4.78	335-77-3		
PFTTrDA*	Not detected	48		ng/kg	4.78	72629-94-8		
FOSA*	Not detected	48		ng/kg	4.78	754-91-6		
PFTeDA*	Not detected	48		ng/kg	4.78	376-06-7		
11Cl-PF3OUdS*	Not detected	48		ng/kg	4.78	763051-92-9		
9Cl-PF3ONS*	Not detected	48		ng/kg	4.78	756426-58-1		
ADONA*	Not detected	48		ng/kg	4.78	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43389.12 (continued)

Sample Tag: DUP-02S

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 06:44, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	48		ng/kg	4.78	13252-13-6		
PFECHS*	Not detected	48		ng/kg	4.78	67584-42-3		
PFBSA*	Not detected	48		ng/kg	4.78	30334-69-1		
PFHxSA*	Not detected	48		ng/kg	4.78	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43389.13

Sample Tag: AOC7-MW-22-08 (2-3)

Collected Date/Time: 12/12/2022 11:55

Matrix: Soil

COC Reference: 158707

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.6	IR
1	250ml Plastic	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.26/6.54/10	ASTM D7968-17M	12/19/22 10:00	KCV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 18:30, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	93	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 07:03, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	79		ng/kg	3.95	375-22-4		
PFPeA*	Not detected	40		ng/kg	3.95	2706-90-3		
4:2 FTSA*	Not detected	40		ng/kg	3.95	757124-72-4		
PFHxA*	Not detected	40		ng/kg	3.95	307-24-4		
PFBS*	Not detected	40		ng/kg	3.95	375-73-5		
PFHpA*	Not detected	40		ng/kg	3.95	375-85-9		
PFPeS*	Not detected	40		ng/kg	3.95	2706-91-4		
6:2 FTSA*	Not detected	40		ng/kg	3.95	27619-97-2		
PFOA*	Not detected	40		ng/kg	3.95	335-67-1		
PFHxS*	Not detected	40		ng/kg	3.95	355-46-4		
PFHxS-LN*	Not detected	40		ng/kg	3.95	355-46-4-LN		
PFHxS-BR*	Not detected	40		ng/kg	3.95	355-46-4-BR		
PFNA*	Not detected	40		ng/kg	3.95	375-95-1		
8:2 FTSA*	Not detected	40		ng/kg	3.95	39108-34-4		
PFHpS*	Not detected	40		ng/kg	3.95	375-92-8		
PFDA*	Not detected	40		ng/kg	3.95	335-76-2		
N-MeFOSAA*	Not detected	40		ng/kg	3.95	2355-31-9		
EtFOSAA*	Not detected	40		ng/kg	3.95	2991-50-6		
PFOS*	110	40		ng/kg	3.95	1763-23-1		
PFOS-LN*	99	40		ng/kg	3.95	1763-23-1-LN		
PFOS-BR*	Not detected	40		ng/kg	3.95	1763-23-1-BR		
PFUnDA*	Not detected	40		ng/kg	3.95	2058-94-8		
PFNS*	Not detected	40		ng/kg	3.95	68259-12-1		
PFDODA*	Not detected	40		ng/kg	3.95	307-55-1		
PFDS*	76	40		ng/kg	3.95	335-77-3		
PFTTrDA*	Not detected	40		ng/kg	3.95	72629-94-8		
FOSA*	Not detected	40		ng/kg	3.95	754-91-6		
PFTeDA*	Not detected	40		ng/kg	3.95	376-06-7		
11Cl-PF3OUdS*	Not detected	40		ng/kg	3.95	763051-92-9		
9Cl-PF3ONS*	Not detected	40		ng/kg	3.95	756426-58-1		
ADONA*	Not detected	40		ng/kg	3.95	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43389.13 (continued)

Sample Tag: AOC7-MW-22-08 (2-3)

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 07:03, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	40		ng/kg	3.95	13252-13-6		
PFECHS*	Not detected	40		ng/kg	3.95	67584-42-3		
PFBSA*	Not detected	40		ng/kg	3.95	30334-69-1		
PFHxSA*	Not detected	40		ng/kg	3.95	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43389.14

Sample Tag: AOC7-MW-22-09 (2-4)

Collected Date/Time: 12/12/2022 12:30

Matrix: Soil

COC Reference: 158707

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.6	IR
1	250ml Plastic	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	7.81/6.50/10	ASTM D7968-17M	12/19/22 10:00	KCV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 18:30, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 07:23, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	160		ng/kg	8.04	375-22-4		
PFPeA*	Not detected	80		ng/kg	8.04	2706-90-3		
4:2 FTSA*	Not detected	80		ng/kg	8.04	757124-72-4		
PFHxA*	Not detected	80		ng/kg	8.04	307-24-4		
PFBS*	Not detected	80		ng/kg	8.04	375-73-5		
PFHpA*	Not detected	80		ng/kg	8.04	375-85-9		
PFPeS*	Not detected	80		ng/kg	8.04	2706-91-4		
6:2 FTSA*	Not detected	80		ng/kg	8.04	27619-97-2		
PFOA*	Not detected	80		ng/kg	8.04	335-67-1		
PFHxS*	Not detected	80		ng/kg	8.04	355-46-4		
PFHxS-LN*	Not detected	80		ng/kg	8.04	355-46-4-LN		
PFHxS-BR*	Not detected	80		ng/kg	8.04	355-46-4-BR		
PFNA*	Not detected	80		ng/kg	8.04	375-95-1		
8:2 FTSA*	Not detected	80		ng/kg	8.04	39108-34-4		
PFHpS*	Not detected	80		ng/kg	8.04	375-92-8		
PFDA*	Not detected	80		ng/kg	8.04	335-76-2		
N-MeFOSAA*	Not detected	80		ng/kg	8.04	2355-31-9		
EtFOSAA*	Not detected	80		ng/kg	8.04	2991-50-6		
PFOS*	Not detected	80		ng/kg	8.04	1763-23-1		
PFOS-LN*	Not detected	80		ng/kg	8.04	1763-23-1-LN		
PFOS-BR*	Not detected	80		ng/kg	8.04	1763-23-1-BR		
PFUnDA*	Not detected	80		ng/kg	8.04	2058-94-8		
PFNS*	Not detected	80		ng/kg	8.04	68259-12-1		
PFDODA*	Not detected	80		ng/kg	8.04	307-55-1		
PFDS*	Not detected	80		ng/kg	8.04	335-77-3		
PFTTrDA*	Not detected	80		ng/kg	8.04	72629-94-8		
FOSA*	Not detected	80		ng/kg	8.04	754-91-6		
PFTeDA*	Not detected	80		ng/kg	8.04	376-06-7		
11Cl-PF3OUdS*	Not detected	80		ng/kg	8.04	763051-92-9		
9Cl-PF3ONS*	Not detected	80		ng/kg	8.04	756426-58-1		
ADONA*	Not detected	80		ng/kg	8.04	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43389.14 (continued)

Sample Tag: AOC7-MW-22-09 (2-4)

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 07:23, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	80		ng/kg	8.04	13252-13-6		
PFECHS*	Not detected	80		ng/kg	8.04	67584-42-3		
PFBSA*	Not detected	80		ng/kg	8.04	30334-69-1		
PFHxSA*	Not detected	80		ng/kg	8.04	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43389.15

Sample Tag: AOC7-MW-22-09 (8-10)

Collected Date/Time: 12/12/2022 13:00

Matrix: Soil

COC Reference: 158707

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.6	IR
1	250ml Plastic	None	Yes	3.6	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.20/6.47/10	ASTM D7968-17M	12/19/22 10:00	KCV	

Inorganics

Method: SM2540B, Run Date: 12/13/22 18:30, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	89	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 07:42, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	82		ng/kg	4.12	375-22-4		
PFPeA*	Not detected	41		ng/kg	4.12	2706-90-3		
4:2 FTSA*	Not detected	41		ng/kg	4.12	757124-72-4	I	
PFHxA*	49	41		ng/kg	4.12	307-24-4		
PFBS*	Not detected	41		ng/kg	4.12	375-73-5		
PFHpA*	80	41		ng/kg	4.12	375-85-9		
PFPeS*	Not detected	41		ng/kg	4.12	2706-91-4		
6:2 FTSA*	Not detected	41		ng/kg	4.12	27619-97-2	I	
PFOA*	480	41		ng/kg	4.12	335-67-1		
PFHxS*	Not detected	41		ng/kg	4.12	355-46-4		
PFHxS-LN*	Not detected	41		ng/kg	4.12	355-46-4-LN		
PFHxS-BR*	Not detected	41		ng/kg	4.12	355-46-4-BR		
PFNA*	80	41		ng/kg	4.12	375-95-1		
8:2 FTSA*	Not detected	41		ng/kg	4.12	39108-34-4	I	
PFHpS*	Not detected	41		ng/kg	4.12	375-92-8		
PFDA*	230	41		ng/kg	4.12	335-76-2		
N-MeFOSAA*	Not detected	41		ng/kg	4.12	2355-31-9	I	
EtFOSAA*	Not detected	41		ng/kg	4.12	2991-50-6	I	
PFOS*	2,300	41		ng/kg	4.12	1763-23-1		
PFOS-LN*	1,800	41		ng/kg	4.12	1763-23-1-LN		
PFOS-BR*	520	41		ng/kg	4.12	1763-23-1-BR		
PFUnDA*	Not detected	41		ng/kg	4.12	2058-94-8		
PFNS*	Not detected	41		ng/kg	4.12	68259-12-1		
PFDODA*	48	41		ng/kg	4.12	307-55-1		
PFDS*	340	41		ng/kg	4.12	335-77-3		
PFTTrDA*	Not detected	41		ng/kg	4.12	72629-94-8		
FOSA*	Not detected	41		ng/kg	4.12	754-91-6		
PFTeDA*	Not detected	41		ng/kg	4.12	376-06-7		
11Cl-PF3OUdS*	Not detected	41		ng/kg	4.12	763051-92-9		
9Cl-PF3ONS*	Not detected	41		ng/kg	4.12	756426-58-1		

I-Matrix interference with internal standard



Analytical Laboratory Report

Lab Sample ID: S43389.15 (continued)

Sample Tag: AOC7-MW-22-09 (8-10)

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 07:42, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
ADONA*	Not detected	41		ng/kg	4.12	919005-14-4		
HFPO-DA*	Not detected	41		ng/kg	4.12	13252-13-6		
PFECHS*	Not detected	41		ng/kg	4.12	67584-42-3		
PFBSA*	Not detected	41		ng/kg	4.12	30334-69-1		
PFHxSA*	Not detected	41		ng/kg	4.12	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43389.16

Sample Tag: AOC7-MW-22-10 (2-4)

Collected Date/Time: 12/12/2022 15:10

Matrix: Soil

COC Reference: 158707

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.6	IR

Other / Misc.

Method: , Run Date: 12/16/22 15:36, Analyst: JRM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Hold until notified*	Completed				1			



Analytical Laboratory Report

Lab Sample ID: S43389.17

Sample Tag: AOC7-MW-22-10 (8-10)

Collected Date/Time: 12/12/2022 15:20

Matrix: Soil

COC Reference: 158707

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.6	IR

Other / Misc.

Method: , Run Date: 12/16/22 15:36, Analyst: JRM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Hold until notified*	Completed				1			

Merit Laboratories Login Checklist

Lab Set ID:S43389

Client:TRC (TRC)

Project: Detroit Axle Southern RCRA Invest. 495430.0001

Submitted: 12/13/2022 15:10 Login User: MMC

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place

Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Selection	Description	Note
Sample Receiving		
01.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples are received at 4C +/- 2C Thermometer # IR 5.4
02.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Received on ice/ cooling process begun
03.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples shipped
04.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples left in 24 hr. drop box
05.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Are there custody seals/tape or is the drop box locked
Chain of Custody		
06.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC adequately filled out
07.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC signed and relinquished to the lab
08.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sample tag on bottles match COC
09.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Subcontracting needed? Subcontracted to:
Preservation		
10.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Do sample have correct chemical preservation
11.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Completed pH checks on preserved samples? (no VOAs)
12.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Did any samples need to be preserved in the lab?
Bottle Conditions		
13.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	All bottles intact
14.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Appropriate analytical bottles are used
15.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Merit bottles used
16.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sufficient sample volume received
17.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples require laboratory filtration
18.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples submitted within holding time
19.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Do water VOC or TOX bottles contain headspace

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____



2680 East Lansing Dr., East Lansing, MI 48823
 Phone (517) 332-0167 Fax (517) 332-4034
 www.meritlabs.com

C.O.C. PAGE # _____ OF _____ 158704

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME *K. Cratsenburg*
 COMPANY *TRC*
 ADDRESS *1540 Eisenhower Place*
 CITY *Ann Arbor* STATE *MI* ZIP CODE *48108*
 PHONE NO. _____ CELL NO. _____ P.O. NO. *4954300001*
 E-MAIL ADDRESS *Kcratsenburg@trccompanies.com* QUOTE NO. _____

CONTACT NAME _____ SAME
 COMPANY _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP CODE _____
 PHONE NO. _____ E-MAIL ADDRESS _____

PROJECT NO./NAME *495430-0001 Detroit Axle Southern RCRA Envst.* SAMPLER(S) - PLEASE PRINT/SIGN NAME *H. Schmidt*
 TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____
 DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER *TRC EDD*

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

<i>VOCs + TICs + 14</i>	<i>5 VOCs + TICs</i>	<i>Metals *</i>	<i>3 PFAS</i>	<i>PCBs</i>	<i>The. Over</i>	<i>3 alcohols</i>
-------------------------	----------------------	-----------------	---------------	-------------	------------------	-------------------

Certifications
 OHIO VAP Drinking Water
 DoD NPDES
 Project Locations
 Detroit New York
 Other _____
 Special Instructions

MATRIX W=WATER GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 CODE: SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR WS=WASTE

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	COLLECTION		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives												
	DATE	TIME				NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER						
<i>43388/43389</i>	<i>12/12/22</i>	<i>1135</i>	<i>AOC10-TPO1-N</i>	<i>S</i>	<i>9</i>	<i>7</i>												
<i>.02</i>		<i>1154</i>	<i>AOC10-TPO1-S</i>															
<i>.03</i>		<i>1202</i>	<i>AOC10-TPO1-E</i>															
<i>.04</i>		<i>1202</i>	<i>AOC10-TPO1-W</i>															
<i>.05</i>		<i>1230</i>	<i>AOC10-TPO1-B</i>															
<i>.06</i>		<i>—</i>	<i>Dup-01s</i>															
<i>.07</i>		<i>1335</i>	<i>AOC10-TPO2</i>															
<i>.08</i>		<i>1440</i>	<i>AOC10-TPO2</i>															
<i>.09</i>		<i>1406</i>	<i>AOC10-TPO2</i>															
<i>.10</i>		<i>1406</i>	<i>AOC10-TPO2</i>															
<i>.11</i>		<i>1428</i>	<i>AOC10-TPO2</i>															
<i>.12</i>		<i>—</i>	<i>Dup-02s</i>															

* SEE PROJECT SCOPE

RELINQUISHED BY: *H. Schmidt* Sampler DATE *12/12/22* TIME *1500*
 RECEIVED BY: *Sample pickup pt.* DATE *12/12/22* TIME *1500*
 RELINQUISHED BY: *B Yalen* DATE *12.13.22* TIME *1245*
 RECEIVED BY: *Tarrah Meershaen* DATE *12/13/22* TIME *12:15*

RELINQUISHED BY: *Tarrah Meershaen* DATE *12/13/22* TIME *1510*
 RECEIVED BY: *M Dilco* DATE *12/13/22* TIME *1510*
 SEAL NO. SEAL INTACT YES NO INITIALS _____ NOTES: TEMP. ON ARRIVAL *5.4*

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE



REPORT TO **CHAIN OF CUSTODY RECORD** **INVOICE TO**

CONTACT NAME: **KCRATSENBURG**
 COMPANY: **TRC**
 ADDRESS: **1540 EISENHOWER PL**
 CITY: **ANN ARBOR** STATE: **MI** ZIP CODE: **48108**
 PHONE NO. _____ CELL NO. _____ P.O. NO. **495430.0001**
 E-MAIL ADDRESS: **Kcratsenburgetre.companies.net** QUOTE NO. _____

CONTACT NAME: _____ SAME
 COMPANY: _____
 ADDRESS: _____
 CITY: _____ STATE: _____ ZIP CODE: _____
 PHONE NO. _____ E-MAIL ADDRESS: _____

PROJECT NO./NAME: **DETROIT AXLE** SAMPLER(S) - PLEASE PRINT/SIGN NAME: **B. YELEN**
 TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____
 DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER **TRC EDD**
 MATRIX W=WATER GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 CODE: SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR WS=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

VEGETICS, 1,4 D	SUCC + TICS	METALS *	31 PFAS	PCB	THORIUM	3 ALCOHOLS	Certifications
							<input type="checkbox"/> OHIO VAP <input type="checkbox"/> Drinking Water
							<input type="checkbox"/> DoD <input type="checkbox"/> NPDES
							Project Locations
							<input type="checkbox"/> Detroit <input type="checkbox"/> New York
							<input type="checkbox"/> Other _____
							Special Instructions

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	COLLECTION		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives														
	DATE	TIME				NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER								
43388/43389.13	2.12.22	1155	A007-MW-22-08(2-3)	S	9	7														
.14		1230	A007-MW-22-09(2-4)																	
.15		1300	A007-MW-22-09(8-10)																	
43389.16		1510	A009-MW-22-10(2-4)																	
.17		1520	A009-MW-22-10(8-10)																	

* SEE PROJECT SCOPE

RELINQUISHED BY: **B. YELEN** Sampler DATE: **12.13.22** TIME: **12:15**
 RECEIVED BY: **Tarrah Allershan** DATE: **12/13/22** TIME: **12:15**
 RELINQUISHED BY: _____ DATE: _____ TIME: _____
 RECEIVED BY: _____ DATE: _____ TIME: _____

RELINQUISHED BY: **Tarrah Allershan** DATE: **12/13/22** TIME: **15:10**
 RECEIVED BY: **M. O'Neil** DATE: **12/13/22** TIME: **15:10**
 SEAL NO. _____ SEAL INTACT YES NO INITIALS _____
 SEAL NO. _____ SEAL INTACT YES NO INITIALS _____
 NOTES: TEMP. ON ARRIVAL **5.4**



Analytical Laboratory Report

Report ID: S43471.01(01)
Generated on 01/17/2023

Report to
Attention: Kelly Cratsenburg
TRC
1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: 734-412-5424 FAX:
Email: KCratsenburg@trccompanies.com

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Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Additional Contacts: Vince Buening

Report Summary

Lab Sample ID(s): S43471.01-S43471.35
Project: Detroit Axle Southern Invest. 495430.0001
Collected Date(s): 12/13/2022 - 12/14/2022
Submitted Date/Time: 12/14/2022 16:50
Sampled by: B. Yelen / H. Schnaidt
P.O. #: 193431

Table of Contents

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- Sample Summary (Page 5)

Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
SM2540B	Standard Method 2540 B 2015
SW3050B	SW 846 Method 3050B Revision 2 December 1996
SW3546	SW 846 Method 3546 Revision 0 February 2007
SW5035A	SW 846 Method 5035A Revision 1 July 2002
SW5035A/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5035A Revision 1 July 2002
SW6020A	SW 846 Method 6020A Revision 1 February 2007
SW7471B	SW 846 Method 7471B Revision 2 February 2007
SW8082A	SW 846 Method 8082A Revision 1 February 2007
SW8260B - SIM	SW 846 Method 8260B Revision 2 December 1996 SIMs
SW8270D	SW 846 Method 8270D Revision 4 February 2007



Analytical Laboratory Report

Sample Summary (35 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S43471.01	AOC11-TP01-N	Soil	12/13/22 08:25
S43471.02	AOC11-TP01-S	Soil	12/13/22 08:36
S43471.03	AOC11-TP01-E	Soil	12/13/22 08:56
S43471.04	AOC11-TP01-W	Soil	12/13/22 08:56
S43471.05	AOC11-TP01-B	Soil	12/13/22 09:35
S43471.06	DUP-03S	Soil	12/13/22 00:01
S43471.07	AOC11-TP02-N	Soil	12/13/22 10:16
S43471.08	AOC11-TP02-S	Soil	12/13/22 10:33
S43471.09	AOC11-TP02-E	Soil	12/13/22 10:43
S43471.10	AOC11-TP02-W	Soil	12/13/22 10:43
S43471.11	AOC11-TP02-B	Soil	12/13/22 11:18
S43471.12	DUP-04S	Soil	12/13/22 00:01
S43471.13	AOC11-TP03-N	Soil	12/13/22 12:30
S43471.14	AOC11-TP03-S	Soil	12/13/22 12:45
S43471.15	AOC11-TP03-E	Soil	12/13/22 13:00
S43471.16	AOC11-TP03-W	Soil	12/13/22 13:00
S43471.17	AOC11-TP03-B	Soil	12/13/22 13:30
S43471.18	DUP-05S	Soil	12/13/22 00:01
S43471.19	AOC11-TP04-N	Soil	12/13/22 14:10
S43471.20	AOC11-TP04-S	Soil	12/13/22 14:15
S43471.21	AOC11-TP04-E	Soil	12/13/22 14:35
S43471.22	AOC11-TP04-W	Soil	12/13/22 14:35
S43471.23	AOC11-TP04-B	Soil	12/13/22 15:03
S43471.24	DUP-06S	Soil	12/13/22 00:01
S43471.25	AOC11-MW-22-07 (2-4)	Soil	12/13/22 10:20
S43471.26	AOC11-MW-22-07 (8-10)	Soil	12/13/22 10:40
S43471.27	AOC7-MW-22-08 (8-10)	Soil	12/13/22 08:50
S43471.28	AOC11-MW-22-10 (2-4)	Soil	12/13/22 12:45
S43471.29	AOC11-MW-22-10 (8-10)	Soil	12/13/22 13:00
S43471.30	AOC3-MW-22-11 (2-4)	Soil	12/13/22 13:50
S43471.31	AOC3-MW-22-11 (8-10)	Soil	12/13/22 14:00
S43471.32	AOC3-MW-22-12 (2-4)	Soil	12/13/22 16:00
S43471.33	AOC3-MW-22-12 (8-10)	Soil	12/13/22 16:10
S43471.34	AOC9-MW-22-13 (2-4)	Soil	12/14/22 09:30
S43471.35	AOC9-MW-22-13 (8-10)	Soil	12/14/22 09:40



Analytical Laboratory Report

Lab Sample ID: S43471.01

Sample Tag: AOC11-TP01-N

Collected Date/Time: 12/13/2022 08:25

Matrix: Soil

COC Reference: 158705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 08:55	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 12:30	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 12:00	TAW	
Sample wt. (g) / Methanol (ml)*	10.862/10	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/16/22 13:31	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	92	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 12:13, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	2,310	1.0		mg/kg	320	7429-90-5		
Antimony	Not detected	0.50		mg/kg	320	7440-36-0		
Arsenic	1.29	0.20		mg/kg	320	7440-38-2		
Barium	17.4	1.0		mg/kg	320	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	320	7440-41-7		
Boron	Not detected	2.0		mg/kg	320	7440-42-8		
Cadmium	0.30	0.20		mg/kg	320	7440-43-9		
Chromium	2.95	0.50		mg/kg	320	7440-47-3		
Cobalt	0.64	0.50		mg/kg	320	7440-48-4		
Copper	5.76	0.50		mg/kg	320	7440-50-8		
Iron	2,160	1.0		mg/kg	320	7439-89-6		
Lead	40.3	0.30		mg/kg	320	7439-92-1		
Manganese	88.1	0.50		mg/kg	320	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	320	7439-98-7		
Nickel	1.80	0.50		mg/kg	320	7440-02-0		
Selenium	Not detected	0.40		mg/kg	320	7782-49-2		
Silver	Not detected	0.20		mg/kg	320	7440-22-4		
Strontium	12.8	0.50		mg/kg	320	7440-24-6		
Thallium	Not detected	0.20		mg/kg	320	7440-28-0		
Tin	Not detected	2.0		mg/kg	320	7440-31-5		
Titanium	42.2	1.0		mg/kg	320	7440-32-6		
Vanadium	5.06	0.50		mg/kg	320	7440-62-2		
Zinc	21.6	0.50		mg/kg	320	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43471.01 (continued)

Sample Tag: AOC11-TP01-N

Method: SW6020A, Run Date: 12/19/22 11:00, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	7,900	20		mg/kg	320	7440-70-2		
Magnesium	1,470	20		mg/kg	320	7439-95-4		
Potassium	167	20		mg/kg	320	7440-09-7		
Sodium	Not detected	20		mg/kg	320	7440-23-5		

Method: SW7471B, Run Date: 12/16/22 15:49, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.341	0.050		mg/kg	65	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/19/22 18:01, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 19:26, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	640	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	1,350	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	3,800	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	4,040	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	3,150	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	1,410	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	3,580	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	4,570	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	600	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43471.01 (continued)

Sample Tag: AOC11-TP01-N

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 19:26, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	9,820	330		ug/kg	6	206-44-0		
Fluorene	730	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	1,520	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	7,340	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	7,610	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/23/22 19:26, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Phenanthrene	Found			ug/kg	6	85-01-8		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Anthracene	Found			ug/kg	6	120-12-7		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 05:53, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	54.4	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 12:18, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	54.4			



Analytical Laboratory Report

Lab Sample ID: S43471.01 (continued)

Sample Tag: AOC11-TP01-N

Method: SW8260B - SIM, Run Date: 12/22/22 12:43, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	54.4	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	54.4	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 12:18, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	54.4	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	54.4	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	54.4	107-13-1		
2-Butanone (MEK)	Not detected	820		ug/kg	54.4	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	54.4	75-71-8		
Chloromethane	Not detected	300		ug/kg	54.4	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	54.4	75-01-4		
Bromomethane	Not detected	200		ug/kg	54.4	74-83-9		
Chloroethane	Not detected	300		ug/kg	54.4	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	54.4	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	54.4	75-35-4		
Methylene chloride	Not detected	100		ug/kg	54.4	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	54.4	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	54.4	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	54.4	156-59-2		
Chloroform	Not detected	50		ug/kg	54.4	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	54.4	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	54.4	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	54.4	56-23-5		
Benzene	Not detected	50		ug/kg	54.4	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	54.4	107-06-2		
Trichloroethene	Not detected	50		ug/kg	54.4	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	54.4	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	54.4	75-27-4		
Dibromomethane	Not detected	300		ug/kg	54.4	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	54.4	10061-01-5		
Toluene	Not detected	50		ug/kg	54.4	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	54.4	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	54.4	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	54.4	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	54.4	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	54.4	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	54.4	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	54.4	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	54.4	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	54.4			
o-Xylene	Not detected	50		ug/kg	54.4	95-47-6		
Styrene	Not detected	50		ug/kg	54.4	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	54.4	98-82-8		
Bromoform	Not detected	100		ug/kg	54.4	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	54.4	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	54.4	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	54.4	103-65-1		
Bromobenzene	Not detected	100		ug/kg	54.4	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.01 (continued)

Sample Tag: AOC11-TP01-N

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 12:18, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	54.4	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	54.4	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	54.4	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	54.4	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	54.4	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	54.4	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	54.4	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	54.4	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	54.4	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	54.4	104-51-8		
1,2,4-Trichlorobenzene	Not detected	360		ug/kg	54.4	120-82-1		
1,2,3-Trichlorobenzene	Not detected	360		ug/kg	54.4	87-61-6		
Naphthalene	Not detected	300		ug/kg	54.4	91-20-3		
Acrolein	Not detected	50		ug/kg	54.4	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	54.4	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	54.4	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	54.4	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	54.4	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	54.4	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	54.4	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	54.4	76-13-1		

Other / Misc.

Method: , Run Date: 12/22/22 03:02, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:24, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/19/22 10:57, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.02

Sample Tag: AOC11-TP01-S

Collected Date/Time: 12/13/2022 08:36

Matrix: Soil

COC Reference: 158705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 08:55	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 12:30	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 12:00	TAW	
Sample wt. (g) / Methanol (ml)*	4.992/10	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/16/22 13:31	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	92	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 12:15, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	2,520	1.0		mg/kg	312	7429-90-5		
Antimony	Not detected	0.50		mg/kg	312	7440-36-0		
Arsenic	0.61	0.20		mg/kg	312	7440-38-2		
Barium	14.7	1.0		mg/kg	312	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	312	7440-41-7		
Boron	Not detected	2.0		mg/kg	312	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	312	7440-43-9		
Chromium	2.28	0.50		mg/kg	312	7440-47-3		
Cobalt	0.72	0.50		mg/kg	312	7440-48-4		
Copper	2.60	0.50		mg/kg	312	7440-50-8		
Iron	2,080	1.0		mg/kg	312	7439-89-6		
Lead	20.6	0.30		mg/kg	312	7439-92-1		
Manganese	56.2	0.50		mg/kg	312	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	312	7439-98-7		
Nickel	1.74	0.50		mg/kg	312	7440-02-0		
Selenium	Not detected	0.40		mg/kg	312	7782-49-2		
Silver	Not detected	0.20		mg/kg	312	7440-22-4		
Strontium	7.42	0.50		mg/kg	312	7440-24-6		
Thallium	Not detected	0.20		mg/kg	312	7440-28-0		
Tin	Not detected	2.0		mg/kg	312	7440-31-5		
Titanium	57.2	1.0		mg/kg	312	7440-32-6		
Vanadium	2.90	0.50		mg/kg	312	7440-62-2		
Zinc	11.3	0.50		mg/kg	312	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43471.02 (continued)

Sample Tag: AOC11-TP01-S

Method: SW6020A, Run Date: 12/19/22 11:01, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	3,490	20		mg/kg	312	7440-70-2		
Magnesium	694	20		mg/kg	312	7439-95-4		
Potassium	126	20		mg/kg	312	7440-09-7		
Sodium	Not detected	20		mg/kg	312	7440-23-5		

Method: SW7471B, Run Date: 12/16/22 15:53, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.055	0.050		mg/kg	60	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/19/22 16:10, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	1	12674-11-2		
PCB-1242	Not detected	330		ug/kg	1	53469-21-9		
PCB-1221	Not detected	330		ug/kg	1	11104-28-2		
PCB-1232	Not detected	330		ug/kg	1	11141-16-5		
PCB-1248	Not detected	330		ug/kg	1	12672-29-6		
PCB-1254	Not detected	330		ug/kg	1	11097-69-1		
PCB-1260	Not detected	330		ug/kg	1	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 19:56, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	390	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	440	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	360	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	410	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	430	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43471.02 (continued)

Sample Tag: AOC11-TP01-S

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 19:56, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	770	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	Not detected	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	680	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/23/22 19:56, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Phenanthrene	Found			ug/kg	6	85-01-8		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Benzo(ghi)perylene	Found			ug/kg	6	191-24-2		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 06:18, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	600		ug/kg	113	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 12:42, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	113			



Analytical Laboratory Report

Lab Sample ID: S43471.02 (continued)

Sample Tag: AOC11-TP01-S

Method: SW8260B - SIM, Run Date: 12/22/22 13:03, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	6		ug/kg	113	96-12-8		
1,4-Dioxane*	Not detected	100		ug/kg	113	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 12:42, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	2,000		ug/kg	113	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	500		ug/kg	113	1634-04-4		
Acrylonitrile	Not detected	200		ug/kg	113	107-13-1		
2-Butanone (MEK)	Not detected	1,700		ug/kg	113	78-93-3		
Dichlorodifluoromethane	Not detected	600		ug/kg	113	75-71-8		
Chloromethane	Not detected	600		ug/kg	113	74-87-3		
Vinyl chloride	Not detected	100		ug/kg	113	75-01-4		
Bromomethane	Not detected	500		ug/kg	113	74-83-9		
Chloroethane	Not detected	600		ug/kg	113	75-00-3		
Trichlorofluoromethane	Not detected	200		ug/kg	113	75-69-4		
1,1-Dichloroethene	Not detected	100		ug/kg	113	75-35-4		
Methylene chloride	Not detected	200		ug/kg	113	75-09-2		
trans-1,2-Dichloroethene	Not detected	100		ug/kg	113	156-60-5		
1,1-Dichloroethane	Not detected	100		ug/kg	113	75-34-3		
cis-1,2-Dichloroethene	Not detected	100		ug/kg	113	156-59-2		
Chloroform	Not detected	100		ug/kg	113	67-66-3		
1,1,1-Trichloroethane	Not detected	100		ug/kg	113	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	6,000		ug/kg	113	108-10-1		
Carbon tetrachloride	Not detected	100		ug/kg	113	56-23-5		
Benzene	Not detected	100		ug/kg	113	71-43-2		
1,2-Dichloroethane	Not detected	100		ug/kg	113	107-06-2		
Trichloroethene	Not detected	100		ug/kg	113	79-01-6		
1,2-Dichloropropane	Not detected	100		ug/kg	113	78-87-5		
Bromodichloromethane	Not detected	200		ug/kg	113	75-27-4		
Dibromomethane	Not detected	600		ug/kg	113	74-95-3		
cis-1,3-Dichloropropene	Not detected	100		ug/kg	113	10061-01-5		
Toluene	Not detected	100		ug/kg	113	108-88-3		
trans-1,3-Dichloropropene	Not detected	100		ug/kg	113	10061-02-6		
1,1,2-Trichloroethane	Not detected	100		ug/kg	113	79-00-5		
Tetrachloroethene	Not detected	100		ug/kg	113	127-18-4		
Dibromochloromethane	Not detected	200		ug/kg	113	124-48-1		
1,2-Dibromoethane	Not detected	50		ug/kg	113	106-93-4	M	
Chlorobenzene	Not detected	100		ug/kg	113	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	200		ug/kg	113	630-20-6		
Ethylbenzene	Not detected	100		ug/kg	113	100-41-4		
p,m-Xylene	Not detected	200		ug/kg	113			
o-Xylene	Not detected	100		ug/kg	113	95-47-6		
Styrene	Not detected	100		ug/kg	113	100-42-5		
Isopropylbenzene	Not detected	600		ug/kg	113	98-82-8		
Bromoform	Not detected	200		ug/kg	113	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	100		ug/kg	113	79-34-5		
1,2,3-Trichloropropane	Not detected	200		ug/kg	113	96-18-4		
n-Propylbenzene	Not detected	100		ug/kg	113	103-65-1		
Bromobenzene	Not detected	200		ug/kg	113	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.02 (continued)

Sample Tag: AOC11-TP01-S

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 12:42, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	100		ug/kg	113	108-67-8		
tert-Butylbenzene	Not detected	100		ug/kg	113	98-06-6		
1,2,4-Trimethylbenzene	Not detected	100		ug/kg	113	95-63-6		
sec-Butylbenzene	Not detected	100		ug/kg	113	135-98-8		
p-Isopropyltoluene	Not detected	200		ug/kg	113	99-87-6		
1,3-Dichlorobenzene	Not detected	200		ug/kg	113	541-73-1		
1,4-Dichlorobenzene	Not detected	200		ug/kg	113	106-46-7		
1,2-Dichlorobenzene	Not detected	200		ug/kg	113	95-50-1		
1,2,3-Trimethylbenzene	Not detected	100		ug/kg	113	526-73-8		
n-Butylbenzene	Not detected	100		ug/kg	113	104-51-8		
1,2,4-Trichlorobenzene	Not detected	750		ug/kg	113	120-82-1		
1,2,3-Trichlorobenzene	Not detected	750		ug/kg	113	87-61-6		
Naphthalene	Not detected	600		ug/kg	113	91-20-3		
Acrolein	Not detected	100		ug/kg	113	107-02-8		
2-Chlorotoluene	Not detected	100		ug/kg	113	95-49-8		
4-Chlorotoluene	Not detected	100		ug/kg	113	106-43-4		
1,3-Dichloropropane	Not detected	100		ug/kg	113	142-28-9		
1,1-Dichloropropene	Not detected	100		ug/kg	113	563-58-6		
2,2-Dichloropropane	Not detected	100		ug/kg	113	594-20-7		
Hexachlorobutadiene	Not detected	100		ug/kg	113	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	100		ug/kg	113	76-13-1		

Other / Misc.

Method: , Run Date: 12/22/22 15:07, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 01/10/23 08:01, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/19/22 10:57, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.03

Sample Tag: AOC11-TP01-E

Collected Date/Time: 12/13/2022 08:56

Matrix: Soil

COC Reference: 158705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 08:55	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 12:30	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 12:00	TAW	
Sample wt. (g) / Methanol (ml)*	9.621/10	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/16/22 13:31	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	92	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 12:17, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	2,180	1.0		mg/kg	314	7429-90-5		
Antimony	Not detected	0.50		mg/kg	314	7440-36-0		
Arsenic	0.82	0.20		mg/kg	314	7440-38-2		
Barium	14.9	1.0		mg/kg	314	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	314	7440-41-7		
Boron	Not detected	2.0		mg/kg	314	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	314	7440-43-9		
Chromium	2.67	0.50		mg/kg	314	7440-47-3		
Cobalt	0.74	0.50		mg/kg	314	7440-48-4		
Copper	2.90	0.50		mg/kg	314	7440-50-8		
Iron	1,500	1.0		mg/kg	314	7439-89-6		
Lead	23.7	0.30		mg/kg	314	7439-92-1		
Manganese	39.6	0.50		mg/kg	314	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	314	7439-98-7		
Nickel	1.79	0.50		mg/kg	314	7440-02-0		
Selenium	Not detected	0.40		mg/kg	314	7782-49-2		
Silver	Not detected	0.20		mg/kg	314	7440-22-4		
Strontium	11.7	0.50		mg/kg	314	7440-24-6		
Thallium	Not detected	0.20		mg/kg	314	7440-28-0		
Tin	Not detected	2.0		mg/kg	314	7440-31-5		
Titanium	46.4	1.0		mg/kg	314	7440-32-6		
Vanadium	3.27	0.50		mg/kg	314	7440-62-2		
Zinc	14.9	0.50		mg/kg	314	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43471.03 (continued)

Sample Tag: AOC11-TP01-E

Method: SW6020A, Run Date: 12/19/22 11:02, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	9,390	20		mg/kg	314	7440-70-2		
Magnesium	2,720	20		mg/kg	314	7439-95-4		
Potassium	151	20		mg/kg	314	7440-09-7		
Sodium	23.9	20		mg/kg	314	7440-23-5		

Method: SW7471B, Run Date: 12/16/22 15:56, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.298	0.050		mg/kg	62	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/19/22 18:13, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 20:26, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	950	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	2,560	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	4,610	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	3,950	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	3,790	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	1,050	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	3,800	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	4,650	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	470	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43471.03 (continued)

Sample Tag: AOC11-TP01-E

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 20:26, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	10,150	330		ug/kg	6	206-44-0		
Fluorene	1,070	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	1,130	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	8,750	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	8,490	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/23/22 20:26, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Phenanthrene	Found			ug/kg	6	85-01-8		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Anthracene	Found			ug/kg	6	120-12-7		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 06:42, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	60.8	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 13:06, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	60.8			



Analytical Laboratory Report

Lab Sample ID: S43471.03 (continued)

Sample Tag: AOC11-TP01-E

Method: SW8260B - SIM, Run Date: 12/22/22 13:24, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	60.8	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	60.8	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 13:06, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	60.8	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	60.8	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	60.8	107-13-1		
2-Butanone (MEK)	Not detected	910		ug/kg	60.8	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	60.8	75-71-8		
Chloromethane	Not detected	300		ug/kg	60.8	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	60.8	75-01-4		
Bromomethane	Not detected	200		ug/kg	60.8	74-83-9		
Chloroethane	Not detected	300		ug/kg	60.8	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	60.8	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	60.8	75-35-4		
Methylene chloride	Not detected	100		ug/kg	60.8	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	60.8	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	60.8	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	60.8	156-59-2		
Chloroform	Not detected	60		ug/kg	60.8	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	60.8	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	60.8	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	60.8	56-23-5		
Benzene	Not detected	60		ug/kg	60.8	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	60.8	107-06-2		
Trichloroethene	Not detected	60		ug/kg	60.8	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	60.8	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	60.8	75-27-4		
Dibromomethane	Not detected	300		ug/kg	60.8	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	60.8	10061-01-5		
Toluene	Not detected	60		ug/kg	60.8	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	60.8	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	60.8	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	60.8	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	60.8	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	60.8	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	60.8	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	60.8	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	60.8	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	60.8			
o-Xylene	Not detected	60		ug/kg	60.8	95-47-6		
Styrene	Not detected	60		ug/kg	60.8	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	60.8	98-82-8		
Bromoform	Not detected	100		ug/kg	60.8	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	60.8	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	60.8	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	60.8	103-65-1		
Bromobenzene	Not detected	100		ug/kg	60.8	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.03 (continued)

Sample Tag: AOC11-TP01-E

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 13:06, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	60.8	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	60.8	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	60.8	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	60.8	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	60.8	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	60.8	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	60.8	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	60.8	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	60.8	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	60.8	104-51-8		
1,2,4-Trichlorobenzene	Not detected	400		ug/kg	60.8	120-82-1		
1,2,3-Trichlorobenzene	Not detected	400		ug/kg	60.8	87-61-6		
Naphthalene	Not detected	300		ug/kg	60.8	91-20-3		
Acrolein	Not detected	60		ug/kg	60.8	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	60.8	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	60.8	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	60.8	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	60.8	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	60.8	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	60.8	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	60.8	76-13-1		

Other / Misc.

Method: , Run Date: 12/22/22 03:44, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:24, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/19/22 10:57, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.04

Sample Tag: AOC11-TP01-W

Collected Date/Time: 12/13/2022 08:56

Matrix: Soil

COC Reference: 158705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 08:55	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 12:30	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 12:00	TAW	
Sample wt. (g) / Methanol (ml)*	10.119/10	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/16/22 13:31	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	92	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 12:20, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,840	1.0		mg/kg	312	7429-90-5		
Antimony	Not detected	0.50		mg/kg	312	7440-36-0		
Arsenic	0.67	0.20		mg/kg	312	7440-38-2		
Barium	10.9	1.0		mg/kg	312	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	312	7440-41-7		
Boron	Not detected	2.0		mg/kg	312	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	312	7440-43-9		
Chromium	2.25	0.50		mg/kg	312	7440-47-3		
Cobalt	0.73	0.50		mg/kg	312	7440-48-4		
Copper	2.69	0.50		mg/kg	312	7440-50-8		
Iron	1,720	1.0		mg/kg	312	7439-89-6		
Lead	29.2	0.30		mg/kg	312	7439-92-1		
Manganese	53.9	0.50		mg/kg	312	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	312	7439-98-7		
Nickel	1.88	0.50		mg/kg	312	7440-02-0		
Selenium	Not detected	0.40		mg/kg	312	7782-49-2		
Silver	Not detected	0.20		mg/kg	312	7440-22-4		
Strontium	12.4	0.50		mg/kg	312	7440-24-6		
Thallium	Not detected	0.20		mg/kg	312	7440-28-0		
Tin	Not detected	2.0		mg/kg	312	7440-31-5		
Titanium	39.6	1.0		mg/kg	312	7440-32-6		
Vanadium	3.51	0.50		mg/kg	312	7440-62-2		
Zinc	9.46	0.50		mg/kg	312	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43471.04 (continued)

Sample Tag: AOC11-TP01-W

Method: SW6020A, Run Date: 12/19/22 11:04, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	11,400	20		mg/kg	312	7440-70-2		
Magnesium	2,190	20		mg/kg	312	7439-95-4		
Potassium	127	20		mg/kg	312	7440-09-7		
Sodium	Not detected	20		mg/kg	312	7440-23-5		

Method: SW7471B, Run Date: 12/16/22 16:00, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	57	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/19/22 18:25, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 20:56, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	430	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	420	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	440	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	440	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	480	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43471.04 (continued)

Sample Tag: AOC11-TP01-W

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 20:56, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	900	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	450	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	770	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/23/22 20:56, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Phenanthrene	Found			ug/kg	6	85-01-8		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Indeno(1,2,3-cd)pyrene	Found			ug/kg	6	193-39-5		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 07:06, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	58.1	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 13:30, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	58.1			



Analytical Laboratory Report

Lab Sample ID: S43471.04 (continued)

Sample Tag: AOC11-TP01-W

Method: SW8260B - SIM, Run Date: 12/22/22 13:45, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	58.1	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	58.1	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 13:30, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	58.1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	58.1	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	58.1	107-13-1		
2-Butanone (MEK)	Not detected	870		ug/kg	58.1	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	58.1	75-71-8		
Chloromethane	Not detected	300		ug/kg	58.1	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	58.1	75-01-4		
Bromomethane	Not detected	200		ug/kg	58.1	74-83-9		
Chloroethane	Not detected	300		ug/kg	58.1	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	58.1	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	58.1	75-35-4		
Methylene chloride	Not detected	100		ug/kg	58.1	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	58.1	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	58.1	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	58.1	156-59-2		
Chloroform	Not detected	60		ug/kg	58.1	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	58.1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	58.1	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	58.1	56-23-5		
Benzene	Not detected	60		ug/kg	58.1	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	58.1	107-06-2		
Trichloroethene	Not detected	60		ug/kg	58.1	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	58.1	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	58.1	75-27-4		
Dibromomethane	Not detected	300		ug/kg	58.1	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	58.1	10061-01-5		
Toluene	Not detected	60		ug/kg	58.1	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	58.1	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	58.1	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	58.1	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	58.1	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	58.1	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	58.1	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	58.1	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	58.1	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	58.1			
o-Xylene	Not detected	60		ug/kg	58.1	95-47-6		
Styrene	Not detected	60		ug/kg	58.1	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	58.1	98-82-8		
Bromoform	Not detected	100		ug/kg	58.1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	58.1	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	58.1	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	58.1	103-65-1		
Bromobenzene	Not detected	100		ug/kg	58.1	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.04 (continued)

Sample Tag: AOC11-TP01-W

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 13:30, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	58.1	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	58.1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	58.1	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	58.1	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	58.1	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	58.1	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	58.1	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	58.1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	58.1	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	58.1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	380		ug/kg	58.1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	380		ug/kg	58.1	87-61-6		
Naphthalene	Not detected	300		ug/kg	58.1	91-20-3		
Acrolein	Not detected	60		ug/kg	58.1	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	58.1	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	58.1	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	58.1	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	58.1	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	58.1	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	58.1	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	58.1	76-13-1		

Other / Misc.

Method: , Run Date: 12/22/22 04:05, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:24, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/19/22 10:57, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.05

Sample Tag: AOC11-TP01-B

Collected Date/Time: 12/13/2022 09:35

Matrix: Soil

COC Reference: 158705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 08:55	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 12:30	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 12:00	TAW	
Sample wt. (g) / Methanol (ml)*	10.254/10	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/16/22 13:31	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	91	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 12:22, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	2,290	1.0		mg/kg	305	7429-90-5		
Antimony	Not detected	0.50		mg/kg	305	7440-36-0		
Arsenic	0.97	0.20		mg/kg	305	7440-38-2		
Barium	20.1	1.0		mg/kg	305	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	305	7440-41-7		
Boron	Not detected	2.0		mg/kg	305	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	305	7440-43-9		
Chromium	3.91	0.50		mg/kg	305	7440-47-3		
Cobalt	1.21	0.50		mg/kg	305	7440-48-4		
Copper	47.4	0.50		mg/kg	305	7440-50-8		
Iron	6,530	1.0		mg/kg	305	7439-89-6		
Lead	46.6	0.30		mg/kg	305	7439-92-1		
Manganese	76.0	0.50		mg/kg	305	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	305	7439-98-7		
Nickel	3.92	0.50		mg/kg	305	7440-02-0		
Selenium	Not detected	0.40		mg/kg	305	7782-49-2		
Silver	Not detected	0.20		mg/kg	305	7440-22-4		
Strontium	11.8	0.50		mg/kg	305	7440-24-6		
Thallium	Not detected	0.20		mg/kg	305	7440-28-0		
Tin	Not detected	2.0		mg/kg	305	7440-31-5		
Titanium	48.8	1.0		mg/kg	305	7440-32-6		
Vanadium	5.30	0.50		mg/kg	305	7440-62-2		
Zinc	30.9	0.50		mg/kg	305	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43471.05 (continued)

Sample Tag: AOC11-TP01-B

Method: SW6020A, Run Date: 12/19/22 11:06, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	8,010	20		mg/kg	305	7440-70-2		
Magnesium	1,310	20		mg/kg	305	7439-95-4		
Potassium	145	20		mg/kg	305	7440-09-7		
Sodium	Not detected	20		mg/kg	305	7440-23-5		

Method: SW7471B, Run Date: 12/16/22 16:03, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.062	0.050		mg/kg	68	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/19/22 18:38, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 12:54, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	630	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	750	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	700	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	530	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	750	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	790	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43471.05 (continued)

Sample Tag: AOC11-TP01-B

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/23/22 12:54, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	1,320	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	450	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	560	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	1,170	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/23/22 12:54, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Phenanthrene	Found			ug/kg	6	85-01-8		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Anthracene	Found			ug/kg	6	120-12-7		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 07:30, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	58.5	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 13:54, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	58.5			



Analytical Laboratory Report

Lab Sample ID: S43471.05 (continued)

Sample Tag: AOC11-TP01-B

Method: SW8260B - SIM, Run Date: 12/22/22 14:06, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	58.5	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	58.5	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 13:54, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	58.5	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	58.5	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	58.5	107-13-1		
2-Butanone (MEK)	Not detected	880		ug/kg	58.5	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	58.5	75-71-8		
Chloromethane	Not detected	300		ug/kg	58.5	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	58.5	75-01-4		
Bromomethane	Not detected	200		ug/kg	58.5	74-83-9		
Chloroethane	Not detected	300		ug/kg	58.5	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	58.5	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	58.5	75-35-4		
Methylene chloride	Not detected	100		ug/kg	58.5	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	58.5	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	58.5	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	58.5	156-59-2		
Chloroform	Not detected	60		ug/kg	58.5	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	58.5	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	58.5	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	58.5	56-23-5		
Benzene	Not detected	60		ug/kg	58.5	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	58.5	107-06-2		
Trichloroethene	Not detected	60		ug/kg	58.5	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	58.5	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	58.5	75-27-4		
Dibromomethane	Not detected	300		ug/kg	58.5	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	58.5	10061-01-5		
Toluene	Not detected	60		ug/kg	58.5	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	58.5	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	58.5	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	58.5	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	58.5	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	58.5	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	58.5	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	58.5	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	58.5	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	58.5			
o-Xylene	Not detected	60		ug/kg	58.5	95-47-6		
Styrene	Not detected	60		ug/kg	58.5	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	58.5	98-82-8		
Bromoform	Not detected	100		ug/kg	58.5	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	58.5	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	58.5	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	58.5	103-65-1		
Bromobenzene	Not detected	100		ug/kg	58.5	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.05 (continued)

Sample Tag: AOC11-TP01-B

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 13:54, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	58.5	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	58.5	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	58.5	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	58.5	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	58.5	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	58.5	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	58.5	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	58.5	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	58.5	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	58.5	104-51-8		
1,2,4-Trichlorobenzene	Not detected	390		ug/kg	58.5	120-82-1		
1,2,3-Trichlorobenzene	Not detected	390		ug/kg	58.5	87-61-6		
Naphthalene	Not detected	300		ug/kg	58.5	91-20-3		
Acrolein	Not detected	60		ug/kg	58.5	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	58.5	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	58.5	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	58.5	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	58.5	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	58.5	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	58.5	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	58.5	76-13-1		

Other / Misc.

Method: , Run Date: 12/22/22 04:26, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:24, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/19/22 10:57, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.06

Sample Tag: DUP-03S

Collected Date/Time: 12/13/2022 00:01

Matrix: Soil

COC Reference: 158705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 13:00	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 12:00	TAW	
Sample wt. (g) / Methanol (ml)*	11.665/11	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/16/22 13:31	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	92	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 15:06, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	2,050	1.0		mg/kg	299	7429-90-5		
Antimony	Not detected	0.50		mg/kg	299	7440-36-0		
Arsenic	0.68	0.20		mg/kg	299	7440-38-2		
Barium	14.4	1.0		mg/kg	299	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	299	7440-41-7		
Boron	Not detected	2.0		mg/kg	299	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	299	7440-43-9		
Chromium	1.90	0.50		mg/kg	299	7440-47-3		
Cobalt	0.50	0.50		mg/kg	299	7440-48-4		
Copper	3.46	0.50		mg/kg	299	7440-50-8		
Iron	1,260	1.0		mg/kg	299	7439-89-6		
Lead	8.35	0.30		mg/kg	299	7439-92-1		
Manganese	39.0	0.50		mg/kg	299	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	299	7439-98-7		
Nickel	0.89	0.50		mg/kg	299	7440-02-0		
Selenium	Not detected	0.40		mg/kg	299	7782-49-2		
Silver	Not detected	0.20		mg/kg	299	7440-22-4		
Strontium	7.31	0.50		mg/kg	299	7440-24-6		
Thallium	Not detected	0.20		mg/kg	299	7440-28-0		
Tin	Not detected	2.0		mg/kg	299	7440-31-5		
Titanium	25.6	1.0		mg/kg	299	7440-32-6		
Vanadium	2.76	0.50		mg/kg	299	7440-62-2		
Zinc	9.75	0.50		mg/kg	299	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43471.06 (continued)

Sample Tag: DUP-03S

Method: SW6020A, Run Date: 12/19/22 11:24, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	6,170	20		mg/kg	299	7440-70-2		
Magnesium	1,020	20		mg/kg	299	7439-95-4		
Potassium	109	20		mg/kg	299	7440-09-7		
Sodium	Not detected	20		mg/kg	299	7440-23-5		

Method: SW7471B, Run Date: 12/16/22 16:06, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	64	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/19/22 18:49, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/27/22 22:21, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	570	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	890	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	650	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	710	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	660	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43471.06 (continued)

Sample Tag: DUP-03S

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/27/22 22:21, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	860	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	Not detected	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	770	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/27/22 22:21, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene*	Found			ug/kg	6			
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Benzo(ghi)perylene	Found			ug/kg	6	191-24-2		
Indeno(1,2,3-cd)pyrene	Found			ug/kg	6	193-39-5		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 07:55, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	55.6	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 14:18, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	55.6			



Analytical Laboratory Report

Lab Sample ID: S43471.06 (continued)

Sample Tag: DUP-03S

Method: SW8260B - SIM, Run Date: 12/22/22 14:27, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	55.6	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	55.6	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 14:18, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	55.6	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	55.6	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	55.6	107-13-1		
2-Butanone (MEK)	Not detected	830		ug/kg	55.6	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	55.6	75-71-8		
Chloromethane	Not detected	300		ug/kg	55.6	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	55.6	75-01-4		
Bromomethane	Not detected	200		ug/kg	55.6	74-83-9		
Chloroethane	Not detected	300		ug/kg	55.6	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	55.6	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	55.6	75-35-4		
Methylene chloride	Not detected	100		ug/kg	55.6	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	55.6	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	55.6	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	55.6	156-59-2		
Chloroform	Not detected	60		ug/kg	55.6	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	55.6	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	55.6	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	55.6	56-23-5		
Benzene	Not detected	60		ug/kg	55.6	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	55.6	107-06-2		
Trichloroethene	Not detected	60		ug/kg	55.6	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	55.6	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	55.6	75-27-4		
Dibromomethane	Not detected	300		ug/kg	55.6	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	55.6	10061-01-5		
Toluene	Not detected	60		ug/kg	55.6	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	55.6	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	55.6	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	55.6	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	55.6	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	55.6	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	55.6	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	55.6	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	55.6	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	55.6			
o-Xylene	Not detected	60		ug/kg	55.6	95-47-6		
Styrene	Not detected	60		ug/kg	55.6	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	55.6	98-82-8		
Bromoform	Not detected	100		ug/kg	55.6	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	55.6	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	55.6	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	55.6	103-65-1		
Bromobenzene	Not detected	100		ug/kg	55.6	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.06 (continued)

Sample Tag: DUP-03S

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 14:18, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	55.6	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	55.6	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	55.6	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	55.6	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	55.6	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	55.6	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	55.6	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	55.6	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	55.6	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	55.6	104-51-8		
1,2,4-Trichlorobenzene	Not detected	370		ug/kg	55.6	120-82-1		
1,2,3-Trichlorobenzene	Not detected	370		ug/kg	55.6	87-61-6		
Naphthalene	Not detected	300		ug/kg	55.6	91-20-3		
Acrolein	Not detected	60		ug/kg	55.6	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	55.6	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	55.6	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	55.6	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	55.6	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	55.6	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	55.6	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	55.6	76-13-1		

Other / Misc.

Method: , Run Date: 12/22/22 04:47, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:24, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/19/22 10:57, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.07

Sample Tag: AOC11-TP02-N

Collected Date/Time: 12/13/2022 10:16

Matrix: Soil

COC Reference: 158705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 13:00	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 12:00	TAW	
Sample wt. (g) / Methanol (ml)*	11.535/11	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/16/22 13:31	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 15:08, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,050	1.0		mg/kg	310	7429-90-5		
Antimony	Not detected	0.50		mg/kg	310	7440-36-0		
Arsenic	0.53	0.20		mg/kg	310	7440-38-2		
Barium	9.95	1.0		mg/kg	310	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	310	7440-41-7		
Boron	Not detected	2.0		mg/kg	310	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	310	7440-43-9		
Chromium	1.51	0.50		mg/kg	310	7440-47-3		
Cobalt	0.54	0.50		mg/kg	310	7440-48-4		
Copper	2.45	0.50		mg/kg	310	7440-50-8		
Iron	902	1.0		mg/kg	310	7439-89-6		
Lead	13.7	0.30		mg/kg	310	7439-92-1		
Manganese	40.1	0.50		mg/kg	310	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	310	7439-98-7		
Nickel	1.09	0.50		mg/kg	310	7440-02-0		
Selenium	Not detected	0.40		mg/kg	310	7782-49-2		
Silver	Not detected	0.20		mg/kg	310	7440-22-4		
Strontium	11.1	0.50		mg/kg	310	7440-24-6		
Thallium	Not detected	0.20		mg/kg	310	7440-28-0		
Tin	Not detected	2.0		mg/kg	310	7440-31-5		
Titanium	22.3	1.0		mg/kg	310	7440-32-6		
Vanadium	1.88	0.50		mg/kg	310	7440-62-2		
Zinc	8.93	0.50		mg/kg	310	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43471.07 (continued)

Sample Tag: AOC11-TP02-N

Method: SW6020A, Run Date: 12/19/22 11:29, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	9,870	20		mg/kg	310	7440-70-2		
Magnesium	1,920	20		mg/kg	310	7439-95-4		
Potassium	86.8	20		mg/kg	310	7440-09-7		
Sodium	Not detected	20		mg/kg	310	7440-23-5		

Method: SW7471B, Run Date: 12/16/22 16:09, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.076	0.050		mg/kg	62	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/19/22 19:01, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/27/22 22:51, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	Not detected	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43471.07 (continued)

Sample Tag: AOC11-TP02-N

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/27/22 22:51, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	490	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	Not detected	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	420	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/27/22 22:51, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Phenanthrene	Found			ug/kg	6	85-01-8		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
11H-Benzo[a]fluorene	Found			ug/kg	6	238-54-6		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 08:19, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	52.8	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 14:43, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	52.8			



Analytical Laboratory Report

Lab Sample ID: S43471.07 (continued)

Sample Tag: AOC11-TP02-N

Method: SW8260B - SIM, Run Date: 12/22/22 14:48, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	52.8	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	52.8	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 14:43, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	52.8	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	52.8	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	52.8	107-13-1		
2-Butanone (MEK)	Not detected	790		ug/kg	52.8	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	52.8	75-71-8		
Chloromethane	Not detected	300		ug/kg	52.8	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	52.8	75-01-4		
Bromomethane	Not detected	200		ug/kg	52.8	74-83-9		
Chloroethane	Not detected	300		ug/kg	52.8	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	52.8	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	52.8	75-35-4		
Methylene chloride	Not detected	100		ug/kg	52.8	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	52.8	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	52.8	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	52.8	156-59-2		
Chloroform	Not detected	50		ug/kg	52.8	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	52.8	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	52.8	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	52.8	56-23-5		
Benzene	Not detected	50		ug/kg	52.8	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	52.8	107-06-2		
Trichloroethene	Not detected	50		ug/kg	52.8	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	52.8	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	52.8	75-27-4		
Dibromomethane	Not detected	300		ug/kg	52.8	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	52.8	10061-01-5		
Toluene	Not detected	50		ug/kg	52.8	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	52.8	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	52.8	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	52.8	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	52.8	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	52.8	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	52.8	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	52.8	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	52.8	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	52.8			
o-Xylene	Not detected	50		ug/kg	52.8	95-47-6		
Styrene	Not detected	50		ug/kg	52.8	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	52.8	98-82-8		
Bromoform	Not detected	100		ug/kg	52.8	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	52.8	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	52.8	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	52.8	103-65-1		
Bromobenzene	Not detected	100		ug/kg	52.8	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.07 (continued)

Sample Tag: AOC11-TP02-N

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 14:43, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	52.8	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	52.8	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	52.8	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	52.8	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	52.8	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	52.8	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	52.8	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	52.8	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	52.8	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	52.8	104-51-8		
1,2,4-Trichlorobenzene	Not detected	350		ug/kg	52.8	120-82-1		
1,2,3-Trichlorobenzene	Not detected	350		ug/kg	52.8	87-61-6		
Naphthalene	Not detected	300		ug/kg	52.8	91-20-3		
Acrolein	Not detected	50		ug/kg	52.8	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	52.8	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	52.8	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	52.8	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	52.8	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	52.8	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	52.8	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	52.8	76-13-1		

Other / Misc.

Method: , Run Date: 12/22/22 05:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:24, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/19/22 10:57, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.08

Sample Tag: AOC11-TP02-S

Collected Date/Time: 12/13/2022 10:33

Matrix: Soil

COC Reference: 158705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 13:00	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 12:00	TAW	
Sample wt. (g) / Methanol (ml)*	7.728/10	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/16/22 13:31	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 15:10, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,120	1.0		mg/kg	315	7429-90-5		
Antimony	Not detected	0.50		mg/kg	315	7440-36-0		
Arsenic	0.55	0.20		mg/kg	315	7440-38-2		
Barium	10.4	1.0		mg/kg	315	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	315	7440-41-7		
Boron	Not detected	2.0		mg/kg	315	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	315	7440-43-9		
Chromium	1.54	0.50		mg/kg	315	7440-47-3		
Cobalt	Not detected	0.50		mg/kg	315	7440-48-4		
Copper	2.84	0.50		mg/kg	315	7440-50-8		
Iron	871	1.0		mg/kg	315	7439-89-6		
Lead	15.9	0.30		mg/kg	315	7439-92-1		
Manganese	40.8	0.50		mg/kg	315	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	315	7439-98-7		
Nickel	0.98	0.50		mg/kg	315	7440-02-0		
Selenium	Not detected	0.40		mg/kg	315	7782-49-2		
Silver	Not detected	0.20		mg/kg	315	7440-22-4		
Strontium	10.4	0.50		mg/kg	315	7440-24-6		
Thallium	Not detected	0.20		mg/kg	315	7440-28-0		
Tin	Not detected	2.0		mg/kg	315	7440-31-5		
Titanium	19.5	1.0		mg/kg	315	7440-32-6		
Vanadium	1.98	0.50		mg/kg	315	7440-62-2		
Zinc	10.5	0.50		mg/kg	315	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43471.08 (continued)

Sample Tag: AOC11-TP02-S

Method: SW6020A, Run Date: 12/19/22 11:31, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	8,810	20		mg/kg	315	7440-70-2		
Magnesium	1,730	20		mg/kg	315	7439-95-4		
Potassium	111	20		mg/kg	315	7440-09-7		
Sodium	21.5	20		mg/kg	315	7440-23-5		

Method: SW7471B, Run Date: 12/16/22 16:13, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.956	0.050		mg/kg	66	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/19/22 19:13, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/27/22 23:22, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	430	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	450	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	430	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	440	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	480	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43471.08 (continued)

Sample Tag: AOC11-TP02-S

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/27/22 23:22, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	900	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	410	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	770	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/27/22 23:22, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Phenanthrene	Found			ug/kg	6	85-01-8		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
11H-Benzo[a]fluorene	Found			ug/kg	6	238-54-6		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/27/22 15:07, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	400		ug/kg	72	108-20-3		
TICs*	None Found			ug/kg	72			



Analytical Laboratory Report

Lab Sample ID: S43471.08 (continued)

Sample Tag: AOC11-TP02-S

Method: SW8260B - SIM, Run Date: 12/25/22 18:07, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	4		ug/kg	72	96-12-8		
1,4-Dioxane*	Not detected	70		ug/kg	72	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/27/22 15:07, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	2,000		ug/kg	72	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	300		ug/kg	72	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	72	107-13-1		
2-Butanone (MEK)	Not detected	1,100		ug/kg	72	78-93-3		
Dichlorodifluoromethane	Not detected	400		ug/kg	72	75-71-8		
Chloromethane	Not detected	400		ug/kg	72	74-87-3		
Vinyl chloride	Not detected	70		ug/kg	72	75-01-4		
Bromomethane	Not detected	300		ug/kg	72	74-83-9		
Chloroethane	Not detected	400		ug/kg	72	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	72	75-69-4		
1,1-Dichloroethene	Not detected	70		ug/kg	72	75-35-4		
Methylene chloride	Not detected	100		ug/kg	72	75-09-2		
trans-1,2-Dichloroethene	Not detected	70		ug/kg	72	156-60-5		
1,1-Dichloroethane	Not detected	70		ug/kg	72	75-34-3		
cis-1,2-Dichloroethene	Not detected	70		ug/kg	72	156-59-2		
Chloroform	Not detected	70		ug/kg	72	67-66-3		
1,1,1-Trichloroethane	Not detected	70		ug/kg	72	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	4,000		ug/kg	72	108-10-1		
Carbon tetrachloride	Not detected	70		ug/kg	72	56-23-5		
Benzene	Not detected	70		ug/kg	72	71-43-2		
1,2-Dichloroethane	Not detected	70		ug/kg	72	107-06-2		
Trichloroethene	Not detected	70		ug/kg	72	79-01-6		
1,2-Dichloropropane	Not detected	70		ug/kg	72	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	72	75-27-4		
Dibromomethane	Not detected	400		ug/kg	72	74-95-3		
cis-1,3-Dichloropropene	Not detected	70		ug/kg	72	10061-01-5		
Toluene	Not detected	70		ug/kg	72	108-88-3		
trans-1,3-Dichloropropene	Not detected	70		ug/kg	72	10061-02-6		
1,1,2-Trichloroethane	Not detected	70		ug/kg	72	79-00-5		
Tetrachloroethene	Not detected	70		ug/kg	72	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	72	124-48-1		
1,2-Dibromoethane	Not detected	30		ug/kg	72	106-93-4	M	
Chlorobenzene	Not detected	70		ug/kg	72	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	72	630-20-6		
Ethylbenzene	Not detected	70		ug/kg	72	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	72			
o-Xylene	Not detected	70		ug/kg	72	95-47-6		
Styrene	Not detected	70		ug/kg	72	100-42-5		
Isopropylbenzene	Not detected	400		ug/kg	72	98-82-8		
Bromoform	Not detected	100		ug/kg	72	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	70		ug/kg	72	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	72	96-18-4		
n-Propylbenzene	Not detected	70		ug/kg	72	103-65-1		
Bromobenzene	Not detected	100		ug/kg	72	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.08 (continued)

Sample Tag: AOC11-TP02-S

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/27/22 15:07, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	70		ug/kg	72	108-67-8		
tert-Butylbenzene	Not detected	70		ug/kg	72	98-06-6		
1,2,4-Trimethylbenzene	Not detected	70		ug/kg	72	95-63-6		
sec-Butylbenzene	Not detected	70		ug/kg	72	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	72	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	72	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	72	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	72	95-50-1		
1,2,3-Trimethylbenzene	Not detected	70		ug/kg	72	526-73-8		
n-Butylbenzene	Not detected	70		ug/kg	72	104-51-8		
1,2,4-Trichlorobenzene	Not detected	480		ug/kg	72	120-82-1		
1,2,3-Trichlorobenzene	Not detected	480		ug/kg	72	87-61-6		
Naphthalene	Not detected	400		ug/kg	72	91-20-3		
Acrolein	Not detected	70		ug/kg	72	107-02-8		
2-Chlorotoluene	Not detected	70		ug/kg	72	95-49-8		
4-Chlorotoluene	Not detected	70		ug/kg	72	106-43-4		
1,3-Dichloropropane	Not detected	70		ug/kg	72	142-28-9		
1,1-Dichloropropene	Not detected	70		ug/kg	72	563-58-6		
2,2-Dichloropropane	Not detected	70		ug/kg	72	594-20-7		
Hexachlorobutadiene	Not detected	70		ug/kg	72	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	70		ug/kg	72	76-13-1		

Other / Misc.

Method: , Run Date: 12/22/22 05:28, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:24, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/19/22 10:57, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.09

Sample Tag: AOC11-TP02-E

Collected Date/Time: 12/13/2022 10:43

Matrix: Soil

COC Reference: 158705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 13:00	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 12:00	TAW	
Sample wt. (g) / Methanol (ml)*	14.183/14	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/16/22 13:31	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 15:12, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,100	1.0		mg/kg	304	7429-90-5		
Antimony	Not detected	0.50		mg/kg	304	7440-36-0		
Arsenic	0.56	0.20		mg/kg	304	7440-38-2		
Barium	13.1	1.0		mg/kg	304	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	304	7440-41-7		
Boron	Not detected	2.0		mg/kg	304	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	304	7440-43-9		
Chromium	2.17	0.50		mg/kg	304	7440-47-3		
Cobalt	0.54	0.50		mg/kg	304	7440-48-4		
Copper	2.76	0.50		mg/kg	304	7440-50-8		
Iron	985	1.0		mg/kg	304	7439-89-6		
Lead	48.1	0.30		mg/kg	304	7439-92-1		
Manganese	50.6	0.50		mg/kg	304	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	304	7439-98-7		
Nickel	1.14	0.50		mg/kg	304	7440-02-0		
Selenium	Not detected	0.40		mg/kg	304	7782-49-2		
Silver	Not detected	0.20		mg/kg	304	7440-22-4		
Strontium	13.9	0.50		mg/kg	304	7440-24-6		
Thallium	Not detected	0.20		mg/kg	304	7440-28-0		
Tin	Not detected	2.0		mg/kg	304	7440-31-5		
Titanium	22.7	1.0		mg/kg	304	7440-32-6		
Vanadium	2.07	0.50		mg/kg	304	7440-62-2		
Zinc	14.8	0.50		mg/kg	304	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43471.09 (continued)

Sample Tag: AOC11-TP02-E

Method: SW6020A, Run Date: 12/19/22 11:32, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	13,300	20		mg/kg	304	7440-70-2		
Magnesium	2,190	20		mg/kg	304	7439-95-4		
Potassium	113	20		mg/kg	304	7440-09-7		
Sodium	24.7	20		mg/kg	304	7440-23-5		

Method: SW7471B, Run Date: 12/16/22 16:16, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.102	0.050		mg/kg	63	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/19/22 19:26, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/27/22 23:53, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	430	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	430	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	380	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	410	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	470	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43471.09 (continued)

Sample Tag: AOC11-TP02-E

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/27/22 23:53, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	880	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	400	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	770	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/27/22 23:53, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Phenanthrene	Found			ug/kg	6	85-01-8		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
11H-Benzo[a]fluorene	Found			ug/kg	6	238-54-6		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 08:43, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	54.6	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 20:18, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	54.6			



Analytical Laboratory Report

Lab Sample ID: S43471.09 (continued)

Sample Tag: AOC11-TP02-E

Method: SW8260B - SIM, Run Date: 12/22/22 15:29, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	54.6	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	54.6	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 20:18, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	54.6	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	54.6	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	54.6	107-13-1		
2-Butanone (MEK)	Not detected	820		ug/kg	54.6	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	54.6	75-71-8		
Chloromethane	Not detected	300		ug/kg	54.6	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	54.6	75-01-4		
Bromomethane	Not detected	200		ug/kg	54.6	74-83-9		
Chloroethane	Not detected	300		ug/kg	54.6	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	54.6	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	54.6	75-35-4		
Methylene chloride	Not detected	100		ug/kg	54.6	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	54.6	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	54.6	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	54.6	156-59-2		
Chloroform	Not detected	50		ug/kg	54.6	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	54.6	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	54.6	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	54.6	56-23-5		
Benzene	Not detected	50		ug/kg	54.6	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	54.6	107-06-2		
Trichloroethene	Not detected	50		ug/kg	54.6	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	54.6	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	54.6	75-27-4		
Dibromomethane	Not detected	300		ug/kg	54.6	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	54.6	10061-01-5		
Toluene	Not detected	50		ug/kg	54.6	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	54.6	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	54.6	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	54.6	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	54.6	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	54.6	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	54.6	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	54.6	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	54.6	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	54.6			
o-Xylene	Not detected	50		ug/kg	54.6	95-47-6		
Styrene	Not detected	50		ug/kg	54.6	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	54.6	98-82-8		
Bromoform	Not detected	100		ug/kg	54.6	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	54.6	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	54.6	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	54.6	103-65-1		
Bromobenzene	Not detected	100		ug/kg	54.6	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.09 (continued)

Sample Tag: AOC11-TP02-E

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 20:18, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	54.6	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	54.6	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	54.6	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	54.6	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	54.6	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	54.6	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	54.6	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	54.6	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	54.6	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	54.6	104-51-8		
1,2,4-Trichlorobenzene	Not detected	360		ug/kg	54.6	120-82-1		
1,2,3-Trichlorobenzene	Not detected	360		ug/kg	54.6	87-61-6		
Naphthalene	Not detected	300		ug/kg	54.6	91-20-3		
Acrolein	Not detected	50		ug/kg	54.6	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	54.6	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	54.6	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	54.6	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	54.6	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	54.6	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	54.6	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	54.6	76-13-1		

Other / Misc.

Method: , Run Date: 12/22/22 05:49, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:24, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/19/22 10:57, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.10

Sample Tag: AOC11-TP02-W

Collected Date/Time: 12/13/2022 10:43

Matrix: Soil

COC Reference: 158705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 13:00	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 12:00	TAW	
Sample wt. (g) / Methanol (ml)*	12.706/12	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/16/22 13:31	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	93	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 15:14, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,930	1.0		mg/kg	304	7429-90-5		
Antimony	Not detected	0.50		mg/kg	304	7440-36-0		
Arsenic	0.71	0.20		mg/kg	304	7440-38-2		
Barium	16.3	1.0		mg/kg	304	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	304	7440-41-7		
Boron	Not detected	2.0		mg/kg	304	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	304	7440-43-9		
Chromium	3.72	0.50		mg/kg	304	7440-47-3		
Cobalt	0.70	0.50		mg/kg	304	7440-48-4		
Copper	4.41	0.50		mg/kg	304	7440-50-8		
Iron	1,390	1.0		mg/kg	304	7439-89-6		
Lead	43.9	0.30		mg/kg	304	7439-92-1		
Manganese	64.4	0.50		mg/kg	304	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	304	7439-98-7		
Nickel	2.23	0.50		mg/kg	304	7440-02-0		
Selenium	Not detected	0.40		mg/kg	304	7782-49-2		
Silver	Not detected	0.20		mg/kg	304	7440-22-4		
Strontium	29.3	0.50		mg/kg	304	7440-24-6		
Thallium	Not detected	0.20		mg/kg	304	7440-28-0		
Tin	Not detected	2.0		mg/kg	304	7440-31-5		
Titanium	33.4	1.0		mg/kg	304	7440-32-6		
Vanadium	3.08	0.50		mg/kg	304	7440-62-2		
Zinc	18.1	0.50		mg/kg	304	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43471.10 (continued)

Sample Tag: AOC11-TP02-W

Method: SW6020A, Run Date: 12/19/22 11:33, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	12,200	20		mg/kg	304	7440-70-2		
Magnesium	1,400	20		mg/kg	304	7439-95-4		
Potassium	161	20		mg/kg	304	7440-09-7		
Sodium	23.1	20		mg/kg	304	7440-23-5		

Method: SW7471B, Run Date: 12/16/22 16:19, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.120	0.050		mg/kg	65	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/19/22 19:38, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 00:23, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	370	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	1,620	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	1,940	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	1,500	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	450	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	1,460	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	2,000	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43471.10 (continued)

Sample Tag: AOC11-TP02-W

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 00:23, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	3,800	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	480	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	2,460	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	3,200	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/28/22 00:23, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Phenanthrene	Found			ug/kg	6	85-01-8		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
11H-Benzo[a]fluorene	Found			ug/kg	6	238-54-6		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 11:56, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	54.5	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 20:42, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	54.5			



Analytical Laboratory Report

Lab Sample ID: S43471.10 (continued)

Sample Tag: AOC11-TP02-W

Method: SW8260B - SIM, Run Date: 12/25/22 18:27, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	54.5	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	54.5	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 20:42, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	54.5	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	54.5	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	54.5	107-13-1		
2-Butanone (MEK)	Not detected	820		ug/kg	54.5	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	54.5	75-71-8		
Chloromethane	Not detected	300		ug/kg	54.5	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	54.5	75-01-4		
Bromomethane	Not detected	200		ug/kg	54.5	74-83-9		
Chloroethane	Not detected	300		ug/kg	54.5	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	54.5	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	54.5	75-35-4		
Methylene chloride	Not detected	100		ug/kg	54.5	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	54.5	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	54.5	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	54.5	156-59-2		
Chloroform	Not detected	50		ug/kg	54.5	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	54.5	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	54.5	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	54.5	56-23-5		
Benzene	Not detected	50		ug/kg	54.5	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	54.5	107-06-2		
Trichloroethene	Not detected	50		ug/kg	54.5	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	54.5	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	54.5	75-27-4		
Dibromomethane	Not detected	300		ug/kg	54.5	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	54.5	10061-01-5		
Toluene	Not detected	50		ug/kg	54.5	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	54.5	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	54.5	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	54.5	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	54.5	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	54.5	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	54.5	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	54.5	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	54.5	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	54.5			
o-Xylene	Not detected	50		ug/kg	54.5	95-47-6		
Styrene	Not detected	50		ug/kg	54.5	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	54.5	98-82-8		
Bromoform	Not detected	100		ug/kg	54.5	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	54.5	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	54.5	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	54.5	103-65-1		
Bromobenzene	Not detected	100		ug/kg	54.5	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.10 (continued)

Sample Tag: AOC11-TP02-W

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 20:42, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	54.5	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	54.5	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	54.5	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	54.5	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	54.5	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	54.5	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	54.5	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	54.5	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	54.5	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	54.5	104-51-8		
1,2,4-Trichlorobenzene	Not detected	360		ug/kg	54.5	120-82-1		
1,2,3-Trichlorobenzene	Not detected	360		ug/kg	54.5	87-61-6		
Naphthalene	Not detected	300		ug/kg	54.5	91-20-3		
Acrolein	Not detected	50		ug/kg	54.5	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	54.5	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	54.5	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	54.5	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	54.5	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	54.5	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	54.5	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	54.5	76-13-1		

Other / Misc.

Method: , Run Date: 12/22/22 06:10, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:24, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/19/22 10:57, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.11

Sample Tag: AOC11-TP02-B

Collected Date/Time: 12/13/2022 11:18

Matrix: Soil

COC Reference: 158705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 13:00	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	13.911/13	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/16/22 13:31	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 15:16, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	992	1.0		mg/kg	313	7429-90-5		
Antimony	Not detected	0.50		mg/kg	313	7440-36-0		
Arsenic	0.51	0.20		mg/kg	313	7440-38-2		
Barium	8.93	1.0		mg/kg	313	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	313	7440-41-7		
Boron	Not detected	2.0		mg/kg	313	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	313	7440-43-9		
Chromium	1.47	0.50		mg/kg	313	7440-47-3		
Cobalt	0.58	0.50		mg/kg	313	7440-48-4		
Copper	2.61	0.50		mg/kg	313	7440-50-8		
Iron	862	1.0		mg/kg	313	7439-89-6		
Lead	10.2	0.30		mg/kg	313	7439-92-1		
Manganese	38.1	0.50		mg/kg	313	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	313	7439-98-7		
Nickel	1.22	0.50		mg/kg	313	7440-02-0		
Selenium	Not detected	0.40		mg/kg	313	7782-49-2		
Silver	Not detected	0.20		mg/kg	313	7440-22-4		
Strontium	13.1	0.50		mg/kg	313	7440-24-6		
Thallium	Not detected	0.20		mg/kg	313	7440-28-0		
Tin	Not detected	2.0		mg/kg	313	7440-31-5		
Titanium	17.3	1.0		mg/kg	313	7440-32-6		
Vanadium	1.72	0.50		mg/kg	313	7440-62-2		
Zinc	10.1	0.50		mg/kg	313	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43471.11 (continued)

Sample Tag: AOC11-TP02-B

Method: SW6020A, Run Date: 12/19/22 11:34, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	12,400	20		mg/kg	313	7440-70-2		
Magnesium	2,380	20		mg/kg	313	7439-95-4		
Potassium	118	20		mg/kg	313	7440-09-7		
Sodium	Not detected	20		mg/kg	313	7440-23-5		

Method: SW7471B, Run Date: 12/16/22 16:29, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.110	0.050		mg/kg	56	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/20/22 14:22, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 00:54, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	360	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	340	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	340	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	360	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	380	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43471.11 (continued)

Sample Tag: AOC11-TP02-B

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 00:54, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	770	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	Not detected	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	680	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/28/22 00:54, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Phenanthrene	Found			ug/kg	6	85-01-8		
11H-Benzo[a]fluorene	Found			ug/kg	6	238-54-6		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 12:20, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	52.9	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 19:54, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	52.9			



Analytical Laboratory Report

Lab Sample ID: S43471.11 (continued)

Sample Tag: AOC11-TP02-B

Method: SW8260B - SIM, Run Date: 12/22/22 17:08, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	52.9	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	52.9	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 19:54, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	52.9	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	52.9	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	52.9	107-13-1		
2-Butanone (MEK)	Not detected	790		ug/kg	52.9	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	52.9	75-71-8		
Chloromethane	Not detected	300		ug/kg	52.9	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	52.9	75-01-4		
Bromomethane	Not detected	200		ug/kg	52.9	74-83-9		
Chloroethane	Not detected	300		ug/kg	52.9	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	52.9	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	52.9	75-35-4		
Methylene chloride	Not detected	100		ug/kg	52.9	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	52.9	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	52.9	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	52.9	156-59-2		
Chloroform	Not detected	50		ug/kg	52.9	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	52.9	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	52.9	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	52.9	56-23-5		
Benzene	Not detected	50		ug/kg	52.9	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	52.9	107-06-2		
Trichloroethene	Not detected	50		ug/kg	52.9	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	52.9	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	52.9	75-27-4		
Dibromomethane	Not detected	300		ug/kg	52.9	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	52.9	10061-01-5		
Toluene	Not detected	50		ug/kg	52.9	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	52.9	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	52.9	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	52.9	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	52.9	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	52.9	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	52.9	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	52.9	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	52.9	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	52.9			
o-Xylene	Not detected	50		ug/kg	52.9	95-47-6		
Styrene	Not detected	50		ug/kg	52.9	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	52.9	98-82-8		
Bromoform	Not detected	100		ug/kg	52.9	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	52.9	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	52.9	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	52.9	103-65-1		
Bromobenzene	Not detected	100		ug/kg	52.9	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.11 (continued)

Sample Tag: AOC11-TP02-B

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 19:54, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	52.9	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	52.9	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	52.9	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	52.9	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	52.9	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	52.9	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	52.9	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	52.9	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	52.9	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	52.9	104-51-8		
1,2,4-Trichlorobenzene	Not detected	350		ug/kg	52.9	120-82-1		
1,2,3-Trichlorobenzene	Not detected	350		ug/kg	52.9	87-61-6		
Naphthalene	Not detected	300		ug/kg	52.9	91-20-3		
Acrolein	Not detected	50		ug/kg	52.9	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	52.9	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	52.9	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	52.9	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	52.9	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	52.9	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	52.9	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	52.9	76-13-1		

Other / Misc.

Method: , Run Date: 12/23/22 21:47, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:24, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/19/22 10:57, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.12

Sample Tag: DUP-04S

Collected Date/Time: 12/13/2022 00:01

Matrix: Soil

COC Reference: 158705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 13:00	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	12.278/12	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/16/22 13:31	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 15:18, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,180	1.0		mg/kg	306	7429-90-5		
Antimony	Not detected	0.50		mg/kg	306	7440-36-0		
Arsenic	0.66	0.20		mg/kg	306	7440-38-2		
Barium	11.3	1.0		mg/kg	306	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	306	7440-41-7		
Boron	Not detected	2.0		mg/kg	306	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	306	7440-43-9		
Chromium	2.10	0.50		mg/kg	306	7440-47-3		
Cobalt	0.76	0.50		mg/kg	306	7440-48-4		
Copper	3.01	0.50		mg/kg	306	7440-50-8		
Iron	1,490	1.0		mg/kg	306	7439-89-6		
Lead	11.2	0.30		mg/kg	306	7439-92-1		
Manganese	64.8	0.50		mg/kg	306	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	306	7439-98-7		
Nickel	1.74	0.50		mg/kg	306	7440-02-0		
Selenium	Not detected	0.40		mg/kg	306	7782-49-2		
Silver	Not detected	0.20		mg/kg	306	7440-22-4		
Strontium	19.0	0.50		mg/kg	306	7440-24-6		
Thallium	Not detected	0.20		mg/kg	306	7440-28-0		
Tin	Not detected	2.0		mg/kg	306	7440-31-5		
Titanium	29.2	1.0		mg/kg	306	7440-32-6		
Vanadium	2.42	0.50		mg/kg	306	7440-62-2		
Zinc	10.8	0.50		mg/kg	306	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43471.12 (continued)

Sample Tag: DUP-04S

Method: SW6020A, Run Date: 12/19/22 11:36, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	18,000	20		mg/kg	306	7440-70-2		
Magnesium	3,530	20		mg/kg	306	7439-95-4		
Potassium	100	20		mg/kg	306	7440-09-7		
Sodium	24.3	20		mg/kg	306	7440-23-5		

Method: SW7471B, Run Date: 12/16/22 16:32, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	61	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/20/22 14:34, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 11:13, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	Not detected	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43471.12 (continued)

Sample Tag: DUP-04S

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 11:13, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	510	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	Not detected	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	430	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/28/22 11:13, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Phenanthrene	Found			ug/kg	6	85-01-8		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Indeno(1,2,3-cd)pyrene	Found			ug/kg	6	193-39-5		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 12:45, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	54.1	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 21:06, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	54.1			



Analytical Laboratory Report

Lab Sample ID: S43471.12 (continued)

Sample Tag: DUP-04S

Method: SW8260B - SIM, Run Date: 12/22/22 17:29, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	54.1	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	54.1	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 21:06, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	54.1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	54.1	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	54.1	107-13-1		
2-Butanone (MEK)	Not detected	810		ug/kg	54.1	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	54.1	75-71-8		
Chloromethane	Not detected	300		ug/kg	54.1	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	54.1	75-01-4		
Bromomethane	Not detected	200		ug/kg	54.1	74-83-9		
Chloroethane	Not detected	300		ug/kg	54.1	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	54.1	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	54.1	75-35-4		
Methylene chloride	Not detected	100		ug/kg	54.1	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	54.1	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	54.1	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	54.1	156-59-2		
Chloroform	Not detected	50		ug/kg	54.1	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	54.1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	54.1	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	54.1	56-23-5		
Benzene	Not detected	50		ug/kg	54.1	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	54.1	107-06-2		
Trichloroethene	Not detected	50		ug/kg	54.1	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	54.1	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	54.1	75-27-4		
Dibromomethane	Not detected	300		ug/kg	54.1	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	54.1	10061-01-5		
Toluene	Not detected	50		ug/kg	54.1	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	54.1	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	54.1	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	54.1	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	54.1	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	54.1	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	54.1	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	54.1	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	54.1	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	54.1			
o-Xylene	Not detected	50		ug/kg	54.1	95-47-6		
Styrene	Not detected	50		ug/kg	54.1	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	54.1	98-82-8		
Bromoform	Not detected	100		ug/kg	54.1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	54.1	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	54.1	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	54.1	103-65-1		
Bromobenzene	Not detected	100		ug/kg	54.1	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.12 (continued)

Sample Tag: DUP-04S

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 21:06, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	54.1	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	54.1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	54.1	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	54.1	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	54.1	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	54.1	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	54.1	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	54.1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	54.1	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	54.1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	360		ug/kg	54.1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	360		ug/kg	54.1	87-61-6		
Naphthalene	Not detected	300		ug/kg	54.1	91-20-3		
Acrolein	Not detected	50		ug/kg	54.1	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	54.1	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	54.1	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	54.1	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	54.1	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	54.1	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	54.1	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	54.1	76-13-1		

Other / Misc.

Method: , Run Date: 12/23/22 22:07, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:24, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/19/22 10:57, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.13

Sample Tag: AOC11-TP03-N

Collected Date/Time: 12/13/2022 12:30

Matrix: Soil

COC Reference: 158706

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 13:00	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	14.409/14	SW5035A	12/15/22 11:46	BDO	
Mercury Digestion	Completed	SW7471B	12/16/22 13:31	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 15:20, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,290	1.0		mg/kg	306	7429-90-5		
Antimony	Not detected	0.50		mg/kg	306	7440-36-0		
Arsenic	0.59	0.20		mg/kg	306	7440-38-2		
Barium	11.1	1.0		mg/kg	306	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	306	7440-41-7		
Boron	Not detected	2.0		mg/kg	306	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	306	7440-43-9		
Chromium	2.33	0.50		mg/kg	306	7440-47-3		
Cobalt	0.66	0.50		mg/kg	306	7440-48-4		
Copper	2.12	0.50		mg/kg	306	7440-50-8		
Iron	1,270	1.0		mg/kg	306	7439-89-6		
Lead	7.40	0.30		mg/kg	306	7439-92-1		
Manganese	69.4	0.50		mg/kg	306	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	306	7439-98-7		
Nickel	1.38	0.50		mg/kg	306	7440-02-0		
Selenium	Not detected	0.40		mg/kg	306	7782-49-2		
Silver	Not detected	0.20		mg/kg	306	7440-22-4		
Strontium	11.5	0.50		mg/kg	306	7440-24-6		
Thallium	Not detected	0.20		mg/kg	306	7440-28-0		
Tin	Not detected	2.0		mg/kg	306	7440-31-5		
Titanium	26.6	1.0		mg/kg	306	7440-32-6		
Vanadium	2.38	0.50		mg/kg	306	7440-62-2		
Zinc	9.63	0.50		mg/kg	306	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43471.13 (continued)

Sample Tag: AOC11-TP03-N

Method: SW6020A, Run Date: 12/19/22 11:37, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	12,900	20		mg/kg	306	7440-70-2		
Magnesium	1,690	20		mg/kg	306	7439-95-4		
Potassium	92.6	20		mg/kg	306	7440-09-7		
Sodium	Not detected	20		mg/kg	306	7440-23-5		

Method: SW7471B, Run Date: 12/16/22 16:36, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	66	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/20/22 14:46, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 11:44, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	360	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	340	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	370	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43471.13 (continued)

Sample Tag: AOC11-TP03-N

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 11:44, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	740	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	410	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	640	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/28/22 11:44, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Phenanthrene	Found			ug/kg	6	85-01-8		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Indeno(1,2,3-cd)pyrene	Found			ug/kg	6	193-39-5		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 13:09, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	54.9	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 21:30, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	54.9			



Analytical Laboratory Report

Lab Sample ID: S43471.13 (continued)

Sample Tag: AOC11-TP03-N

Method: SW8260B - SIM, Run Date: 12/22/22 17:49, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	54.9	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	54.9	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 21:30, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	54.9	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	54.9	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	54.9	107-13-1		
2-Butanone (MEK)	Not detected	820		ug/kg	54.9	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	54.9	75-71-8		
Chloromethane	Not detected	300		ug/kg	54.9	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	54.9	75-01-4		
Bromomethane	Not detected	200		ug/kg	54.9	74-83-9		
Chloroethane	Not detected	300		ug/kg	54.9	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	54.9	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	54.9	75-35-4		
Methylene chloride	Not detected	100		ug/kg	54.9	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	54.9	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	54.9	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	54.9	156-59-2		
Chloroform	Not detected	50		ug/kg	54.9	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	54.9	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	54.9	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	54.9	56-23-5		
Benzene	Not detected	50		ug/kg	54.9	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	54.9	107-06-2		
Trichloroethene	Not detected	50		ug/kg	54.9	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	54.9	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	54.9	75-27-4		
Dibromomethane	Not detected	300		ug/kg	54.9	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	54.9	10061-01-5		
Toluene	Not detected	50		ug/kg	54.9	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	54.9	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	54.9	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	54.9	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	54.9	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	54.9	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	54.9	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	54.9	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	54.9	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	54.9			
o-Xylene	Not detected	50		ug/kg	54.9	95-47-6		
Styrene	Not detected	50		ug/kg	54.9	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	54.9	98-82-8		
Bromoform	Not detected	100		ug/kg	54.9	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	54.9	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	54.9	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	54.9	103-65-1		
Bromobenzene	Not detected	100		ug/kg	54.9	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.13 (continued)

Sample Tag: AOC11-TP03-N

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 21:30, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	54.9	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	54.9	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	54.9	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	54.9	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	54.9	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	54.9	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	54.9	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	54.9	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	54.9	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	54.9	104-51-8		
1,2,4-Trichlorobenzene	Not detected	360		ug/kg	54.9	120-82-1		
1,2,3-Trichlorobenzene	Not detected	360		ug/kg	54.9	87-61-6		
Naphthalene	Not detected	300		ug/kg	54.9	91-20-3		
Acrolein	Not detected	50		ug/kg	54.9	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	54.9	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	54.9	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	54.9	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	54.9	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	54.9	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	54.9	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	54.9	76-13-1		

Other / Misc.

Method: , Run Date: 12/23/22 22:28, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:24, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/19/22 10:57, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.14

Sample Tag: AOC11-TP03-S

Collected Date/Time: 12/13/2022 12:45

Matrix: Soil

COC Reference: 158706

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 13:00	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	14.822/14	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/16/22 13:31	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 15:23, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	807	1.0		mg/kg	304	7429-90-5		
Antimony	Not detected	0.50		mg/kg	304	7440-36-0		
Arsenic	0.71	0.20		mg/kg	304	7440-38-2		
Barium	8.23	1.0		mg/kg	304	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	304	7440-41-7		
Boron	Not detected	2.0		mg/kg	304	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	304	7440-43-9		
Chromium	1.44	0.50		mg/kg	304	7440-47-3		
Cobalt	0.80	0.50		mg/kg	304	7440-48-4		
Copper	1.77	0.50		mg/kg	304	7440-50-8		
Iron	1,150	1.0		mg/kg	304	7439-89-6		
Lead	4.11	0.30		mg/kg	304	7439-92-1		
Manganese	92.8	0.50		mg/kg	304	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	304	7439-98-7		
Nickel	1.58	0.50		mg/kg	304	7440-02-0		
Selenium	Not detected	0.40		mg/kg	304	7782-49-2		
Silver	Not detected	0.20		mg/kg	304	7440-22-4		
Strontium	33.2	0.50		mg/kg	304	7440-24-6		
Thallium	Not detected	0.20		mg/kg	304	7440-28-0		
Tin	Not detected	2.0		mg/kg	304	7440-31-5		
Titanium	18.4	1.0		mg/kg	304	7440-32-6		
Vanadium	1.80	0.50		mg/kg	304	7440-62-2		
Zinc	6.73	0.50		mg/kg	304	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43471.14 (continued)

Sample Tag: AOC11-TP03-S

Method: SW6020A, Run Date: 12/19/22 11:38, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	33,700	20		mg/kg	304	7440-70-2		
Magnesium	5,910	20		mg/kg	304	7439-95-4		
Potassium	103	20		mg/kg	304	7440-09-7		
Sodium	28.9	20		mg/kg	304	7440-23-5		

Method: SW7471B, Run Date: 12/16/22 16:39, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	57	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/20/22 14:58, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 12:14, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	Not detected	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43471.14 (continued)

Sample Tag: AOC11-TP03-S

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 12:14, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	Not detected	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	Not detected	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	Not detected	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/28/22 12:14, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Indeno(1,2,3-cd)pyrene	Found			ug/kg	6	193-39-5		
Benzo(ghi)perylene	Found			ug/kg	6	191-24-2		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 13:33, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	52.3	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 21:55, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	52.3			



Analytical Laboratory Report

Lab Sample ID: S43471.14 (continued)

Sample Tag: AOC11-TP03-S

Method: SW8260B - SIM, Run Date: 12/22/22 18:11, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	52.3	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	52.3	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 21:55, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	52.3	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	52.3	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	52.3	107-13-1		
2-Butanone (MEK)	Not detected	780		ug/kg	52.3	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	52.3	75-71-8		
Chloromethane	Not detected	300		ug/kg	52.3	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	52.3	75-01-4		
Bromomethane	Not detected	200		ug/kg	52.3	74-83-9		
Chloroethane	Not detected	300		ug/kg	52.3	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	52.3	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	52.3	75-35-4		
Methylene chloride	Not detected	100		ug/kg	52.3	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	52.3	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	52.3	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	52.3	156-59-2		
Chloroform	Not detected	50		ug/kg	52.3	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	52.3	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	52.3	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	52.3	56-23-5		
Benzene	Not detected	50		ug/kg	52.3	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	52.3	107-06-2		
Trichloroethene	Not detected	50		ug/kg	52.3	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	52.3	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	52.3	75-27-4		
Dibromomethane	Not detected	300		ug/kg	52.3	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	52.3	10061-01-5		
Toluene	Not detected	50		ug/kg	52.3	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	52.3	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	52.3	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	52.3	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	52.3	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	52.3	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	52.3	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	52.3	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	52.3	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	52.3			
o-Xylene	Not detected	50		ug/kg	52.3	95-47-6		
Styrene	Not detected	50		ug/kg	52.3	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	52.3	98-82-8		
Bromoform	Not detected	100		ug/kg	52.3	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	52.3	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	52.3	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	52.3	103-65-1		
Bromobenzene	Not detected	100		ug/kg	52.3	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.14 (continued)

Sample Tag: AOC11-TP03-S

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 21:55, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	52.3	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	52.3	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	52.3	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	52.3	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	52.3	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	52.3	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	52.3	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	52.3	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	52.3	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	52.3	104-51-8		
1,2,4-Trichlorobenzene	Not detected	350		ug/kg	52.3	120-82-1		
1,2,3-Trichlorobenzene	Not detected	350		ug/kg	52.3	87-61-6		
Naphthalene	Not detected	300		ug/kg	52.3	91-20-3		
Acrolein	Not detected	50		ug/kg	52.3	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	52.3	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	52.3	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	52.3	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	52.3	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	52.3	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	52.3	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	52.3	76-13-1		

Other / Misc.

Method: , Run Date: 12/23/22 22:49, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:24, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/19/22 10:57, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.15

Sample Tag: AOC11-TP03-E

Collected Date/Time: 12/13/2022 13:00

Matrix: Soil

COC Reference: 158706

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 13:00	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	14.427/14	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/16/22 13:31	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 15:25, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,540	1.0		mg/kg	313	7429-90-5		
Antimony	Not detected	0.50		mg/kg	313	7440-36-0		
Arsenic	0.57	0.20		mg/kg	313	7440-38-2		
Barium	12.1	1.0		mg/kg	313	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	313	7440-41-7		
Boron	Not detected	2.0		mg/kg	313	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	313	7440-43-9		
Chromium	2.33	0.50		mg/kg	313	7440-47-3		
Cobalt	0.80	0.50		mg/kg	313	7440-48-4		
Copper	2.52	0.50		mg/kg	313	7440-50-8		
Iron	1,420	1.0		mg/kg	313	7439-89-6		
Lead	14.2	0.30		mg/kg	313	7439-92-1		
Manganese	55.2	0.50		mg/kg	313	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	313	7439-98-7		
Nickel	1.32	0.50		mg/kg	313	7440-02-0		
Selenium	Not detected	0.40		mg/kg	313	7782-49-2		
Silver	Not detected	0.20		mg/kg	313	7440-22-4		
Strontium	12.2	0.50		mg/kg	313	7440-24-6		
Thallium	Not detected	0.20		mg/kg	313	7440-28-0		
Tin	Not detected	2.0		mg/kg	313	7440-31-5		
Titanium	30.0	1.0		mg/kg	313	7440-32-6		
Vanadium	3.16	0.50		mg/kg	313	7440-62-2		
Zinc	10.5	0.50		mg/kg	313	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43471.15 (continued)

Sample Tag: AOC11-TP03-E

Method: SW6020A, Run Date: 12/19/22 11:39, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	10,500	20		mg/kg	313	7440-70-2		
Magnesium	2,010	20		mg/kg	313	7439-95-4		
Potassium	97.3	20		mg/kg	313	7440-09-7		
Sodium	Not detected	20		mg/kg	313	7440-23-5		

Method: SW7471B, Run Date: 12/16/22 16:49, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.102	0.050		mg/kg	55	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/20/22 15:10, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 11:07, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	1,300	1,000		ug/kg	50	83-32-9	Y	
Acenaphthylene	Not detected	1,000		ug/kg	50	208-96-8	Y	
Anthracene	5,000	1,000		ug/kg	50	120-12-7	Y	
Benzo(a)anthracene	13,400	1,000		ug/kg	50	56-55-3	Y	
Benzo(b)fluoranthene	10,500	1,000		ug/kg	50	205-99-2	Y	
Benzo(k)fluoranthene	10,300	1,000		ug/kg	50	207-08-9	Y	
Benzo(ghi)perylene	5,900	1,000		ug/kg	50	191-24-2	Y	
Benzo(a)pyrene	11,800	1,000		ug/kg	50	50-32-8	Y	
bis(2-Chloroethoxy)methane	Not detected	1,000		ug/kg	50	111-91-1	Y	
bis(2-Chloroethyl)ether	Not detected	1,000		ug/kg	50	111-44-4	Y	
bis(2-Chloroisopropyl)ether*	Not detected	1,000		ug/kg	50	108-60-1	Y	
bis(2-Ethylhexyl)phthalate	Not detected	1,000		ug/kg	50	117-81-7	Y	
4-Bromophenyl phenyl ether	Not detected	1,000		ug/kg	50	101-55-3	Y	
Butyl benzyl phthalate	Not detected	1,000		ug/kg	50	85-68-7	Y	
2-Chloronaphthalene	Not detected	1,000		ug/kg	50	91-58-7	Y	
4-Chloro-3-methylphenol	Not detected	1,000		ug/kg	50	59-50-7	Y	
2-Chlorophenol	Not detected	1,000		ug/kg	50	95-57-8	Y	
4-Chlorophenyl phenyl ether	Not detected	1,000		ug/kg	50	7005-72-3	Y	
Chrysene	13,500	1,000		ug/kg	50	218-01-9	Y	
Dibenzo(ah)anthracene	2,000	1,000		ug/kg	50	53-70-3	Y	
di-n-Butyl phthalate*	Not detected	1,000		ug/kg	50	84-74-2	Y	
3,3'-Dichlorobenzidine	Not detected	1,000		ug/kg	50	91-94-1	Y	
2,4-Dichlorophenol	Not detected	1,000		ug/kg	50	120-83-2	Y	
Diethyl phthalate	Not detected	1,000		ug/kg	50	84-66-2	Y	
2,4-Dimethylphenol	Not detected	1,000		ug/kg	50	105-67-9	Y	
Dimethyl phthalate	Not detected	1,000		ug/kg	50	131-11-3	Y	

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S43471.15 (continued)

Sample Tag: AOC11-TP03-E

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 11:07, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
4,6-Dinitro-2-methylphenol	Not detected	1,000		ug/kg	50	534-52-1	Y	
2,4-Dinitrophenol	Not detected	1,000		ug/kg	50	51-28-5	Y	
2,4-Dinitrotoluene	Not detected	1,000		ug/kg	50	121-14-2	Y	
2,6-Dinitrotoluene	Not detected	1,000		ug/kg	50	606-20-2	Y	
di-n-Octyl phthalate	Not detected	1,000		ug/kg	50	117-84-0	Y	
Fluoranthene	30,900	1,000		ug/kg	50	206-44-0	Y	
Fluorene	1,400	1,000		ug/kg	50	86-73-7	Y	
Hexachlorobenzene	Not detected	1,000		ug/kg	50	118-74-1	Y	
Hexachlorobutadiene	Not detected	1,000		ug/kg	50	87-68-3	Y	
Hexachlorocyclopentadiene	Not detected	1,000		ug/kg	50	77-47-4	Y	
Hexachloroethane	Not detected	1,000		ug/kg	50	67-72-1	Y	
Indeno(1,2,3-cd)pyrene	5,600	1,000		ug/kg	50	193-39-5	Y	
Isophorone	Not detected	1,000		ug/kg	50	78-59-1	Y	
Naphthalene	Not detected	1,000		ug/kg	50	91-20-3	Y	
Nitrobenzene	Not detected	1,000		ug/kg	50	98-95-3	Y	
2-Nitrophenol	Not detected	1,000		ug/kg	50	88-75-5	Y	
4-Nitrophenol	Not detected	1,000		ug/kg	50	100-02-7	Y	
N-Nitrosodiphenylamine	Not detected	1,000		ug/kg	50	86-30-6	Y	
N-Nitrosodi-n-propylamine	Not detected	1,000		ug/kg	50	621-64-7	Y	
Pentachlorophenol	Not detected	1,000		ug/kg	50	87-86-5	Y	
Phenanthrene	14,700	1,000		ug/kg	50	85-01-8	Y	
Phenol	Not detected	1,000		ug/kg	50	108-95-2	Y	
Pyrene	25,300	1,000		ug/kg	50	129-00-0	Y	
1,2,4-Trichlorobenzene	Not detected	1,000		ug/kg	50	120-82-1	Y	
2,4,6-Trichlorophenol	Not detected	1,000		ug/kg	50	88-06-2	Y	
Benzidine	Not detected	1,000		ug/kg	50	92-87-5	Y	
N-Nitrosodimethylamine	Not detected	1,000		ug/kg	50	62-75-9	Y	

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/28/22 12:45, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Phenanthrene	Found			ug/kg	6	85-01-8		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
11H-Benzo[a]fluorene	Found			ug/kg	6	238-54-6		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 13:57, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	54.8	108-20-3		

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S43471.15 (continued)

Sample Tag: AOC11-TP03-E

Method: SW5035A/8260C, Run Date: 12/18/22 22:19, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	54.8			

Method: SW8260B - SIM, Run Date: 12/22/22 18:31, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	54.8	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	54.8	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 22:19, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	54.8	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	54.8	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	54.8	107-13-1		
2-Butanone (MEK)	Not detected	820		ug/kg	54.8	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	54.8	75-71-8		
Chloromethane	Not detected	300		ug/kg	54.8	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	54.8	75-01-4		
Bromomethane	Not detected	200		ug/kg	54.8	74-83-9		
Chloroethane	Not detected	300		ug/kg	54.8	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	54.8	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	54.8	75-35-4		
Methylene chloride	Not detected	100		ug/kg	54.8	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	54.8	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	54.8	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	54.8	156-59-2		
Chloroform	Not detected	50		ug/kg	54.8	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	54.8	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	54.8	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	54.8	56-23-5		
Benzene	Not detected	50		ug/kg	54.8	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	54.8	107-06-2		
Trichloroethene	Not detected	50		ug/kg	54.8	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	54.8	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	54.8	75-27-4		
Dibromomethane	Not detected	300		ug/kg	54.8	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	54.8	10061-01-5		
Toluene	Not detected	50		ug/kg	54.8	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	54.8	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	54.8	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	54.8	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	54.8	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	54.8	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	54.8	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	54.8	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	54.8	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	54.8			
o-Xylene	Not detected	50		ug/kg	54.8	95-47-6		
Styrene	Not detected	50		ug/kg	54.8	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	54.8	98-82-8		
Bromoform	Not detected	100		ug/kg	54.8	75-25-2		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.15 (continued)

Sample Tag: AOC11-TP03-E

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 22:19, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	54.8	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	54.8	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	54.8	103-65-1		
Bromobenzene	Not detected	100		ug/kg	54.8	108-86-1		
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	54.8	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	54.8	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	54.8	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	54.8	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	54.8	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	54.8	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	54.8	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	54.8	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	54.8	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	54.8	104-51-8		
1,2,4-Trichlorobenzene	Not detected	360		ug/kg	54.8	120-82-1		
1,2,3-Trichlorobenzene	Not detected	360		ug/kg	54.8	87-61-6		
Naphthalene	Not detected	300		ug/kg	54.8	91-20-3		
Acrolein	Not detected	50		ug/kg	54.8	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	54.8	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	54.8	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	54.8	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	54.8	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	54.8	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	54.8	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	54.8	76-13-1		

Other / Misc.

Method: , Run Date: 12/23/22 23:09, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:24, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/19/22 10:57, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.16

Sample Tag: AOC11-TP03-W

Collected Date/Time: 12/13/2022 13:00

Matrix: Soil

COC Reference: 158706

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 13:00	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	14.607/14	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/16/22 13:31	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	93	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 15:52, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	829	1.0		mg/kg	314	7429-90-5		
Antimony	Not detected	0.50		mg/kg	314	7440-36-0		
Arsenic	0.51	0.20		mg/kg	314	7440-38-2		
Barium	8.44	1.0		mg/kg	314	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	314	7440-41-7		
Boron	Not detected	2.0		mg/kg	314	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	314	7440-43-9		
Chromium	1.56	0.50		mg/kg	314	7440-47-3		
Cobalt	0.58	0.50		mg/kg	314	7440-48-4		
Copper	1.79	0.50		mg/kg	314	7440-50-8		
Iron	915	1.0		mg/kg	314	7439-89-6		
Lead	6.37	0.30		mg/kg	314	7439-92-1		
Manganese	46.2	0.50		mg/kg	314	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	314	7439-98-7		
Nickel	1.19	0.50		mg/kg	314	7440-02-0		
Selenium	Not detected	0.40		mg/kg	314	7782-49-2		
Silver	Not detected	0.20		mg/kg	314	7440-22-4		
Strontium	13.8	0.50		mg/kg	314	7440-24-6		
Thallium	Not detected	0.20		mg/kg	314	7440-28-0		
Tin	Not detected	2.0		mg/kg	314	7440-31-5		
Titanium	17.1	1.0		mg/kg	314	7440-32-6		
Vanadium	1.81	0.50		mg/kg	314	7440-62-2		
Zinc	5.88	0.50		mg/kg	314	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43471.16 (continued)

Sample Tag: AOC11-TP03-W

Method: SW6020A, Run Date: 12/19/22 12:09, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	14,700	20		mg/kg	314	7440-70-2		
Magnesium	2,120	20		mg/kg	314	7439-95-4		
Potassium	94.8	20		mg/kg	314	7440-09-7		
Sodium	Not detected	20		mg/kg	314	7440-23-5		

Method: SW7471B, Run Date: 12/16/22 17:15, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	2.369	0.050		mg/kg	640	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/20/22 15:22, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 13:15, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	Not detected	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43471.16 (continued)

Sample Tag: AOC11-TP03-W

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 13:15, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	630	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	330	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	530	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/28/22 13:15, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
1,2:3,4-Dibenzpyrene	Found			ug/kg	6			
Phenanthrene	Found			ug/kg	6	85-01-8		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 14:22, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	55.3	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 22:42, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	55.3			



Analytical Laboratory Report

Lab Sample ID: S43471.16 (continued)

Sample Tag: AOC11-TP03-W

Method: SW8260B - SIM, Run Date: 12/22/22 18:52, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	55.3	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	55.3	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 22:42, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	55.3	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	55.3	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	55.3	107-13-1		
2-Butanone (MEK)	Not detected	830		ug/kg	55.3	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	55.3	75-71-8		
Chloromethane	Not detected	300		ug/kg	55.3	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	55.3	75-01-4		
Bromomethane	Not detected	200		ug/kg	55.3	74-83-9		
Chloroethane	Not detected	300		ug/kg	55.3	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	55.3	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	55.3	75-35-4		
Methylene chloride	Not detected	100		ug/kg	55.3	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	55.3	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	55.3	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	55.3	156-59-2		
Chloroform	Not detected	60		ug/kg	55.3	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	55.3	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	55.3	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	55.3	56-23-5		
Benzene	Not detected	60		ug/kg	55.3	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	55.3	107-06-2		
Trichloroethene	Not detected	60		ug/kg	55.3	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	55.3	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	55.3	75-27-4		
Dibromomethane	Not detected	300		ug/kg	55.3	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	55.3	10061-01-5		
Toluene	Not detected	60		ug/kg	55.3	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	55.3	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	55.3	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	55.3	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	55.3	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	55.3	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	55.3	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	55.3	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	55.3	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	55.3			
o-Xylene	Not detected	60		ug/kg	55.3	95-47-6		
Styrene	Not detected	60		ug/kg	55.3	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	55.3	98-82-8		
Bromoform	Not detected	100		ug/kg	55.3	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	55.3	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	55.3	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	55.3	103-65-1		
Bromobenzene	Not detected	100		ug/kg	55.3	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.16 (continued)

Sample Tag: AOC11-TP03-W

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 22:42, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	55.3	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	55.3	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	55.3	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	55.3	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	55.3	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	55.3	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	55.3	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	55.3	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	55.3	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	55.3	104-51-8		
1,2,4-Trichlorobenzene	Not detected	360		ug/kg	55.3	120-82-1		
1,2,3-Trichlorobenzene	Not detected	360		ug/kg	55.3	87-61-6		
Naphthalene	Not detected	300		ug/kg	55.3	91-20-3		
Acrolein	Not detected	60		ug/kg	55.3	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	55.3	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	55.3	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	55.3	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	55.3	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	55.3	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	55.3	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	55.3	76-13-1		

Other / Misc.

Method: , Run Date: 12/23/22 23:30, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:24, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/19/22 10:57, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.17

Sample Tag: AOC11-TP03-B

Collected Date/Time: 12/13/2022 13:30

Matrix: Soil

COC Reference: 158706

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 13:00	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	15.863/15	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/16/22 13:31	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	92	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 15:54, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,490	1.0		mg/kg	305	7429-90-5		
Antimony	Not detected	0.50		mg/kg	305	7440-36-0		
Arsenic	0.73	0.20		mg/kg	305	7440-38-2		
Barium	11.4	1.0		mg/kg	305	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	305	7440-41-7		
Boron	Not detected	2.0		mg/kg	305	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	305	7440-43-9		
Chromium	2.34	0.50		mg/kg	305	7440-47-3		
Cobalt	0.59	0.50		mg/kg	305	7440-48-4		
Copper	2.54	0.50		mg/kg	305	7440-50-8		
Iron	1,150	1.0		mg/kg	305	7439-89-6		
Lead	9.05	0.30		mg/kg	305	7439-92-1		
Manganese	41.1	0.50		mg/kg	305	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	305	7439-98-7		
Nickel	1.22	0.50		mg/kg	305	7440-02-0		
Selenium	Not detected	0.40		mg/kg	305	7782-49-2		
Silver	Not detected	0.20		mg/kg	305	7440-22-4		
Strontium	10.6	0.50		mg/kg	305	7440-24-6		
Thallium	Not detected	0.20		mg/kg	305	7440-28-0		
Tin	Not detected	2.0		mg/kg	305	7440-31-5		
Titanium	24.6	1.0		mg/kg	305	7440-32-6		
Vanadium	2.50	0.50		mg/kg	305	7440-62-2		
Zinc	9.29	0.50		mg/kg	305	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43471.17 (continued)

Sample Tag: AOC11-TP03-B

Method: SW6020A, Run Date: 12/19/22 12:10, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	9,990	20		mg/kg	305	7440-70-2		
Magnesium	2,080	20		mg/kg	305	7439-95-4		
Potassium	97.2	20		mg/kg	305	7440-09-7		
Sodium	Not detected	20		mg/kg	305	7440-23-5		

Method: SW7471B, Run Date: 12/16/22 16:56, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	64	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/20/22 15:33, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 13:46, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	490	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	460	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	440	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	470	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	580	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43471.17 (continued)

Sample Tag: AOC11-TP03-B

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 13:46, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	1,120	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	630	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	940	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/28/22 13:46, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Phenanthrene	Found			ug/kg	6	85-01-8		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Hexadecane*	Found			ug/kg	6	544-76-3		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 14:46, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	55.7	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 23:07, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	55.7			



Analytical Laboratory Report

Lab Sample ID: S43471.17 (continued)

Sample Tag: AOC11-TP03-B

Method: SW8260B - SIM, Run Date: 12/22/22 19:20, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	55.7	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	55.7	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 23:07, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	55.7	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	55.7	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	55.7	107-13-1		
2-Butanone (MEK)	Not detected	840		ug/kg	55.7	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	55.7	75-71-8		
Chloromethane	Not detected	300		ug/kg	55.7	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	55.7	75-01-4		
Bromomethane	Not detected	200		ug/kg	55.7	74-83-9		
Chloroethane	Not detected	300		ug/kg	55.7	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	55.7	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	55.7	75-35-4		
Methylene chloride	Not detected	100		ug/kg	55.7	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	55.7	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	55.7	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	55.7	156-59-2		
Chloroform	Not detected	60		ug/kg	55.7	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	55.7	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	55.7	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	55.7	56-23-5		
Benzene	Not detected	60		ug/kg	55.7	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	55.7	107-06-2		
Trichloroethene	Not detected	60		ug/kg	55.7	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	55.7	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	55.7	75-27-4		
Dibromomethane	Not detected	300		ug/kg	55.7	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	55.7	10061-01-5		
Toluene	Not detected	60		ug/kg	55.7	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	55.7	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	55.7	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	55.7	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	55.7	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	55.7	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	55.7	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	55.7	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	55.7	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	55.7			
o-Xylene	Not detected	60		ug/kg	55.7	95-47-6		
Styrene	Not detected	60		ug/kg	55.7	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	55.7	98-82-8		
Bromoform	Not detected	100		ug/kg	55.7	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	55.7	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	55.7	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	55.7	103-65-1		
Bromobenzene	Not detected	100		ug/kg	55.7	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.17 (continued)

Sample Tag: AOC11-TP03-B

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 23:07, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	55.7	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	55.7	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	55.7	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	55.7	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	55.7	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	55.7	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	55.7	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	55.7	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	55.7	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	55.7	104-51-8		
1,2,4-Trichlorobenzene	Not detected	370		ug/kg	55.7	120-82-1		
1,2,3-Trichlorobenzene	Not detected	370		ug/kg	55.7	87-61-6		
Naphthalene	Not detected	300		ug/kg	55.7	91-20-3		
Acrolein	Not detected	60		ug/kg	55.7	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	55.7	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	55.7	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	55.7	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	55.7	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	55.7	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	55.7	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	55.7	76-13-1		

Other / Misc.

Method: , Run Date: 12/23/22 23:51, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:24, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/19/22 10:57, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.18

Sample Tag: DUP-05S

Collected Date/Time: 12/13/2022 00:01

Matrix: Soil

COC Reference: 158706

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 13:00	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	14.151/14	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/16/22 13:31	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	92	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 15:56, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	2,100	1.0		mg/kg	314	7429-90-5		
Antimony	Not detected	0.50		mg/kg	314	7440-36-0		
Arsenic	0.42	0.20		mg/kg	314	7440-38-2		
Barium	12.5	1.0		mg/kg	314	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	314	7440-41-7		
Boron	Not detected	2.0		mg/kg	314	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	314	7440-43-9		
Chromium	1.96	0.50		mg/kg	314	7440-47-3		
Cobalt	0.58	0.50		mg/kg	314	7440-48-4		
Copper	1.19	0.50		mg/kg	314	7440-50-8		
Iron	1,150	1.0		mg/kg	314	7439-89-6		
Lead	6.98	0.30		mg/kg	314	7439-92-1		
Manganese	19.0	0.50		mg/kg	314	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	314	7439-98-7		
Nickel	1.02	0.50		mg/kg	314	7440-02-0		
Selenium	Not detected	0.40		mg/kg	314	7782-49-2		
Silver	Not detected	0.20		mg/kg	314	7440-22-4		
Strontium	2.34	0.50		mg/kg	314	7440-24-6		
Thallium	Not detected	0.20		mg/kg	314	7440-28-0		
Tin	Not detected	2.0		mg/kg	314	7440-31-5		
Titanium	36.2	1.0		mg/kg	314	7440-32-6		
Vanadium	2.70	0.50		mg/kg	314	7440-62-2		
Zinc	4.28	0.50		mg/kg	314	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43471.18 (continued)

Sample Tag: DUP-05S

Method: SW6020A, Run Date: 12/19/22 12:11, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	1,180	20		mg/kg	314	7440-70-2		
Magnesium	275	20		mg/kg	314	7439-95-4		
Potassium	77.0	20		mg/kg	314	7440-09-7		
Sodium	Not detected	20		mg/kg	314	7440-23-5		

Method: SW7471B, Run Date: 12/16/22 16:59, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	61	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/20/22 15:45, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 14:47, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	Not detected	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43471.18 (continued)

Sample Tag: DUP-05S

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 14:47, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	330	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	Not detected	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	Not detected	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/28/22 14:47, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Phenanthrene	Found			ug/kg	6	85-01-8		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Indeno(1,2,3-cd)pyrene	Found			ug/kg	6	193-39-5		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 15:10, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	58.1	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 23:31, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	58.1			



Analytical Laboratory Report

Lab Sample ID: S43471.18 (continued)

Sample Tag: DUP-05S

Method: SW8260B - SIM, Run Date: 12/22/22 19:40, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	58.1	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	58.1	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 23:31, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	58.1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	58.1	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	58.1	107-13-1		
2-Butanone (MEK)	Not detected	870		ug/kg	58.1	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	58.1	75-71-8		
Chloromethane	Not detected	300		ug/kg	58.1	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	58.1	75-01-4		
Bromomethane	Not detected	200		ug/kg	58.1	74-83-9		
Chloroethane	Not detected	300		ug/kg	58.1	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	58.1	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	58.1	75-35-4		
Methylene chloride	Not detected	100		ug/kg	58.1	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	58.1	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	58.1	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	58.1	156-59-2		
Chloroform	Not detected	60		ug/kg	58.1	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	58.1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	58.1	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	58.1	56-23-5		
Benzene	Not detected	60		ug/kg	58.1	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	58.1	107-06-2		
Trichloroethene	Not detected	60		ug/kg	58.1	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	58.1	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	58.1	75-27-4		
Dibromomethane	Not detected	300		ug/kg	58.1	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	58.1	10061-01-5		
Toluene	Not detected	60		ug/kg	58.1	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	58.1	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	58.1	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	58.1	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	58.1	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	58.1	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	58.1	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	58.1	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	58.1	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	58.1			
o-Xylene	Not detected	60		ug/kg	58.1	95-47-6		
Styrene	Not detected	60		ug/kg	58.1	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	58.1	98-82-8		
Bromoform	Not detected	100		ug/kg	58.1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	58.1	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	58.1	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	58.1	103-65-1		
Bromobenzene	Not detected	100		ug/kg	58.1	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.18 (continued)

Sample Tag: DUP-05S

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 23:31, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	58.1	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	58.1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	58.1	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	58.1	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	58.1	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	58.1	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	58.1	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	58.1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	58.1	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	58.1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	380		ug/kg	58.1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	380		ug/kg	58.1	87-61-6		
Naphthalene	Not detected	300		ug/kg	58.1	91-20-3		
Acrolein	Not detected	60		ug/kg	58.1	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	58.1	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	58.1	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	58.1	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	58.1	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	58.1	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	58.1	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	58.1	76-13-1		

Other / Misc.

Method: , Run Date: 12/24/22 00:11, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:24, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/19/22 10:57, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.19

Sample Tag: AOC11-TP04-N

Collected Date/Time: 12/13/2022 14:10

Matrix: Soil

COC Reference: 158706

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 13:00	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	13.291/13	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/16/22 13:31	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	93	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 15:58, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,540	1.0		mg/kg	307	7429-90-5		
Antimony	Not detected	0.50		mg/kg	307	7440-36-0		
Arsenic	0.76	0.20		mg/kg	307	7440-38-2		
Barium	12.6	1.0		mg/kg	307	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	307	7440-41-7		
Boron	Not detected	2.0		mg/kg	307	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	307	7440-43-9		
Chromium	2.19	0.50		mg/kg	307	7440-47-3		
Cobalt	0.59	0.50		mg/kg	307	7440-48-4		
Copper	2.78	0.50		mg/kg	307	7440-50-8		
Iron	1,310	1.0		mg/kg	307	7439-89-6		
Lead	12.3	0.30		mg/kg	307	7439-92-1		
Manganese	48.9	0.50		mg/kg	307	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	307	7439-98-7		
Nickel	1.34	0.50		mg/kg	307	7440-02-0		
Selenium	Not detected	0.40		mg/kg	307	7782-49-2		
Silver	Not detected	0.20		mg/kg	307	7440-22-4		
Strontium	12.0	0.50		mg/kg	307	7440-24-6		
Thallium	Not detected	0.20		mg/kg	307	7440-28-0		
Tin	Not detected	2.0		mg/kg	307	7440-31-5		
Titanium	33.8	1.0		mg/kg	307	7440-32-6		
Vanadium	2.97	0.50		mg/kg	307	7440-62-2		
Zinc	19.8	0.50		mg/kg	307	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43471.19 (continued)

Sample Tag: AOC11-TP04-N

Method: SW6020A, Run Date: 12/19/22 12:13, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	8,950	20		mg/kg	307	7440-70-2		
Magnesium	1,340	20		mg/kg	307	7439-95-4		
Potassium	139	20		mg/kg	307	7440-09-7		
Sodium	33.6	20		mg/kg	307	7440-23-5		

Method: SW7471B, Run Date: 12/16/22 17:02, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.224	0.050		mg/kg	61	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/20/22 15:57, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 15:49, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	720	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	1,060	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	840	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	770	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	970	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	1,000	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43471.19 (continued)

Sample Tag: AOC11-TP04-N

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 15:49, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	1,290	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	550	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	500	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	1,170	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/28/22 15:49, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Phenanthrene	Found			ug/kg	6	85-01-8		
Benzo(ghi)perylene	Found			ug/kg	6	191-24-2		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 15:38, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	56.3	108-20-3		

Method: SW5035A/8260C, Run Date: 12/18/22 23:55, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	56.3			



Analytical Laboratory Report

Lab Sample ID: S43471.19 (continued)

Sample Tag: AOC11-TP04-N

Method: SW8260B - SIM, Run Date: 12/22/22 20:01, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	56.3	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	56.3	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 23:55, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	56.3	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	56.3	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	56.3	107-13-1		
2-Butanone (MEK)	Not detected	840		ug/kg	56.3	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	56.3	75-71-8		
Chloromethane	Not detected	300		ug/kg	56.3	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	56.3	75-01-4		
Bromomethane	Not detected	200		ug/kg	56.3	74-83-9		
Chloroethane	Not detected	300		ug/kg	56.3	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	56.3	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	56.3	75-35-4		
Methylene chloride	Not detected	100		ug/kg	56.3	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	56.3	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	56.3	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	56.3	156-59-2		
Chloroform	Not detected	60		ug/kg	56.3	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	56.3	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	56.3	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	56.3	56-23-5		
Benzene	Not detected	60		ug/kg	56.3	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	56.3	107-06-2		
Trichloroethene	Not detected	60		ug/kg	56.3	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	56.3	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	56.3	75-27-4		
Dibromomethane	Not detected	300		ug/kg	56.3	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	56.3	10061-01-5		
Toluene	Not detected	60		ug/kg	56.3	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	56.3	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	56.3	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	56.3	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	56.3	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	56.3	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	56.3	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	56.3	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	56.3	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	56.3			
o-Xylene	Not detected	60		ug/kg	56.3	95-47-6		
Styrene	Not detected	60		ug/kg	56.3	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	56.3	98-82-8		
Bromoform	Not detected	100		ug/kg	56.3	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	56.3	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	56.3	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	56.3	103-65-1		
Bromobenzene	Not detected	100		ug/kg	56.3	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.19 (continued)

Sample Tag: AOC11-TP04-N

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/18/22 23:55, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	56.3	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	56.3	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	56.3	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	56.3	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	56.3	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	56.3	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	56.3	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	56.3	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	56.3	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	56.3	104-51-8		
1,2,4-Trichlorobenzene	Not detected	370		ug/kg	56.3	120-82-1		
1,2,3-Trichlorobenzene	Not detected	370		ug/kg	56.3	87-61-6		
Naphthalene	Not detected	300		ug/kg	56.3	91-20-3		
Acrolein	Not detected	60		ug/kg	56.3	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	56.3	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	56.3	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	56.3	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	56.3	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	56.3	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	56.3	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	56.3	76-13-1		

Other / Misc.

Method: , Run Date: 12/24/22 00:32, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:24, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/19/22 10:57, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.20

Sample Tag: AOC11-TP04-S

Collected Date/Time: 12/13/2022 14:15

Matrix: Soil

COC Reference: 158706

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 13:00	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	15.271/15	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/16/22 13:31	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	93	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 16:00, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,420	1.0		mg/kg	311	7429-90-5		
Antimony	Not detected	0.50		mg/kg	311	7440-36-0		
Arsenic	0.69	0.20		mg/kg	311	7440-38-2		
Barium	10.8	1.0		mg/kg	311	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	311	7440-41-7		
Boron	Not detected	2.0		mg/kg	311	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	311	7440-43-9		
Chromium	2.04	0.50		mg/kg	311	7440-47-3		
Cobalt	0.63	0.50		mg/kg	311	7440-48-4		
Copper	3.25	0.50		mg/kg	311	7440-50-8		
Iron	1,150	1.0		mg/kg	311	7439-89-6		
Lead	10.9	0.30		mg/kg	311	7439-92-1		
Manganese	52.0	0.50		mg/kg	311	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	311	7439-98-7		
Nickel	1.43	0.50		mg/kg	311	7440-02-0		
Selenium	Not detected	0.40		mg/kg	311	7782-49-2		
Silver	Not detected	0.20		mg/kg	311	7440-22-4		
Strontium	16.6	0.50		mg/kg	311	7440-24-6		
Thallium	Not detected	0.20		mg/kg	311	7440-28-0		
Tin	Not detected	2.0		mg/kg	311	7440-31-5		
Titanium	29.1	1.0		mg/kg	311	7440-32-6		
Vanadium	2.70	0.50		mg/kg	311	7440-62-2		
Zinc	14.7	0.50		mg/kg	311	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43471.20 (continued)

Sample Tag: AOC11-TP04-S

Method: SW6020A, Run Date: 12/19/22 12:14, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	11,300	20		mg/kg	311	7440-70-2		
Magnesium	1,320	20		mg/kg	311	7439-95-4		
Potassium	130	20		mg/kg	311	7440-09-7		
Sodium	20.2	20		mg/kg	311	7440-23-5		

Method: SW7471B, Run Date: 12/16/22 17:05, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.372	0.050		mg/kg	66	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/20/22 16:09, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 15:18, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	920	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	1,010	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	780	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	610	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	970	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	1,060	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43471.20 (continued)

Sample Tag: AOC11-TP04-S

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 15:18, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	2,000	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	550	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	1,140	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	1,660	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/28/22 15:18, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Phenanthrene	Found			ug/kg	6	85-01-8		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Indeno(1,2,3-cd)pyrene	Found			ug/kg	6	193-39-5		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 16:02, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	56.6	108-20-3		

Method: SW5035A/8260C, Run Date: 12/19/22 00:19, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	56.6			



Analytical Laboratory Report

Lab Sample ID: S43471.20 (continued)

Sample Tag: AOC11-TP04-S

Method: SW8260B - SIM, Run Date: 12/22/22 20:22, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	56.6	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	56.6	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 00:19, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	56.6	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	56.6	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	56.6	107-13-1		
2-Butanone (MEK)	Not detected	850		ug/kg	56.6	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	56.6	75-71-8		
Chloromethane	Not detected	300		ug/kg	56.6	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	56.6	75-01-4		
Bromomethane	Not detected	200		ug/kg	56.6	74-83-9		
Chloroethane	Not detected	300		ug/kg	56.6	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	56.6	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	56.6	75-35-4		
Methylene chloride	Not detected	100		ug/kg	56.6	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	56.6	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	56.6	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	56.6	156-59-2		
Chloroform	Not detected	60		ug/kg	56.6	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	56.6	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	56.6	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	56.6	56-23-5		
Benzene	Not detected	60		ug/kg	56.6	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	56.6	107-06-2		
Trichloroethene	Not detected	60		ug/kg	56.6	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	56.6	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	56.6	75-27-4		
Dibromomethane	Not detected	300		ug/kg	56.6	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	56.6	10061-01-5		
Toluene	Not detected	60		ug/kg	56.6	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	56.6	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	56.6	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	56.6	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	56.6	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	56.6	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	56.6	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	56.6	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	56.6	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	56.6			
o-Xylene	Not detected	60		ug/kg	56.6	95-47-6		
Styrene	Not detected	60		ug/kg	56.6	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	56.6	98-82-8		
Bromoform	Not detected	100		ug/kg	56.6	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	56.6	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	56.6	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	56.6	103-65-1		
Bromobenzene	Not detected	100		ug/kg	56.6	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.20 (continued)

Sample Tag: AOC11-TP04-S

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 00:19, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	56.6	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	56.6	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	56.6	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	56.6	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	56.6	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	56.6	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	56.6	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	56.6	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	56.6	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	56.6	104-51-8		
1,2,4-Trichlorobenzene	Not detected	370		ug/kg	56.6	120-82-1		
1,2,3-Trichlorobenzene	Not detected	370		ug/kg	56.6	87-61-6		
Naphthalene	Not detected	300		ug/kg	56.6	91-20-3		
Acrolein	Not detected	60		ug/kg	56.6	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	56.6	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	56.6	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	56.6	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	56.6	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	56.6	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	56.6	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	56.6	76-13-1		

Other / Misc.

Method: , Run Date: 12/24/22 00:52, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:24, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/20/22 07:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.21

Sample Tag: AOC11-TP04-E

Collected Date/Time: 12/13/2022 14:35

Matrix: Soil

COC Reference: 158706

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 13:00	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	13.978/13	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/19/22 14:18	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	93	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 16:03, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,540	1.0		mg/kg	311	7429-90-5		
Antimony	Not detected	0.50		mg/kg	311	7440-36-0		
Arsenic	0.70	0.20		mg/kg	311	7440-38-2		
Barium	15.9	1.0		mg/kg	311	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	311	7440-41-7		
Boron	Not detected	2.0		mg/kg	311	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	311	7440-43-9		
Chromium	2.19	0.50		mg/kg	311	7440-47-3		
Cobalt	0.69	0.50		mg/kg	311	7440-48-4		
Copper	5.89	0.50		mg/kg	311	7440-50-8		
Iron	1,380	1.0		mg/kg	311	7439-89-6		
Lead	19.8	0.30		mg/kg	311	7439-92-1		
Manganese	50.9	0.50		mg/kg	311	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	311	7439-98-7		
Nickel	1.52	0.50		mg/kg	311	7440-02-0		
Selenium	Not detected	0.40		mg/kg	311	7782-49-2		
Silver	Not detected	0.20		mg/kg	311	7440-22-4		
Strontium	11.2	0.50		mg/kg	311	7440-24-6		
Thallium	Not detected	0.20		mg/kg	311	7440-28-0		
Tin	Not detected	2.0		mg/kg	311	7440-31-5		
Titanium	39.0	1.0		mg/kg	311	7440-32-6		
Vanadium	2.68	0.50		mg/kg	311	7440-62-2		
Zinc	23.6	0.50		mg/kg	311	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43471.21 (continued)

Sample Tag: AOC11-TP04-E

Method: SW6020A, Run Date: 12/19/22 12:15, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	8,930	20		mg/kg	311	7440-70-2		
Magnesium	1,490	20		mg/kg	311	7439-95-4		
Potassium	135	20		mg/kg	311	7440-09-7		
Sodium	Not detected	20		mg/kg	311	7440-23-5		

Method: SW7471B, Run Date: 12/19/22 16:15, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.083	0.050		mg/kg	64	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/20/22 16:21, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 16:19, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	400	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	420	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	430	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	450	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	450	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43471.21 (continued)

Sample Tag: AOC11-TP04-E

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 16:19, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	710	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	Not detected	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	650	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/28/22 16:19, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Phenanthrene	Found			ug/kg	6	85-01-8		
Indeno(1,2,3-cd)pyrene	Found			ug/kg	6	193-39-5		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 16:27, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	53.8	108-20-3		

Method: SW5035A/8260C, Run Date: 12/19/22 00:43, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	53.8			



Analytical Laboratory Report

Lab Sample ID: S43471.21 (continued)

Sample Tag: AOC11-TP04-E

Method: SW8260B - SIM, Run Date: 12/22/22 20:42, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	53.8	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	53.8	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 00:43, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	53.8	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	53.8	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	53.8	107-13-1		
2-Butanone (MEK)	Not detected	810		ug/kg	53.8	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	53.8	75-71-8		
Chloromethane	Not detected	300		ug/kg	53.8	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	53.8	75-01-4		
Bromomethane	Not detected	200		ug/kg	53.8	74-83-9		
Chloroethane	Not detected	300		ug/kg	53.8	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	53.8	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	53.8	75-35-4		
Methylene chloride	Not detected	100		ug/kg	53.8	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	53.8	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	53.8	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	53.8	156-59-2		
Chloroform	Not detected	50		ug/kg	53.8	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	53.8	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	53.8	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	53.8	56-23-5		
Benzene	Not detected	50		ug/kg	53.8	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	53.8	107-06-2		
Trichloroethene	Not detected	50		ug/kg	53.8	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	53.8	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	53.8	75-27-4		
Dibromomethane	Not detected	300		ug/kg	53.8	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	53.8	10061-01-5		
Toluene	Not detected	50		ug/kg	53.8	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	53.8	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	53.8	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	53.8	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	53.8	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	53.8	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	53.8	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	53.8	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	53.8	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	53.8			
o-Xylene	Not detected	50		ug/kg	53.8	95-47-6		
Styrene	Not detected	50		ug/kg	53.8	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	53.8	98-82-8		
Bromoform	Not detected	100		ug/kg	53.8	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	53.8	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	53.8	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	53.8	103-65-1		
Bromobenzene	Not detected	100		ug/kg	53.8	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.21 (continued)

Sample Tag: AOC11-TP04-E

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 00:43, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	53.8	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	53.8	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	53.8	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	53.8	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	53.8	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	53.8	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	53.8	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	53.8	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	53.8	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	53.8	104-51-8		
1,2,4-Trichlorobenzene	Not detected	360		ug/kg	53.8	120-82-1		
1,2,3-Trichlorobenzene	Not detected	360		ug/kg	53.8	87-61-6		
Naphthalene	Not detected	300		ug/kg	53.8	91-20-3		
Acrolein	Not detected	50		ug/kg	53.8	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	53.8	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	53.8	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	53.8	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	53.8	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	53.8	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	53.8	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	53.8	76-13-1		

Other / Misc.

Method: , Run Date: 12/24/22 01:13, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:24, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/20/22 07:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.22

Sample Tag: AOC11-TP04-W

Collected Date/Time: 12/13/2022 14:35

Matrix: Soil

COC Reference: 158706

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 13:00	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	16.365/16	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/19/22 14:18	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	93	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 16:05, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,970	1.0		mg/kg	312	7429-90-5		
Antimony	Not detected	0.50		mg/kg	312	7440-36-0		
Arsenic	0.77	0.20		mg/kg	312	7440-38-2		
Barium	16.0	1.0		mg/kg	312	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	312	7440-41-7		
Boron	Not detected	2.0		mg/kg	312	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	312	7440-43-9		
Chromium	2.52	0.50		mg/kg	312	7440-47-3		
Cobalt	0.72	0.50		mg/kg	312	7440-48-4		
Copper	5.43	0.50		mg/kg	312	7440-50-8		
Iron	1,720	1.0		mg/kg	312	7439-89-6		
Lead	29.4	0.30		mg/kg	312	7439-92-1		
Manganese	58.1	0.50		mg/kg	312	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	312	7439-98-7		
Nickel	1.75	0.50		mg/kg	312	7440-02-0		
Selenium	Not detected	0.40		mg/kg	312	7782-49-2		
Silver	Not detected	0.20		mg/kg	312	7440-22-4		
Strontium	18.8	0.50		mg/kg	312	7440-24-6		
Thallium	Not detected	0.20		mg/kg	312	7440-28-0		
Tin	Not detected	2.0		mg/kg	312	7440-31-5		
Titanium	49.4	1.0		mg/kg	312	7440-32-6		
Vanadium	3.32	0.50		mg/kg	312	7440-62-2		
Zinc	15.5	0.50		mg/kg	312	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43471.22 (continued)

Sample Tag: AOC11-TP04-W

Method: SW6020A, Run Date: 12/19/22 12:16, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	15,100	20		mg/kg	312	7440-70-2		
Magnesium	1,650	20		mg/kg	312	7439-95-4		
Potassium	187	20		mg/kg	312	7440-09-7		
Sodium	27.1	20		mg/kg	312	7440-23-5		

Method: SW7471B, Run Date: 12/19/22 16:18, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.182	0.050		mg/kg	73	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/20/22 16:32, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 11:38, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	1,300		ug/kg	50	83-32-9	Y	
Acenaphthylene	Not detected	1,300		ug/kg	50	208-96-8	Y	
Anthracene	4,200	1,300		ug/kg	50	120-12-7	Y	
Benzo(a)anthracene	16,400	1,300		ug/kg	50	56-55-3	Y	
Benzo(b)fluoranthene	11,900	1,300		ug/kg	50	205-99-2	Y	
Benzo(k)fluoranthene	11,400	1,300		ug/kg	50	207-08-9	Y	
Benzo(ghi)perylene	6,900	1,300		ug/kg	50	191-24-2	Y	
Benzo(a)pyrene	12,600	1,300		ug/kg	50	50-32-8	Y	
bis(2-Chloroethoxy)methane	Not detected	1,300		ug/kg	50	111-91-1	Y	
bis(2-Chloroethyl)ether	Not detected	1,300		ug/kg	50	111-44-4	Y	
bis(2-Chloroisopropyl)ether*	Not detected	1,300		ug/kg	50	108-60-1	Y	
bis(2-Ethylhexyl)phthalate	Not detected	1,300		ug/kg	50	117-81-7	Y	
4-Bromophenyl phenyl ether	Not detected	1,300		ug/kg	50	101-55-3	Y	
Butyl benzyl phthalate	Not detected	1,300		ug/kg	50	85-68-7	Y	
2-Chloronaphthalene	Not detected	1,300		ug/kg	50	91-58-7	Y	
4-Chloro-3-methylphenol	Not detected	1,300		ug/kg	50	59-50-7	Y	
2-Chlorophenol	Not detected	1,300		ug/kg	50	95-57-8	Y	
4-Chlorophenyl phenyl ether	Not detected	1,300		ug/kg	50	7005-72-3	Y	
Chrysene	16,000	1,300		ug/kg	50	218-01-9	Y	
Dibenzo(ah)anthracene	2,400	1,300		ug/kg	50	53-70-3	Y	
di-n-Butyl phthalate*	Not detected	1,300		ug/kg	50	84-74-2	Y	
3,3'-Dichlorobenzidine	Not detected	1,300		ug/kg	50	91-94-1	Y	
2,4-Dichlorophenol	Not detected	1,300		ug/kg	50	120-83-2	Y	
Diethyl phthalate	Not detected	1,300		ug/kg	50	84-66-2	Y	
2,4-Dimethylphenol	Not detected	1,300		ug/kg	50	105-67-9	Y	
Dimethyl phthalate	Not detected	1,300		ug/kg	50	131-11-3	Y	

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S43471.22 (continued)

Sample Tag: AOC11-TP04-W

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 11:38, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
4,6-Dinitro-2-methylphenol	Not detected	1,300		ug/kg	50	534-52-1	Y	
2,4-Dinitrophenol	Not detected	1,300		ug/kg	50	51-28-5	Y	
2,4-Dinitrotoluene	Not detected	1,300		ug/kg	50	121-14-2	Y	
2,6-Dinitrotoluene	Not detected	1,300		ug/kg	50	606-20-2	Y	
di-n-Octyl phthalate	Not detected	1,300		ug/kg	50	117-84-0	Y	
Fluoranthene	36,500	1,300		ug/kg	50	206-44-0	Y	
Fluorene	1,800	1,300		ug/kg	50	86-73-7	Y	
Hexachlorobenzene	Not detected	1,300		ug/kg	50	118-74-1	Y	
Hexachlorobutadiene	Not detected	1,300		ug/kg	50	87-68-3	Y	
Hexachlorocyclopentadiene	Not detected	1,300		ug/kg	50	77-47-4	Y	
Hexachloroethane	Not detected	1,300		ug/kg	50	67-72-1	Y	
Indeno(1,2,3-cd)pyrene	6,500	1,300		ug/kg	50	193-39-5	Y	
Isophorone	Not detected	1,300		ug/kg	50	78-59-1	Y	
Naphthalene	Not detected	1,300		ug/kg	50	91-20-3	Y	
Nitrobenzene	Not detected	1,300		ug/kg	50	98-95-3	Y	
2-Nitrophenol	Not detected	1,300		ug/kg	50	88-75-5	Y	
4-Nitrophenol	Not detected	1,300		ug/kg	50	100-02-7	Y	
N-Nitrosodiphenylamine	Not detected	1,300		ug/kg	50	86-30-6	Y	
N-Nitrosodi-n-propylamine	Not detected	1,300		ug/kg	50	621-64-7	Y	
Pentachlorophenol	Not detected	1,300		ug/kg	50	87-86-5	Y	
Phenanthrene	26,900	1,300		ug/kg	50	85-01-8	Y	
Phenol	Not detected	1,300		ug/kg	50	108-95-2	Y	
Pyrene	28,400	1,300		ug/kg	50	129-00-0	Y	
1,2,4-Trichlorobenzene	Not detected	1,300		ug/kg	50	120-82-1	Y	
2,4,6-Trichlorophenol	Not detected	1,300		ug/kg	50	88-06-2	Y	
Benzidine	Not detected	1,300		ug/kg	50	92-87-5	Y	
N-Nitrosodimethylamine	Not detected	1,300		ug/kg	50	62-75-9	Y	

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/28/22 16:50, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Phenanthrene	Found			ug/kg	6	85-01-8		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Anthracene	Found			ug/kg	6	120-12-7		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 16:51, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	56.3	108-20-3		

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S43471.22 (continued)

Sample Tag: AOC11-TP04-W

Method: SW5035A/8260C, Run Date: 12/19/22 01:08, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	56.3			

Method: SW8260B - SIM, Run Date: 12/22/22 21:02, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	56.3	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	56.3	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 01:08, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	56.3	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	56.3	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	56.3	107-13-1		
2-Butanone (MEK)	Not detected	840		ug/kg	56.3	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	56.3	75-71-8		
Chloromethane	Not detected	300		ug/kg	56.3	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	56.3	75-01-4		
Bromomethane	Not detected	200		ug/kg	56.3	74-83-9		
Chloroethane	Not detected	300		ug/kg	56.3	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	56.3	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	56.3	75-35-4		
Methylene chloride	Not detected	100		ug/kg	56.3	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	56.3	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	56.3	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	56.3	156-59-2		
Chloroform	Not detected	60		ug/kg	56.3	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	56.3	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	56.3	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	56.3	56-23-5		
Benzene	Not detected	60		ug/kg	56.3	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	56.3	107-06-2		
Trichloroethene	Not detected	60		ug/kg	56.3	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	56.3	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	56.3	75-27-4		
Dibromomethane	Not detected	300		ug/kg	56.3	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	56.3	10061-01-5		
Toluene	Not detected	60		ug/kg	56.3	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	56.3	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	56.3	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	56.3	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	56.3	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	56.3	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	56.3	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	56.3	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	56.3	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	56.3			
o-Xylene	Not detected	60		ug/kg	56.3	95-47-6		
Styrene	Not detected	60		ug/kg	56.3	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	56.3	98-82-8		
Bromoform	Not detected	100		ug/kg	56.3	75-25-2		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.22 (continued)

Sample Tag: AOC11-TP04-W

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 01:08, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	56.3	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	56.3	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	56.3	103-65-1		
Bromobenzene	Not detected	100		ug/kg	56.3	108-86-1		
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	56.3	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	56.3	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	56.3	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	56.3	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	56.3	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	56.3	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	56.3	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	56.3	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	56.3	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	56.3	104-51-8		
1,2,4-Trichlorobenzene	Not detected	370		ug/kg	56.3	120-82-1		
1,2,3-Trichlorobenzene	Not detected	370		ug/kg	56.3	87-61-6		
Naphthalene	Not detected	300		ug/kg	56.3	91-20-3		
Acrolein	Not detected	60		ug/kg	56.3	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	56.3	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	56.3	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	56.3	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	56.3	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	56.3	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	56.3	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	56.3	76-13-1		

Other / Misc.

Method: , Run Date: 12/24/22 01:34, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:28, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/20/22 07:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.23

Sample Tag: AOC11-TP04-B

Collected Date/Time: 12/13/2022 15:03

Matrix: Soil

COC Reference: 158706

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 13:00	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	17.662/17	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/19/22 14:18	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	86	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 16:07, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,220	1.0		mg/kg	309	7429-90-5		
Antimony	Not detected	0.50		mg/kg	309	7440-36-0		
Arsenic	0.53	0.20		mg/kg	309	7440-38-2		
Barium	9.00	1.0		mg/kg	309	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	309	7440-41-7		
Boron	Not detected	2.0		mg/kg	309	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	309	7440-43-9		
Chromium	1.55	0.50		mg/kg	309	7440-47-3		
Cobalt	0.57	0.50		mg/kg	309	7440-48-4		
Copper	1.94	0.50		mg/kg	309	7440-50-8		
Iron	1,010	1.0		mg/kg	309	7439-89-6		
Lead	6.59	0.30		mg/kg	309	7439-92-1		
Manganese	36.8	0.50		mg/kg	309	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	309	7439-98-7		
Nickel	1.14	0.50		mg/kg	309	7440-02-0		
Selenium	Not detected	0.40		mg/kg	309	7782-49-2		
Silver	Not detected	0.20		mg/kg	309	7440-22-4		
Strontium	7.49	0.50		mg/kg	309	7440-24-6		
Thallium	Not detected	0.20		mg/kg	309	7440-28-0		
Tin	Not detected	2.0		mg/kg	309	7440-31-5		
Titanium	26.6	1.0		mg/kg	309	7440-32-6		
Vanadium	2.38	0.50		mg/kg	309	7440-62-2		
Zinc	6.42	0.50		mg/kg	309	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43471.23 (continued)

Sample Tag: AOC11-TP04-B

Method: SW6020A, Run Date: 12/19/22 12:18, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	6,240	20		mg/kg	309	7440-70-2		
Magnesium	918	20		mg/kg	309	7439-95-4		
Potassium	97.2	20		mg/kg	309	7440-09-7		
Sodium	Not detected	20		mg/kg	309	7440-23-5		

Method: SW7471B, Run Date: 12/19/22 16:21, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	76	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/20/22 16:45, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 14:17, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	Not detected	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43471.23 (continued)

Sample Tag: AOC11-TP04-B

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 14:17, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	Not detected	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	Not detected	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	Not detected	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/28/22 14:17, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Indeno(1,2,3-cd)pyrene	Found			ug/kg	6	193-39-5		
Benzo(ghi)perylene	Found			ug/kg	6	191-24-2		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 17:15, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	64.1	108-20-3		

Method: SW5035A/8260C, Run Date: 12/19/22 01:32, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	64.1			



Analytical Laboratory Report

Lab Sample ID: S43471.23 (continued)

Sample Tag: AOC11-TP04-B

Method: SW8260B - SIM, Run Date: 12/22/22 21:23, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	64.1	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	64.1	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 01:32, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	64.1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	300		ug/kg	64.1	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	64.1	107-13-1		
2-Butanone (MEK)	Not detected	960		ug/kg	64.1	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	64.1	75-71-8		
Chloromethane	Not detected	300		ug/kg	64.1	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	64.1	75-01-4		
Bromomethane	Not detected	300		ug/kg	64.1	74-83-9		
Chloroethane	Not detected	300		ug/kg	64.1	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	64.1	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	64.1	75-35-4		
Methylene chloride	Not detected	100		ug/kg	64.1	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	64.1	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	64.1	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	64.1	156-59-2		
Chloroform	Not detected	60		ug/kg	64.1	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	64.1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	64.1	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	64.1	56-23-5		
Benzene	Not detected	60		ug/kg	64.1	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	64.1	107-06-2		
Trichloroethene	Not detected	60		ug/kg	64.1	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	64.1	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	64.1	75-27-4		
Dibromomethane	Not detected	300		ug/kg	64.1	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	64.1	10061-01-5		
Toluene	Not detected	60		ug/kg	64.1	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	64.1	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	64.1	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	64.1	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	64.1	124-48-1		
1,2-Dibromoethane	Not detected	30		ug/kg	64.1	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	64.1	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	64.1	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	64.1	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	64.1			
o-Xylene	Not detected	60		ug/kg	64.1	95-47-6		
Styrene	Not detected	60		ug/kg	64.1	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	64.1	98-82-8		
Bromoform	Not detected	100		ug/kg	64.1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	64.1	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	64.1	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	64.1	103-65-1		
Bromobenzene	Not detected	100		ug/kg	64.1	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.23 (continued)

Sample Tag: AOC11-TP04-B

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 01:32, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	64.1	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	64.1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	64.1	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	64.1	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	64.1	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	64.1	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	64.1	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	64.1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	64.1	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	64.1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	420		ug/kg	64.1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	420		ug/kg	64.1	87-61-6		
Naphthalene	Not detected	300		ug/kg	64.1	91-20-3		
Acrolein	Not detected	60		ug/kg	64.1	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	64.1	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	64.1	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	64.1	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	64.1	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	64.1	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	64.1	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	64.1	76-13-1		

Other / Misc.

Method: , Run Date: 12/24/22 01:54, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:28, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/20/22 07:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.24

Sample Tag: DUP-06S

Collected Date/Time: 12/13/2022 00:01

Matrix: Soil

COC Reference: 158706

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 13:00	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	13.539/13	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/19/22 14:18	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	92	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 16:09, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,680	1.0		mg/kg	320	7429-90-5		
Antimony	Not detected	0.50		mg/kg	320	7440-36-0		
Arsenic	0.81	0.20		mg/kg	320	7440-38-2		
Barium	14.4	1.0		mg/kg	320	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	320	7440-41-7		
Boron	Not detected	2.0		mg/kg	320	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	320	7440-43-9		
Chromium	2.80	0.50		mg/kg	320	7440-47-3		
Cobalt	0.72	0.50		mg/kg	320	7440-48-4		
Copper	3.36	0.50		mg/kg	320	7440-50-8		
Iron	1,560	1.0		mg/kg	320	7439-89-6		
Lead	13.8	0.30		mg/kg	320	7439-92-1		
Manganese	55.2	0.50		mg/kg	320	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	320	7439-98-7		
Nickel	2.18	0.50		mg/kg	320	7440-02-0		
Selenium	Not detected	0.40		mg/kg	320	7782-49-2		
Silver	Not detected	0.20		mg/kg	320	7440-22-4		
Strontium	21.7	0.50		mg/kg	320	7440-24-6		
Thallium	Not detected	0.20		mg/kg	320	7440-28-0		
Tin	Not detected	2.0		mg/kg	320	7440-31-5		
Titanium	38.6	1.0		mg/kg	320	7440-32-6		
Vanadium	3.33	0.50		mg/kg	320	7440-62-2		
Zinc	20.4	0.50		mg/kg	320	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43471.24 (continued)

Sample Tag: DUP-06S

Method: SW6020A, Run Date: 12/19/22 12:19, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	14,600	20		mg/kg	320	7440-70-2		
Magnesium	2,350	20		mg/kg	320	7439-95-4		
Potassium	161	20		mg/kg	320	7440-09-7		
Sodium	26.6	20		mg/kg	320	7440-23-5		

Method: SW7471B, Run Date: 12/19/22 16:25, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.251	0.050		mg/kg	57	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/20/22 16:56, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 17:21, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	640	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	800	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	590	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	350	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	740	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	760	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43471.24 (continued)

Sample Tag: DUP-06S

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 17:21, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	1,380	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	330	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	700	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	1,200	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/28/22 17:21, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Phenanthrene	Found			ug/kg	6	85-01-8		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
1,2:3,4-Dibenzpyrene	Found			ug/kg	6			

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 17:40, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	56.5	108-20-3		

Method: SW5035A/8260C, Run Date: 12/19/22 01:56, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	56.5			



Analytical Laboratory Report

Lab Sample ID: S43471.24 (continued)

Sample Tag: DUP-06S

Method: SW8260B - SIM, Run Date: 12/22/22 21:44, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	56.5	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	56.5	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 01:56, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	56.5	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	56.5	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	56.5	107-13-1		
2-Butanone (MEK)	Not detected	850		ug/kg	56.5	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	56.5	75-71-8		
Chloromethane	Not detected	300		ug/kg	56.5	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	56.5	75-01-4		
Bromomethane	Not detected	200		ug/kg	56.5	74-83-9		
Chloroethane	Not detected	300		ug/kg	56.5	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	56.5	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	56.5	75-35-4		
Methylene chloride	Not detected	100		ug/kg	56.5	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	56.5	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	56.5	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	56.5	156-59-2		
Chloroform	Not detected	60		ug/kg	56.5	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	56.5	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	56.5	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	56.5	56-23-5		
Benzene	Not detected	60		ug/kg	56.5	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	56.5	107-06-2		
Trichloroethene	Not detected	60		ug/kg	56.5	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	56.5	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	56.5	75-27-4		
Dibromomethane	Not detected	300		ug/kg	56.5	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	56.5	10061-01-5		
Toluene	Not detected	60		ug/kg	56.5	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	56.5	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	56.5	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	56.5	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	56.5	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	56.5	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	56.5	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	56.5	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	56.5	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	56.5			
o-Xylene	Not detected	60		ug/kg	56.5	95-47-6		
Styrene	Not detected	60		ug/kg	56.5	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	56.5	98-82-8		
Bromoform	Not detected	100		ug/kg	56.5	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	56.5	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	56.5	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	56.5	103-65-1		
Bromobenzene	Not detected	100		ug/kg	56.5	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.24 (continued)

Sample Tag: DUP-06S

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 01:56, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	56.5	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	56.5	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	56.5	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	56.5	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	56.5	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	56.5	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	56.5	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	56.5	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	56.5	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	56.5	104-51-8		
1,2,4-Trichlorobenzene	Not detected	370		ug/kg	56.5	120-82-1		
1,2,3-Trichlorobenzene	Not detected	370		ug/kg	56.5	87-61-6		
Naphthalene	Not detected	300		ug/kg	56.5	91-20-3		
Acrolein	Not detected	60		ug/kg	56.5	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	56.5	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	56.5	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	56.5	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	56.5	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	56.5	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	56.5	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	56.5	76-13-1		

Other / Misc.

Method: , Run Date: 12/24/22 02:15, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:28, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/20/22 07:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.25

Sample Tag: AOC11-MW-22-07 (2-4)

Collected Date/Time: 12/13/2022 10:20

Matrix: Soil

COC Reference: 158708

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 13:00	JRH	
BNA Extraction*	Completed	SW3546	12/19/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	12.435/12	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/19/22 14:18	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	91	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 16:11, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	2,480	1.0		mg/kg	318	7429-90-5		
Antimony	Not detected	0.50		mg/kg	318	7440-36-0		
Arsenic	1.49	0.20		mg/kg	318	7440-38-2		
Barium	24.8	1.0		mg/kg	318	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	318	7440-41-7		
Boron	2.40	2.0		mg/kg	318	7440-42-8		
Cadmium	0.40	0.20		mg/kg	318	7440-43-9		
Chromium	5.45	0.50		mg/kg	318	7440-47-3		
Cobalt	1.03	0.50		mg/kg	318	7440-48-4		
Copper	5.32	0.50		mg/kg	318	7440-50-8		
Iron	2,920	1.0		mg/kg	318	7439-89-6		
Lead	37.5	0.30		mg/kg	318	7439-92-1		
Manganese	108	0.50		mg/kg	318	7439-96-5		
Molybdenum	0.51	0.50		mg/kg	318	7439-98-7		
Nickel	2.96	0.50		mg/kg	318	7440-02-0		
Selenium	Not detected	0.40		mg/kg	318	7782-49-2		
Silver	Not detected	0.20		mg/kg	318	7440-22-4		
Strontium	44.4	0.50		mg/kg	318	7440-24-6		
Thallium	Not detected	0.20		mg/kg	318	7440-28-0		
Tin	Not detected	2.0		mg/kg	318	7440-31-5		
Titanium	82.8	1.0		mg/kg	318	7440-32-6		
Vanadium	7.92	0.50		mg/kg	318	7440-62-2		
Zinc	35.7	0.50		mg/kg	318	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43471.25 (continued)

Sample Tag: AOC11-MW-22-07 (2-4)

Method: SW6020A, Run Date: 12/19/22 12:20, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	32,900	20		mg/kg	318	7440-70-2		
Magnesium	4,500	20		mg/kg	318	7439-95-4		
Potassium	282	20		mg/kg	318	7440-09-7		
Sodium	40.8	20		mg/kg	318	7440-23-5		

Method: SW7471B, Run Date: 12/19/22 16:28, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	1.023	0.050		mg/kg	63	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/20/22 17:09, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/27/22 19:18, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	1,060	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	1,150	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	900	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	570	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	1,080	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	930	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	1,240	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43471.25 (continued)

Sample Tag: AOC11-MW-22-07 (2-4)

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/27/22 19:18, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	2,260	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	530	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	910	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	1,840	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/27/22 19:18, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Phenanthrene	Found			ug/kg	6	85-01-8		
Butyl benzyl phthalate	Found			ug/kg	6	85-68-7		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 18:04, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	58	108-20-3		

Method: SW5035A/8260C, Run Date: 12/19/22 02:20, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	58			



Analytical Laboratory Report

Lab Sample ID: S43471.25 (continued)

Sample Tag: AOC11-MW-22-07 (2-4)

Method: SW8260B - SIM, Run Date: 12/23/22 00:27, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	58	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	58	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 02:20, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	58	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	58	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	58	107-13-1		
2-Butanone (MEK)	Not detected	870		ug/kg	58	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	58	75-71-8		
Chloromethane	Not detected	300		ug/kg	58	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	58	75-01-4		
Bromomethane	Not detected	200		ug/kg	58	74-83-9		
Chloroethane	Not detected	300		ug/kg	58	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	58	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	58	75-35-4		
Methylene chloride	Not detected	100		ug/kg	58	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	58	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	58	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	58	156-59-2		
Chloroform	Not detected	60		ug/kg	58	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	58	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	58	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	58	56-23-5		
Benzene	Not detected	60		ug/kg	58	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	58	107-06-2		
Trichloroethene	Not detected	60		ug/kg	58	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	58	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	58	75-27-4		
Dibromomethane	Not detected	300		ug/kg	58	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	58	10061-01-5		
Toluene	Not detected	60		ug/kg	58	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	58	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	58	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	58	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	58	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	58	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	58	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	58	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	58	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	58			
o-Xylene	Not detected	60		ug/kg	58	95-47-6		
Styrene	Not detected	60		ug/kg	58	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	58	98-82-8		
Bromoform	Not detected	100		ug/kg	58	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	58	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	58	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	58	103-65-1		
Bromobenzene	Not detected	100		ug/kg	58	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.25 (continued)

Sample Tag: AOC11-MW-22-07 (2-4)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 02:20, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	58	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	58	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	58	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	58	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	58	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	58	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	58	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	58	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	58	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	58	104-51-8		
1,2,4-Trichlorobenzene	Not detected	380		ug/kg	58	120-82-1		
1,2,3-Trichlorobenzene	Not detected	380		ug/kg	58	87-61-6		
Naphthalene	Not detected	300		ug/kg	58	91-20-3		
Acrolein	Not detected	60		ug/kg	58	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	58	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	58	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	58	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	58	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	58	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	58	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	58	76-13-1		

Other / Misc.

Method: , Run Date: 12/24/22 05:40, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:28, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/20/22 07:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.26

Sample Tag: AOC11-MW-22-07 (8-10)

Collected Date/Time: 12/13/2022 10:40

Matrix: Soil

COC Reference: 158708

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 16:00	JRH	
BNA Extraction*	Completed	SW3546	12/20/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	12.239/12	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/19/22 14:18	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	89	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 16:43, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,270	1.0		mg/kg	310	7429-90-5		
Antimony	Not detected	0.50		mg/kg	310	7440-36-0		
Arsenic	0.47	0.20		mg/kg	310	7440-38-2		
Barium	7.75	1.0		mg/kg	310	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	310	7440-41-7		
Boron	Not detected	2.0		mg/kg	310	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	310	7440-43-9		
Chromium	1.18	0.50		mg/kg	310	7440-47-3		
Cobalt	Not detected	0.50		mg/kg	310	7440-48-4		
Copper	1.23	0.50		mg/kg	310	7440-50-8		
Iron	820	1.0		mg/kg	310	7439-89-6		
Lead	3.16	0.30		mg/kg	310	7439-92-1		
Manganese	23.3	0.50		mg/kg	310	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	310	7439-98-7		
Nickel	0.69	0.50		mg/kg	310	7440-02-0		
Selenium	Not detected	0.40		mg/kg	310	7782-49-2		
Silver	Not detected	0.20		mg/kg	310	7440-22-4		
Strontium	12.4	0.50		mg/kg	310	7440-24-6		
Thallium	Not detected	0.20		mg/kg	310	7440-28-0		
Tin	Not detected	2.0		mg/kg	310	7440-31-5		
Titanium	23.6	1.0		mg/kg	310	7440-32-6		
Vanadium	2.04	0.50		mg/kg	310	7440-62-2		
Zinc	3.37	0.50		mg/kg	310	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43471.26 (continued)

Sample Tag: AOC11-MW-22-07 (8-10)

Method: SW6020A, Run Date: 12/19/22 12:33, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	10,300	20		mg/kg	310	7440-70-2		
Magnesium	1,750	20		mg/kg	310	7439-95-4		
Potassium	126	20		mg/kg	310	7440-09-7		
Sodium	24.6	20		mg/kg	310	7440-23-5		

Method: SW7471B, Run Date: 12/19/22 16:31, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.120	0.050		mg/kg	80	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/20/22 17:21, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 04:08, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	Not detected	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43471.26 (continued)

Sample Tag: AOC11-MW-22-07 (8-10)

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 04:08, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	490	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	Not detected	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	390	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/29/22 04:08, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Phenanthrene	Found			ug/kg	6	85-01-8		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Indeno(1,2,3-cd)pyrene	Found			ug/kg	6	193-39-5		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 18:28, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	61.3	108-20-3		

Method: SW5035A/8260C, Run Date: 12/19/22 02:44, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	61.3			



Analytical Laboratory Report

Lab Sample ID: S43471.26 (continued)

Sample Tag: AOC11-MW-22-07 (8-10)

Method: SW8260B - SIM, Run Date: 12/23/22 00:48, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	61.3	96-12-8		
1,4-Dioxane*	70	60		ug/kg	61.3	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 02:44, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	61.3	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	61.3	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	61.3	107-13-1		
2-Butanone (MEK)	Not detected	920		ug/kg	61.3	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	61.3	75-71-8		
Chloromethane	Not detected	300		ug/kg	61.3	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	61.3	75-01-4		
Bromomethane	Not detected	200		ug/kg	61.3	74-83-9		
Chloroethane	Not detected	300		ug/kg	61.3	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	61.3	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	61.3	75-35-4		
Methylene chloride	Not detected	100		ug/kg	61.3	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	61.3	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	61.3	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	61.3	156-59-2		
Chloroform	Not detected	60		ug/kg	61.3	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	61.3	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	61.3	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	61.3	56-23-5		
Benzene	Not detected	60		ug/kg	61.3	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	61.3	107-06-2		
Trichloroethene	Not detected	60		ug/kg	61.3	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	61.3	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	61.3	75-27-4		
Dibromomethane	Not detected	300		ug/kg	61.3	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	61.3	10061-01-5		
Toluene	Not detected	60		ug/kg	61.3	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	61.3	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	61.3	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	61.3	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	61.3	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	61.3	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	61.3	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	61.3	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	61.3	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	61.3			
o-Xylene	Not detected	60		ug/kg	61.3	95-47-6		
Styrene	Not detected	60		ug/kg	61.3	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	61.3	98-82-8		
Bromoform	Not detected	100		ug/kg	61.3	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	61.3	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	61.3	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	61.3	103-65-1		
Bromobenzene	Not detected	100		ug/kg	61.3	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.26 (continued)

Sample Tag: AOC11-MW-22-07 (8-10)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 02:44, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	61.3	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	61.3	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	61.3	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	61.3	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	61.3	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	61.3	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	61.3	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	61.3	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	61.3	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	61.3	104-51-8		
1,2,4-Trichlorobenzene	Not detected	400		ug/kg	61.3	120-82-1		
1,2,3-Trichlorobenzene	Not detected	400		ug/kg	61.3	87-61-6		
Naphthalene	Not detected	300		ug/kg	61.3	91-20-3		
Acrolein	Not detected	60		ug/kg	61.3	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	61.3	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	61.3	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	61.3	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	61.3	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	61.3	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	61.3	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	61.3	76-13-1		

Other / Misc.

Method: , Run Date: 12/24/22 06:01, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:28, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/20/22 07:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.27

Sample Tag: AOC7-MW-22-08 (8-10)

Collected Date/Time: 12/13/2022 08:50

Matrix: Soil

COC Reference: 158708

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 16:00	JRH	
BNA Extraction*	Completed	SW3546	12/20/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/19/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	13.151/13	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/19/22 14:18	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	91	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 16:45, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	418	1.0		mg/kg	307	7429-90-5		
Antimony	Not detected	0.50		mg/kg	307	7440-36-0		
Arsenic	0.24	0.20		mg/kg	307	7440-38-2		
Barium	5.37	1.0		mg/kg	307	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	307	7440-41-7		
Boron	Not detected	2.0		mg/kg	307	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	307	7440-43-9		
Chromium	0.65	0.50		mg/kg	307	7440-47-3		
Cobalt	Not detected	0.50		mg/kg	307	7440-48-4		
Copper	1.39	0.50		mg/kg	307	7440-50-8		
Iron	519	1.0		mg/kg	307	7439-89-6		
Lead	1.21	0.30		mg/kg	307	7439-92-1		
Manganese	39.9	0.50		mg/kg	307	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	307	7439-98-7		
Nickel	1.16	0.50		mg/kg	307	7440-02-0		
Selenium	Not detected	0.40		mg/kg	307	7782-49-2		
Silver	Not detected	0.20		mg/kg	307	7440-22-4		
Strontium	4.82	0.50		mg/kg	307	7440-24-6		
Thallium	Not detected	0.20		mg/kg	307	7440-28-0		
Tin	Not detected	2.0		mg/kg	307	7440-31-5		
Titanium	5.34	1.0		mg/kg	307	7440-32-6		
Vanadium	0.93	0.50		mg/kg	307	7440-62-2		
Zinc	2.56	0.50		mg/kg	307	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43471.27 (continued)

Sample Tag: AOC7-MW-22-08 (8-10)

Method: SW6020A, Run Date: 12/19/22 12:34, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	3,970	20		mg/kg	307	7440-70-2		
Magnesium	763	20		mg/kg	307	7439-95-4		
Potassium	84.2	20		mg/kg	307	7440-09-7		
Sodium	Not detected	20		mg/kg	307	7440-23-5		

Method: SW7471B, Run Date: 12/19/22 16:35, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	57	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/20/22 13:33, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	1	12674-11-2		
PCB-1242	Not detected	330		ug/kg	1	53469-21-9		
PCB-1221	Not detected	330		ug/kg	1	11104-28-2		
PCB-1232	Not detected	330		ug/kg	1	11141-16-5		
PCB-1248	Not detected	330		ug/kg	1	12672-29-6		
PCB-1254	Not detected	330		ug/kg	1	11097-69-1		
PCB-1260	Not detected	330		ug/kg	1	11096-82-5		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 12/29/22 04:39, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	6			

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 04:39, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	Not detected	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		



Analytical Laboratory Report

Lab Sample ID: S43471.27 (continued)

Sample Tag: AOC7-MW-22-08 (8-10)

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 04:39, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	Not detected	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	Not detected	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	Not detected	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 18:52, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	59.3	108-20-3		

Method: SW5035A/8260C, Run Date: 12/19/22 03:08, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	59.3			

Method: SW8260B - SIM, Run Date: 12/23/22 01:08, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	59.3	96-12-8		
1,4-Dioxane*	80	60		ug/kg	59.3	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 03:08, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	59.3	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	59.3	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	59.3	107-13-1		



Analytical Laboratory Report

Lab Sample ID: S43471.27 (continued)

Sample Tag: AOC7-MW-22-08 (8-10)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 03:08, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2-Butanone (MEK)	Not detected	890		ug/kg	59.3	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	59.3	75-71-8		
Chloromethane	Not detected	300		ug/kg	59.3	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	59.3	75-01-4		
Bromomethane	Not detected	200		ug/kg	59.3	74-83-9		
Chloroethane	Not detected	300		ug/kg	59.3	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	59.3	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	59.3	75-35-4		
Methylene chloride	Not detected	100		ug/kg	59.3	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	59.3	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	59.3	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	59.3	156-59-2		
Chloroform	Not detected	60		ug/kg	59.3	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	59.3	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	59.3	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	59.3	56-23-5		
Benzene	Not detected	60		ug/kg	59.3	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	59.3	107-06-2		
Trichloroethene	Not detected	60		ug/kg	59.3	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	59.3	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	59.3	75-27-4		
Dibromomethane	Not detected	300		ug/kg	59.3	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	59.3	10061-01-5		
Toluene	Not detected	60		ug/kg	59.3	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	59.3	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	59.3	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	59.3	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	59.3	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	59.3	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	59.3	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	59.3	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	59.3	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	59.3			
o-Xylene	Not detected	60		ug/kg	59.3	95-47-6		
Styrene	Not detected	60		ug/kg	59.3	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	59.3	98-82-8		
Bromoform	Not detected	100		ug/kg	59.3	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	59.3	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	59.3	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	59.3	103-65-1		
Bromobenzene	Not detected	100		ug/kg	59.3	108-86-1		
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	59.3	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	59.3	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	59.3	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	59.3	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	59.3	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	59.3	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	59.3	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	59.3	95-50-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.27 (continued)

Sample Tag: AOC7-MW-22-08 (8-10)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 03:08, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	59.3	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	59.3	104-51-8		
1,2,4-Trichlorobenzene	Not detected	390		ug/kg	59.3	120-82-1		
1,2,3-Trichlorobenzene	Not detected	390		ug/kg	59.3	87-61-6		
Naphthalene	Not detected	300		ug/kg	59.3	91-20-3		
Acrolein	Not detected	60		ug/kg	59.3	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	59.3	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	59.3	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	59.3	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	59.3	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	59.3	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	59.3	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	59.3	76-13-1		

Other / Misc.

Method: , Run Date: 12/24/22 06:21, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:28, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/20/22 07:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.28

Sample Tag: AOC11-MW-22-10 (2-4)

Collected Date/Time: 12/13/2022 12:45

Matrix: Soil

COC Reference: 158708

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 16:00	JRH	
BNA Extraction*	Completed	SW3546	12/20/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/20/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	12.653/12	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/19/22 14:18	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	92	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 16:47, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	2,770	1.0		mg/kg	307	7429-90-5		
Antimony	Not detected	0.50		mg/kg	307	7440-36-0		
Arsenic	1.55	0.20		mg/kg	307	7440-38-2		
Barium	42.7	1.0		mg/kg	307	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	307	7440-41-7		
Boron	2.39	2.0		mg/kg	307	7440-42-8		
Cadmium	0.36	0.20		mg/kg	307	7440-43-9		
Chromium	8.12	0.50		mg/kg	307	7440-47-3		
Cobalt	1.75	0.50		mg/kg	307	7440-48-4		
Copper	7.04	0.50		mg/kg	307	7440-50-8		
Iron	2,460	1.0		mg/kg	307	7439-89-6		
Lead	34.6	0.30		mg/kg	307	7439-92-1		
Manganese	129	0.50		mg/kg	307	7439-96-5		
Molybdenum	0.65	0.50		mg/kg	307	7439-98-7		
Nickel	3.66	0.50		mg/kg	307	7440-02-0		
Selenium	Not detected	0.40		mg/kg	307	7782-49-2		
Silver	0.81	0.20		mg/kg	307	7440-22-4		
Strontium	39.2	0.50		mg/kg	307	7440-24-6		
Thallium	Not detected	0.20		mg/kg	307	7440-28-0		
Tin	Not detected	2.0		mg/kg	307	7440-31-5		
Titanium	80.8	1.0		mg/kg	307	7440-32-6		
Vanadium	8.12	0.50		mg/kg	307	7440-62-2		
Zinc	47.9	0.50		mg/kg	307	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43471.28 (continued)

Sample Tag: AOC11-MW-22-10 (2-4)

Method: SW6020A, Run Date: 12/19/22 12:35, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	33,200	20		mg/kg	307	7440-70-2		
Magnesium	2,980	20		mg/kg	307	7439-95-4		
Potassium	276	20		mg/kg	307	7440-09-7		
Sodium	56.9	20		mg/kg	307	7440-23-5		

Method: SW7471B, Run Date: 12/19/22 16:38, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	1.422	0.050		mg/kg	77	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/21/22 14:55, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	1	12674-11-2		
PCB-1242	Not detected	330		ug/kg	1	53469-21-9		
PCB-1221	Not detected	330		ug/kg	1	11104-28-2		
PCB-1232	Not detected	330		ug/kg	1	11141-16-5		
PCB-1248	Not detected	330		ug/kg	1	12672-29-6		
PCB-1254	Not detected	330		ug/kg	1	11097-69-1		
PCB-1260	Not detected	330		ug/kg	1	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 13:42, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	390	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	1,750	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	1,610	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	1,620	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	1,080	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	1,780	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	1,920	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43471.28 (continued)

Sample Tag: AOC11-MW-22-10 (2-4)

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 13:42, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	3,890	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	970	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	1,790	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	3,380	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/29/22 13:42, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Phenanthrene	Found			ug/kg	6	85-01-8		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Indeno(1,2,3-cd)pyrene	Found			ug/kg	6	193-39-5		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 19:16, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	55.9	108-20-3		

Method: SW5035A/8260C, Run Date: 12/19/22 03:32, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	55.9			



Analytical Laboratory Report

Lab Sample ID: S43471.28 (continued)

Sample Tag: AOC11-MW-22-10 (2-4)

Method: SW8260B - SIM, Run Date: 12/23/22 01:29, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	55.9	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	55.9	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 03:32, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	55.9	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	55.9	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	55.9	107-13-1		
2-Butanone (MEK)	Not detected	840		ug/kg	55.9	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	55.9	75-71-8		
Chloromethane	Not detected	300		ug/kg	55.9	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	55.9	75-01-4		
Bromomethane	Not detected	200		ug/kg	55.9	74-83-9		
Chloroethane	Not detected	300		ug/kg	55.9	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	55.9	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	55.9	75-35-4		
Methylene chloride	Not detected	100		ug/kg	55.9	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	55.9	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	55.9	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	55.9	156-59-2		
Chloroform	Not detected	60		ug/kg	55.9	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	55.9	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	55.9	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	55.9	56-23-5		
Benzene	Not detected	60		ug/kg	55.9	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	55.9	107-06-2		
Trichloroethene	Not detected	60		ug/kg	55.9	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	55.9	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	55.9	75-27-4		
Dibromomethane	Not detected	300		ug/kg	55.9	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	55.9	10061-01-5		
Toluene	Not detected	60		ug/kg	55.9	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	55.9	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	55.9	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	55.9	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	55.9	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	55.9	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	55.9	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	55.9	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	55.9	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	55.9			
o-Xylene	Not detected	60		ug/kg	55.9	95-47-6		
Styrene	Not detected	60		ug/kg	55.9	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	55.9	98-82-8		
Bromoform	Not detected	100		ug/kg	55.9	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	55.9	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	55.9	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	55.9	103-65-1		
Bromobenzene	Not detected	100		ug/kg	55.9	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.28 (continued)

Sample Tag: AOC11-MW-22-10 (2-4)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 03:32, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	55.9	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	55.9	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	55.9	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	55.9	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	55.9	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	55.9	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	55.9	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	55.9	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	55.9	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	55.9	104-51-8		
1,2,4-Trichlorobenzene	Not detected	370		ug/kg	55.9	120-82-1		
1,2,3-Trichlorobenzene	Not detected	370		ug/kg	55.9	87-61-6		
Naphthalene	Not detected	300		ug/kg	55.9	91-20-3		
Acrolein	Not detected	60		ug/kg	55.9	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	55.9	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	55.9	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	55.9	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	55.9	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	55.9	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	55.9	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	55.9	76-13-1		

Other / Misc.

Method: , Run Date: 12/24/22 06:42, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:28, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/20/22 07:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.29

Sample Tag: AOC11-MW-22-10 (8-10)

Collected Date/Time: 12/13/2022 13:00

Matrix: Soil

COC Reference: 158708

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 16:00	JRH	
BNA Extraction*	Completed	SW3546	12/20/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/20/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	12.474/12	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/19/22 14:18	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Metals

Method: SW6020A, Run Date: 12/16/22 16:49, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	693	1.0		mg/kg	304	7429-90-5		
Antimony	Not detected	0.50		mg/kg	304	7440-36-0		
Arsenic	0.97	0.20		mg/kg	304	7440-38-2		
Barium	11.2	1.0		mg/kg	304	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	304	7440-41-7		
Boron	Not detected	2.0		mg/kg	304	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	304	7440-43-9		
Chromium	3.12	0.50		mg/kg	304	7440-47-3		
Cobalt	0.77	0.50		mg/kg	304	7440-48-4		
Copper	2.62	0.50		mg/kg	304	7440-50-8		
Iron	1,070	1.0		mg/kg	304	7439-89-6		
Lead	6.51	0.30		mg/kg	304	7439-92-1		
Manganese	99.5	0.50		mg/kg	304	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	304	7439-98-7		
Nickel	1.51	0.50		mg/kg	304	7440-02-0		
Selenium	Not detected	0.40		mg/kg	304	7782-49-2		
Silver	Not detected	0.20		mg/kg	304	7440-22-4		
Strontium	32.4	0.50		mg/kg	304	7440-24-6		
Thallium	Not detected	0.20		mg/kg	304	7440-28-0		
Tin	Not detected	2.0		mg/kg	304	7440-31-5		
Titanium	17.1	1.0		mg/kg	304	7440-32-6		
Vanadium	1.87	0.50		mg/kg	304	7440-62-2		
Zinc	13.4	0.50		mg/kg	304	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43471.29 (continued)

Sample Tag: AOC11-MW-22-10 (8-10)

Method: SW6020A, Run Date: 12/19/22 12:36, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	38,200	20		mg/kg	304	7440-70-2		
Magnesium	6,670	20		mg/kg	304	7439-95-4		
Potassium	119	20		mg/kg	304	7440-09-7		
Sodium	32.7	20		mg/kg	304	7440-23-5		

Method: SW7471B, Run Date: 12/19/22 16:41, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	68	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/21/22 15:06, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	1	12674-11-2		
PCB-1242	Not detected	330		ug/kg	1	53469-21-9		
PCB-1221	Not detected	330		ug/kg	1	11104-28-2		
PCB-1232	Not detected	330		ug/kg	1	11141-16-5		
PCB-1248	Not detected	330		ug/kg	1	12672-29-6		
PCB-1254	Not detected	330		ug/kg	1	11097-69-1		
PCB-1260	Not detected	330		ug/kg	1	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 13:11, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	840	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	800	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	680	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	500	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	810	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	920	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43471.29 (continued)

Sample Tag: AOC11-MW-22-10 (8-10)

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 13:11, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	1,910	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	450	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	850	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	1,590	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/29/22 13:11, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	6			
Fluoranthene	Found			ug/kg	6	206-44-0		
Pyrene	Found			ug/kg	6	129-00-0		
Phenanthrene	Found			ug/kg	6	85-01-8		
Chrysene	Found			ug/kg	6	218-01-9		
Benzo(a)anthracene	Found			ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9		
Benzo(a)pyrene	Found			ug/kg	6	50-32-8		
Benzo(e)pyrene	Found			ug/kg	6	192-97-2		
Indeno(1,2,3-cd)pyrene	Found			ug/kg	6	193-39-5		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 19:41, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	54.4	108-20-3		

Method: SW5035A/8260C, Run Date: 12/19/22 03:56, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	54.4			



Analytical Laboratory Report

Lab Sample ID: S43471.29 (continued)

Sample Tag: AOC11-MW-22-10 (8-10)

Method: SW8260B - SIM, Run Date: 12/23/22 01:50, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	54.4	96-12-8		
1,4-Dioxane*	60	50		ug/kg	54.4	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 03:56, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	54.4	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	54.4	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	54.4	107-13-1		
2-Butanone (MEK)	Not detected	820		ug/kg	54.4	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	54.4	75-71-8		
Chloromethane	Not detected	300		ug/kg	54.4	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	54.4	75-01-4		
Bromomethane	Not detected	200		ug/kg	54.4	74-83-9		
Chloroethane	Not detected	300		ug/kg	54.4	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	54.4	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	54.4	75-35-4		
Methylene chloride	Not detected	100		ug/kg	54.4	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	54.4	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	54.4	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	54.4	156-59-2		
Chloroform	Not detected	50		ug/kg	54.4	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	54.4	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	54.4	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	54.4	56-23-5		
Benzene	Not detected	50		ug/kg	54.4	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	54.4	107-06-2		
Trichloroethene	Not detected	50		ug/kg	54.4	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	54.4	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	54.4	75-27-4		
Dibromomethane	Not detected	300		ug/kg	54.4	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	54.4	10061-01-5		
Toluene	Not detected	50		ug/kg	54.4	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	54.4	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	54.4	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	54.4	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	54.4	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	54.4	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	54.4	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	54.4	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	54.4	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	54.4			
o-Xylene	Not detected	50		ug/kg	54.4	95-47-6		
Styrene	Not detected	50		ug/kg	54.4	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	54.4	98-82-8		
Bromoform	Not detected	100		ug/kg	54.4	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	54.4	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	54.4	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	54.4	103-65-1		
Bromobenzene	Not detected	100		ug/kg	54.4	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.29 (continued)

Sample Tag: AOC11-MW-22-10 (8-10)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 03:56, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	54.4	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	54.4	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	54.4	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	54.4	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	54.4	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	54.4	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	54.4	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	54.4	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	54.4	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	54.4	104-51-8		
1,2,4-Trichlorobenzene	Not detected	360		ug/kg	54.4	120-82-1		
1,2,3-Trichlorobenzene	Not detected	360		ug/kg	54.4	87-61-6		
Naphthalene	Not detected	300		ug/kg	54.4	91-20-3		
Acrolein	Not detected	50		ug/kg	54.4	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	54.4	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	54.4	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	54.4	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	54.4	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	54.4	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	54.4	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	54.4	76-13-1		

Other / Misc.

Method: , Run Date: 12/24/22 07:02, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:28, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/20/22 07:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.30

Sample Tag: AOC3-MW-22-11 (2-4)

Collected Date/Time: 12/13/2022 13:50

Matrix: Soil

COC Reference: 158708

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
3	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 16:00	JRH	
BNA Extraction*	Completed	SW3546	12/20/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/20/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	11.392/11	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/19/22 14:18	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Metals

Method: SW6020A, Run Date: 12/19/22 12:38, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	212	20		mg/kg	291	7440-70-2		
Magnesium	107	20		mg/kg	291	7439-95-4		
Potassium	42.0	20		mg/kg	291	7440-09-7		
Sodium	44.9	20		mg/kg	291	7440-23-5		

Method: SW6020A, Run Date: 12/16/22 16:51, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	832	1.0		mg/kg	291	7429-90-5		
Antimony	Not detected	0.50		mg/kg	291	7440-36-0		
Arsenic	Not detected	0.20		mg/kg	291	7440-38-2		
Barium	9.12	1.0		mg/kg	291	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	291	7440-41-7		
Boron	Not detected	2.0		mg/kg	291	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	291	7440-43-9		
Chromium	1.07	0.50		mg/kg	291	7440-47-3		
Cobalt	Not detected	0.50		mg/kg	291	7440-48-4		
Copper	0.83	0.50		mg/kg	291	7440-50-8		
Iron	213	1.0		mg/kg	291	7439-89-6		
Lead	0.41	0.30		mg/kg	291	7439-92-1		
Manganese	12.2	0.50		mg/kg	291	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	291	7439-98-7		
Nickel	Not detected	0.50		mg/kg	291	7440-02-0		
Selenium	Not detected	0.40		mg/kg	291	7782-49-2		
Silver	Not detected	0.20		mg/kg	291	7440-22-4		
Strontium	0.79	0.50		mg/kg	291	7440-24-6		
Thallium	Not detected	0.20		mg/kg	291	7440-28-0		
Tin	Not detected	2.0		mg/kg	291	7440-31-5		



Analytical Laboratory Report

Lab Sample ID: S43471.30 (continued)

Sample Tag: AOC3-MW-22-11 (2-4)

Method: SW6020A, Run Date: 12/16/22 16:51, Analyst: JRH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Titanium	22.8	1.0		mg/kg	291	7440-32-6		
Vanadium	Not detected	0.50		mg/kg	291	7440-62-2		
Zinc	1.09	0.50		mg/kg	291	7440-66-6		

Method: SW7471B, Run Date: 12/19/22 16:44, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	61	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/21/22 13:28, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	1	12674-11-2		
PCB-1242	Not detected	330		ug/kg	1	53469-21-9		
PCB-1221	Not detected	330		ug/kg	1	11104-28-2		
PCB-1232	Not detected	330		ug/kg	1	11141-16-5		
PCB-1248	Not detected	330		ug/kg	1	12672-29-6		
PCB-1254	Not detected	330		ug/kg	1	11097-69-1		
PCB-1260	Not detected	330		ug/kg	1	11096-82-5		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 12/29/22 03:07, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	6			

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 03:07, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	Not detected	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		



Analytical Laboratory Report

Lab Sample ID: S43471.30 (continued)

Sample Tag: AOC3-MW-22-11 (2-4)

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 03:07, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	Not detected	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	Not detected	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	Not detected	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/27/22 15:31, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	54.6	108-20-3		
TICs*	None Found			ug/kg	54.6			

Method: SW8260B - SIM, Run Date: 12/23/22 02:11, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	54.6	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	54.6	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/27/22 15:31, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	54.6	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	54.6	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	54.6	107-13-1		
2-Butanone (MEK)	Not detected	820		ug/kg	54.6	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	54.6	75-71-8		
Chloromethane	Not detected	300		ug/kg	54.6	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	54.6	75-01-4		



Analytical Laboratory Report

Lab Sample ID: S43471.30 (continued)

Sample Tag: AOC3-MW-22-11 (2-4)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/27/22 15:31, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Bromomethane	Not detected	200		ug/kg	54.6	74-83-9		
Chloroethane	Not detected	300		ug/kg	54.6	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	54.6	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	54.6	75-35-4		
Methylene chloride	Not detected	100		ug/kg	54.6	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	54.6	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	54.6	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	54.6	156-59-2		
Chloroform	Not detected	50		ug/kg	54.6	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	54.6	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	54.6	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	54.6	56-23-5		
Benzene	Not detected	50		ug/kg	54.6	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	54.6	107-06-2		
Trichloroethene	Not detected	50		ug/kg	54.6	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	54.6	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	54.6	75-27-4		
Dibromomethane	Not detected	300		ug/kg	54.6	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	54.6	10061-01-5		
Toluene	Not detected	50		ug/kg	54.6	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	54.6	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	54.6	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	54.6	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	54.6	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	54.6	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	54.6	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	54.6	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	54.6	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	54.6			
o-Xylene	Not detected	50		ug/kg	54.6	95-47-6		
Styrene	Not detected	50		ug/kg	54.6	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	54.6	98-82-8		
Bromoform	Not detected	100		ug/kg	54.6	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	54.6	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	54.6	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	54.6	103-65-1		
Bromobenzene	Not detected	100		ug/kg	54.6	108-86-1		
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	54.6	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	54.6	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	54.6	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	54.6	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	54.6	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	54.6	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	54.6	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	54.6	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	54.6	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	54.6	104-51-8		
1,2,4-Trichlorobenzene	Not detected	360		ug/kg	54.6	120-82-1		
1,2,3-Trichlorobenzene	Not detected	360		ug/kg	54.6	87-61-6		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.30 (continued)

Sample Tag: AOC3-MW-22-11 (2-4)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/27/22 15:31, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Naphthalene	Not detected	300		ug/kg	54.6	91-20-3		
Acrolein	Not detected	50		ug/kg	54.6	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	54.6	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	54.6	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	54.6	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	54.6	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	54.6	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	54.6	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	54.6	76-13-1		

Other / Misc.

Method: , Run Date: 12/24/22 07:22, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:28, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.31

Sample Tag: AOC3-MW-22-11 (8-10)

Collected Date/Time: 12/13/2022 14:00

Matrix: Soil

COC Reference: 158708

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
3	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 16:00	JRH	
BNA Extraction*	Completed	SW3546	12/20/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/20/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	10.406/10	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/19/22 14:18	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Metals

Method: SW6020A, Run Date: 12/19/22 12:39, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	274	20		mg/kg	283	7440-70-2		
Magnesium	94.0	20		mg/kg	283	7439-95-4		
Potassium	53.8	20		mg/kg	283	7440-09-7		
Sodium	24.7	20		mg/kg	283	7440-23-5		

Method: SW6020A, Run Date: 12/16/22 16:53, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	412	1.0		mg/kg	283	7429-90-5		
Antimony	Not detected	0.50		mg/kg	283	7440-36-0		
Arsenic	Not detected	0.20		mg/kg	283	7440-38-2		
Barium	4.86	1.0		mg/kg	283	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	283	7440-41-7		
Boron	Not detected	2.0		mg/kg	283	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	283	7440-43-9		
Chromium	0.98	0.50		mg/kg	283	7440-47-3		
Cobalt	Not detected	0.50		mg/kg	283	7440-48-4		
Copper	6.32	0.50		mg/kg	283	7440-50-8		
Iron	197	1.0		mg/kg	283	7439-89-6		
Lead	1.06	0.30		mg/kg	283	7439-92-1		
Manganese	5.43	0.50		mg/kg	283	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	283	7439-98-7		
Nickel	0.70	0.50		mg/kg	283	7440-02-0		
Selenium	Not detected	0.40		mg/kg	283	7782-49-2		
Silver	Not detected	0.20		mg/kg	283	7440-22-4		
Strontium	1.06	0.50		mg/kg	283	7440-24-6		
Thallium	Not detected	0.20		mg/kg	283	7440-28-0		
Tin	Not detected	2.0		mg/kg	283	7440-31-5		



Analytical Laboratory Report

Lab Sample ID: S43471.31 (continued)

Sample Tag: AOC3-MW-22-11 (8-10)

Method: SW6020A, Run Date: 12/16/22 16:53, Analyst: JRH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Titanium	6.06	1.0		mg/kg	283	7440-32-6		
Vanadium	0.83	0.50		mg/kg	283	7440-62-2		
Zinc	2.71	0.50		mg/kg	283	7440-66-6		

Method: SW7471B, Run Date: 12/19/22 16:54, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	74	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/21/22 15:17, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	1	12674-11-2		
PCB-1242	Not detected	330		ug/kg	1	53469-21-9		
PCB-1221	Not detected	330		ug/kg	1	11104-28-2		
PCB-1232	Not detected	330		ug/kg	1	11141-16-5		
PCB-1248	Not detected	330		ug/kg	1	12672-29-6		
PCB-1254	Not detected	330		ug/kg	1	11097-69-1		
PCB-1260	Not detected	330		ug/kg	1	11096-82-5		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 12/29/22 02:37, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	6			

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 02:37, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	Not detected	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		



Analytical Laboratory Report

Lab Sample ID: S43471.31 (continued)

Sample Tag: AOC3-MW-22-11 (8-10)

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 02:37, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	Not detected	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	Not detected	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	Not detected	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/27/22 15:56, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	53.2	108-20-3		
TICs*	None Found			ug/kg	53.2			

Method: SW8260B - SIM, Run Date: 12/23/22 02:32, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	53.2	96-12-8		
1,4-Dioxane*	Not detected	80		ug/kg	53.2	123-91-1	X	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/27/22 15:56, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	2,000		ug/kg	53.2	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	53.2	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	53.2	107-13-1		
2-Butanone (MEK)	Not detected	800		ug/kg	53.2	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	53.2	75-71-8		
Chloromethane	Not detected	300		ug/kg	53.2	74-87-3		

X-Elevated reporting limit due to matrix interference



Analytical Laboratory Report

Lab Sample ID: S43471.31 (continued)

Sample Tag: AOC3-MW-22-11 (8-10)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/27/22 15:56, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Vinyl chloride	Not detected	50		ug/kg	53.2	75-01-4		
Bromomethane	Not detected	200		ug/kg	53.2	74-83-9		
Chloroethane	Not detected	300		ug/kg	53.2	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	53.2	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	53.2	75-35-4		
Methylene chloride	Not detected	100		ug/kg	53.2	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	53.2	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	53.2	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	53.2	156-59-2		
Chloroform	Not detected	50		ug/kg	53.2	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	53.2	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	53.2	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	53.2	56-23-5		
Benzene	Not detected	50		ug/kg	53.2	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	53.2	107-06-2		
Trichloroethene	Not detected	50		ug/kg	53.2	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	53.2	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	53.2	75-27-4		
Dibromomethane	Not detected	300		ug/kg	53.2	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	53.2	10061-01-5		
Toluene	Not detected	50		ug/kg	53.2	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	53.2	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	53.2	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	53.2	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	53.2	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	53.2	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	53.2	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	53.2	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	53.2	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	53.2			
o-Xylene	Not detected	50		ug/kg	53.2	95-47-6		
Styrene	Not detected	50		ug/kg	53.2	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	53.2	98-82-8		
Bromoform	Not detected	100		ug/kg	53.2	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	53.2	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	53.2	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	53.2	103-65-1		
Bromobenzene	Not detected	100		ug/kg	53.2	108-86-1		
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	53.2	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	53.2	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	53.2	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	53.2	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	53.2	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	53.2	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	53.2	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	53.2	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	53.2	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	53.2	104-51-8		
1,2,4-Trichlorobenzene	Not detected	350		ug/kg	53.2	120-82-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.31 (continued)

Sample Tag: AOC3-MW-22-11 (8-10)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/27/22 15:56, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2,3-Trichlorobenzene	Not detected	350		ug/kg	53.2	87-61-6		
Naphthalene	Not detected	300		ug/kg	53.2	91-20-3		
Acrolein	Not detected	50		ug/kg	53.2	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	53.2	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	53.2	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	53.2	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	53.2	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	53.2	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	53.2	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	53.2	76-13-1		

Other / Misc.

Method: , Run Date: 12/23/22 18:19, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:28, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.32

Sample Tag: AOC3-MW-22-12 (2-4)

Collected Date/Time: 12/13/2022 16:00

Matrix: Soil

COC Reference: 158708

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
3	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 16:00	JRH	
BNA Extraction*	Completed	SW3546	12/20/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/20/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	9.571/10	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/19/22 14:18	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	97	1		%	1			

Metals

Method: SW6020A, Run Date: 12/19/22 12:40, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	90.6	20		mg/kg	283	7440-70-2		
Magnesium	58.2	20		mg/kg	283	7439-95-4		
Potassium	21.2	20		mg/kg	283	7440-09-7		
Sodium	Not detected	20		mg/kg	283	7440-23-5		

Method: SW6020A, Run Date: 12/16/22 16:55, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,950	1.0		mg/kg	283	7429-90-5		
Antimony	Not detected	0.50		mg/kg	283	7440-36-0		
Arsenic	0.34	0.20		mg/kg	283	7440-38-2		
Barium	4.79	1.0		mg/kg	283	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	283	7440-41-7		
Boron	Not detected	2.0		mg/kg	283	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	283	7440-43-9		
Chromium	2.52	0.50		mg/kg	283	7440-47-3		
Cobalt	0.89	0.50		mg/kg	283	7440-48-4		
Copper	0.50	0.50		mg/kg	283	7440-50-8		
Iron	3,140	1.0		mg/kg	283	7439-89-6		
Lead	1.10	0.30		mg/kg	283	7439-92-1		
Manganese	4.42	0.50		mg/kg	283	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	283	7439-98-7		
Nickel	0.82	0.50		mg/kg	283	7440-02-0		
Selenium	Not detected	0.40		mg/kg	283	7782-49-2		
Silver	Not detected	0.20		mg/kg	283	7440-22-4		
Strontium	Not detected	0.50		mg/kg	283	7440-24-6		
Thallium	Not detected	0.20		mg/kg	283	7440-28-0		
Tin	Not detected	2.0		mg/kg	283	7440-31-5		



Analytical Laboratory Report

Lab Sample ID: S43471.32 (continued)

Sample Tag: AOC3-MW-22-12 (2-4)

Method: SW6020A, Run Date: 12/16/22 16:55, Analyst: JRH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Titanium	64.3	1.0		mg/kg	283	7440-32-6		
Vanadium	4.56	0.50		mg/kg	283	7440-62-2		
Zinc	1.33	0.50		mg/kg	283	7440-66-6		

Method: SW7471B, Run Date: 12/19/22 16:58, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	81	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/21/22 15:28, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	1	12674-11-2		
PCB-1242	Not detected	330		ug/kg	1	53469-21-9		
PCB-1221	Not detected	330		ug/kg	1	11104-28-2		
PCB-1232	Not detected	330		ug/kg	1	11141-16-5		
PCB-1248	Not detected	330		ug/kg	1	12672-29-6		
PCB-1254	Not detected	330		ug/kg	1	11097-69-1		
PCB-1260	Not detected	330		ug/kg	1	11096-82-5		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 12/28/22 21:31, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	6			

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 21:31, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	Not detected	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		



Analytical Laboratory Report

Lab Sample ID: S43471.32 (continued)

Sample Tag: AOC3-MW-22-12 (2-4)

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 21:31, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	Not detected	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	Not detected	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	Not detected	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 20:05, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	55.4	108-20-3		

Method: SW5035A/8260C, Run Date: 12/19/22 08:44, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	55.4			

Method: SW8260B - SIM, Run Date: 12/23/22 02:53, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	55.4	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	55.4	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 08:44, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	55.4	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	55.4	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	55.4	107-13-1		
2-Butanone (MEK)	Not detected	830		ug/kg	55.4	78-93-3		



Analytical Laboratory Report

Lab Sample ID: S43471.32 (continued)

Sample Tag: AOC3-MW-22-12 (2-4)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 08:44, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Dichlorodifluoromethane	Not detected	300		ug/kg	55.4	75-71-8		
Chloromethane	Not detected	300		ug/kg	55.4	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	55.4	75-01-4		
Bromomethane	Not detected	200		ug/kg	55.4	74-83-9		
Chloroethane	Not detected	300		ug/kg	55.4	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	55.4	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	55.4	75-35-4		
Methylene chloride	Not detected	100		ug/kg	55.4	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	55.4	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	55.4	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	55.4	156-59-2		
Chloroform	Not detected	60		ug/kg	55.4	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	55.4	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	55.4	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	55.4	56-23-5		
Benzene	Not detected	60		ug/kg	55.4	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	55.4	107-06-2		
Trichloroethene	Not detected	60		ug/kg	55.4	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	55.4	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	55.4	75-27-4		
Dibromomethane	Not detected	300		ug/kg	55.4	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	55.4	10061-01-5		
Toluene	Not detected	60		ug/kg	55.4	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	55.4	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	55.4	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	55.4	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	55.4	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	55.4	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	55.4	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	55.4	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	55.4	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	55.4			
o-Xylene	Not detected	60		ug/kg	55.4	95-47-6		
Styrene	Not detected	60		ug/kg	55.4	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	55.4	98-82-8		
Bromoform	Not detected	100		ug/kg	55.4	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	55.4	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	55.4	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	55.4	103-65-1		
Bromobenzene	Not detected	100		ug/kg	55.4	108-86-1		
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	55.4	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	55.4	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	55.4	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	55.4	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	55.4	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	55.4	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	55.4	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	55.4	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	55.4	526-73-8		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.32 (continued)

Sample Tag: AOC3-MW-22-12 (2-4)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 08:44, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
n-Butylbenzene	Not detected	60		ug/kg	55.4	104-51-8		
1,2,4-Trichlorobenzene	Not detected	370		ug/kg	55.4	120-82-1		
1,2,3-Trichlorobenzene	Not detected	370		ug/kg	55.4	87-61-6		
Naphthalene	Not detected	300		ug/kg	55.4	91-20-3		
Acrolein	Not detected	60		ug/kg	55.4	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	55.4	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	55.4	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	55.4	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	55.4	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	55.4	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	55.4	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	55.4	76-13-1		

Other / Misc.

Method: , Run Date: 12/23/22 18:39, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:28, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.33

Sample Tag: AOC3-MW-22-12 (8-10)

Collected Date/Time: 12/13/2022 16:10

Matrix: Soil

COC Reference: 158708

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
3	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 16:00	JRH	
BNA Extraction*	Completed	SW3546	12/20/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/20/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	11.317/11	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/19/22 14:18	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	97	1		%	1			

Metals

Method: SW6020A, Run Date: 12/19/22 12:41, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	16,900	20		mg/kg	294	7440-70-2		
Magnesium	1,580	20		mg/kg	294	7439-95-4		
Potassium	54.4	20		mg/kg	294	7440-09-7		
Sodium	Not detected	20		mg/kg	294	7440-23-5		

Method: SW6020A, Run Date: 12/16/22 16:58, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	200	1.0		mg/kg	294	7429-90-5		
Antimony	Not detected	0.50		mg/kg	294	7440-36-0		
Arsenic	Not detected	0.20		mg/kg	294	7440-38-2		
Barium	2.67	1.0		mg/kg	294	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	294	7440-41-7		
Boron	Not detected	2.0		mg/kg	294	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	294	7440-43-9		
Chromium	Not detected	0.50		mg/kg	294	7440-47-3		
Cobalt	Not detected	0.50		mg/kg	294	7440-48-4		
Copper	Not detected	0.50		mg/kg	294	7440-50-8		
Iron	356	1.0		mg/kg	294	7439-89-6		
Lead	0.52	0.30		mg/kg	294	7439-92-1		
Manganese	38.1	0.50		mg/kg	294	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	294	7439-98-7		
Nickel	0.57	0.50		mg/kg	294	7440-02-0		
Selenium	Not detected	0.40		mg/kg	294	7782-49-2		
Silver	Not detected	0.20		mg/kg	294	7440-22-4		
Strontium	18.8	0.50		mg/kg	294	7440-24-6		
Thallium	Not detected	0.20		mg/kg	294	7440-28-0		
Tin	Not detected	2.0		mg/kg	294	7440-31-5		



Analytical Laboratory Report

Lab Sample ID: S43471.33 (continued)

Sample Tag: AOC3-MW-22-12 (8-10)

Method: SW6020A, Run Date: 12/16/22 16:58, Analyst: JRH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Titanium	3.35	1.0		mg/kg	294	7440-32-6		
Vanadium	Not detected	0.50		mg/kg	294	7440-62-2		
Zinc	1.50	0.50		mg/kg	294	7440-66-6		

Method: SW7471B, Run Date: 12/19/22 17:07, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	59	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/21/22 15:40, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	1	12674-11-2		
PCB-1242	Not detected	330		ug/kg	1	53469-21-9		
PCB-1221	Not detected	330		ug/kg	1	11104-28-2		
PCB-1232	Not detected	330		ug/kg	1	11141-16-5		
PCB-1248	Not detected	330		ug/kg	1	12672-29-6		
PCB-1254	Not detected	330		ug/kg	1	11097-69-1		
PCB-1260	Not detected	330		ug/kg	1	11096-82-5		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 12/28/22 22:02, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	6			

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 22:02, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	Not detected	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		



Analytical Laboratory Report

Lab Sample ID: S43471.33 (continued)

Sample Tag: AOC3-MW-22-12 (8-10)

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 22:02, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	Not detected	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	Not detected	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	Not detected	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 20:29, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	51.6	108-20-3		

Method: SW5035A/8260C, Run Date: 12/19/22 09:09, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	51.6			

Method: SW8260B - SIM, Run Date: 12/23/22 03:14, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	51.6	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	51.6	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 09:09, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	51.6	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	51.6	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	51.6	107-13-1		
2-Butanone (MEK)	Not detected	770		ug/kg	51.6	78-93-3		



Analytical Laboratory Report

Lab Sample ID: S43471.33 (continued)

Sample Tag: AOC3-MW-22-12 (8-10)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 09:09, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Dichlorodifluoromethane	Not detected	300		ug/kg	51.6	75-71-8		
Chloromethane	Not detected	300		ug/kg	51.6	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	51.6	75-01-4		
Bromomethane	Not detected	200		ug/kg	51.6	74-83-9		
Chloroethane	Not detected	300		ug/kg	51.6	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	51.6	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	51.6	75-35-4		
Methylene chloride	Not detected	100		ug/kg	51.6	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	51.6	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	51.6	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	51.6	156-59-2		
Chloroform	Not detected	50		ug/kg	51.6	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	51.6	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	51.6	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	51.6	56-23-5		
Benzene	Not detected	50		ug/kg	51.6	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	51.6	107-06-2		
Trichloroethene	Not detected	50		ug/kg	51.6	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	51.6	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	51.6	75-27-4		
Dibromomethane	Not detected	300		ug/kg	51.6	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	51.6	10061-01-5		
Toluene	Not detected	50		ug/kg	51.6	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	51.6	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	51.6	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	51.6	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	51.6	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	51.6	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	51.6	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	51.6	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	51.6	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	51.6			
o-Xylene	Not detected	50		ug/kg	51.6	95-47-6		
Styrene	Not detected	50		ug/kg	51.6	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	51.6	98-82-8		
Bromoform	Not detected	100		ug/kg	51.6	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	51.6	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	51.6	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	51.6	103-65-1		
Bromobenzene	Not detected	100		ug/kg	51.6	108-86-1		
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	51.6	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	51.6	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	51.6	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	51.6	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	51.6	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	51.6	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	51.6	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	51.6	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	51.6	526-73-8		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.33 (continued)

Sample Tag: AOC3-MW-22-12 (8-10)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 09:09, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
n-Butylbenzene	Not detected	50		ug/kg	51.6	104-51-8		
1,2,4-Trichlorobenzene	Not detected	340		ug/kg	51.6	120-82-1		
1,2,3-Trichlorobenzene	Not detected	340		ug/kg	51.6	87-61-6		
Naphthalene	Not detected	300		ug/kg	51.6	91-20-3		
Acrolein	Not detected	50		ug/kg	51.6	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	51.6	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	51.6	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	51.6	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	51.6	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	51.6	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	51.6	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	51.6	76-13-1		

Other / Misc.

Method: , Run Date: 12/23/22 19:00, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:28, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.34

Sample Tag: AOC9-MW-22-13 (2-4)

Collected Date/Time: 12/14/2022 09:30

Matrix: Soil

COC Reference: 158708

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 16:00	JRH	
BNA Extraction*	Completed	SW3546	12/20/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/20/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	11.588/11	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/19/22 14:18	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	93	1		%	1			

Metals

Method: SW6020A, Run Date: 12/19/22 12:43, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	250	20		mg/kg	311	7440-70-2		
Magnesium	66.4	20		mg/kg	311	7439-95-4		
Potassium	45.1	20		mg/kg	311	7440-09-7		
Sodium	64.6	20		mg/kg	311	7440-23-5		

Method: SW6020A, Run Date: 12/16/22 17:00, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	921	1.0		mg/kg	311	7429-90-5		
Antimony	Not detected	0.50		mg/kg	311	7440-36-0		
Arsenic	0.46	0.20		mg/kg	311	7440-38-2		
Barium	4.25	1.0		mg/kg	311	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	311	7440-41-7		
Boron	Not detected	2.0		mg/kg	311	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	311	7440-43-9		
Chromium	2.13	0.50		mg/kg	311	7440-47-3		
Cobalt	Not detected	0.50		mg/kg	311	7440-48-4		
Copper	1.05	0.50		mg/kg	311	7440-50-8		
Iron	681	1.0		mg/kg	311	7439-89-6		
Lead	1.65	0.30		mg/kg	311	7439-92-1		
Manganese	5.86	0.50		mg/kg	311	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	311	7439-98-7		
Nickel	Not detected	0.50		mg/kg	311	7440-02-0		
Selenium	Not detected	0.40		mg/kg	311	7782-49-2		
Silver	Not detected	0.20		mg/kg	311	7440-22-4		
Strontium	0.69	0.50		mg/kg	311	7440-24-6		
Thallium	Not detected	0.20		mg/kg	311	7440-28-0		
Tin	Not detected	2.0		mg/kg	311	7440-31-5		



Analytical Laboratory Report

Lab Sample ID: S43471.34 (continued)

Sample Tag: AOC9-MW-22-13 (2-4)

Method: SW6020A, Run Date: 12/16/22 17:00, Analyst: JRH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Titanium	44.0	1.0		mg/kg	311	7440-32-6		
Vanadium	2.17	0.50		mg/kg	311	7440-62-2		
Zinc	1.02	0.50		mg/kg	311	7440-66-6		

Method: SW7471B, Run Date: 12/19/22 17:11, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	58	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/21/22 15:51, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	1	12674-11-2		
PCB-1242	Not detected	330		ug/kg	1	53469-21-9		
PCB-1221	Not detected	330		ug/kg	1	11104-28-2		
PCB-1232	Not detected	330		ug/kg	1	11141-16-5		
PCB-1248	Not detected	330		ug/kg	1	12672-29-6		
PCB-1254	Not detected	330		ug/kg	1	11097-69-1		
PCB-1260	Not detected	330		ug/kg	1	11096-82-5		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 12/28/22 22:32, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	6			

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 22:32, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	Not detected	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		



Analytical Laboratory Report

Lab Sample ID: S43471.34 (continued)

Sample Tag: AOC9-MW-22-13 (2-4)

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 22:32, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	Not detected	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	Not detected	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	Not detected	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/26/22 20:54, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	54.8	108-20-3		

Method: SW5035A/8260C, Run Date: 12/19/22 09:33, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	54.8			

Method: SW8260B - SIM, Run Date: 12/23/22 03:34, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	54.8	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	54.8	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 09:33, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	54.8	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	54.8	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	54.8	107-13-1		
2-Butanone (MEK)	Not detected	820		ug/kg	54.8	78-93-3		



Analytical Laboratory Report

Lab Sample ID: S43471.34 (continued)

Sample Tag: AOC9-MW-22-13 (2-4)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 09:33, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Dichlorodifluoromethane	Not detected	300		ug/kg	54.8	75-71-8		
Chloromethane	Not detected	300		ug/kg	54.8	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	54.8	75-01-4		
Bromomethane	Not detected	200		ug/kg	54.8	74-83-9		
Chloroethane	Not detected	300		ug/kg	54.8	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	54.8	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	54.8	75-35-4		
Methylene chloride	Not detected	100		ug/kg	54.8	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	54.8	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	54.8	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	54.8	156-59-2		
Chloroform	Not detected	50		ug/kg	54.8	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	54.8	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	54.8	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	54.8	56-23-5		
Benzene	Not detected	50		ug/kg	54.8	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	54.8	107-06-2		
Trichloroethene	Not detected	50		ug/kg	54.8	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	54.8	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	54.8	75-27-4		
Dibromomethane	Not detected	300		ug/kg	54.8	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	54.8	10061-01-5		
Toluene	Not detected	50		ug/kg	54.8	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	54.8	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	54.8	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	54.8	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	54.8	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	54.8	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	54.8	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	54.8	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	54.8	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	54.8			
o-Xylene	Not detected	50		ug/kg	54.8	95-47-6		
Styrene	Not detected	50		ug/kg	54.8	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	54.8	98-82-8		
Bromoform	Not detected	100		ug/kg	54.8	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	54.8	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	54.8	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	54.8	103-65-1		
Bromobenzene	Not detected	100		ug/kg	54.8	108-86-1		
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	54.8	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	54.8	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	54.8	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	54.8	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	54.8	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	54.8	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	54.8	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	54.8	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	54.8	526-73-8		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.34 (continued)

Sample Tag: AOC9-MW-22-13 (2-4)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 09:33, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
n-Butylbenzene	Not detected	50		ug/kg	54.8	104-51-8		
1,2,4-Trichlorobenzene	Not detected	360		ug/kg	54.8	120-82-1		
1,2,3-Trichlorobenzene	Not detected	360		ug/kg	54.8	87-61-6		
Naphthalene	Not detected	300		ug/kg	54.8	91-20-3		
Acrolein	Not detected	50		ug/kg	54.8	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	54.8	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	54.8	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	54.8	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	54.8	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	54.8	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	54.8	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	54.8	76-13-1		

Other / Misc.

Method: , Run Date: 12/23/22 16:31, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:28, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/20/22 07:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43471.35

Sample Tag: AOC9-MW-22-13 (8-10)

Collected Date/Time: 12/14/2022 09:40

Matrix: Soil

COC Reference: 158708

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.2	IR
4	4oz Glass	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/16/22 16:00	JRH	
BNA Extraction*	Completed	SW3546	12/20/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/20/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	10.476/10	SW5035A	12/15/22 10:45	BDO	
Mercury Digestion	Completed	SW7471B	12/19/22 14:18	CTV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	97	1		%	1			

Metals

Method: SW6020A, Run Date: 12/19/22 12:44, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	30,400	20		mg/kg	291	7440-70-2		
Magnesium	5,600	20		mg/kg	291	7439-95-4		
Potassium	67.8	20		mg/kg	291	7440-09-7		
Sodium	44.5	20		mg/kg	291	7440-23-5		

Method: SW6020A, Run Date: 12/16/22 17:02, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	277	1.0		mg/kg	291	7429-90-5		
Antimony	Not detected	0.50		mg/kg	291	7440-36-0		
Arsenic	0.20	0.20		mg/kg	291	7440-38-2		
Barium	7.38	1.0		mg/kg	291	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	291	7440-41-7		
Boron	Not detected	2.0		mg/kg	291	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	291	7440-43-9		
Chromium	0.60	0.50		mg/kg	291	7440-47-3		
Cobalt	Not detected	0.50		mg/kg	291	7440-48-4		
Copper	0.86	0.50		mg/kg	291	7440-50-8		
Iron	614	1.0		mg/kg	291	7439-89-6		
Lead	0.76	0.30		mg/kg	291	7439-92-1		
Manganese	199	0.50		mg/kg	291	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	291	7439-98-7		
Nickel	0.97	0.50		mg/kg	291	7440-02-0		
Selenium	Not detected	0.40		mg/kg	291	7782-49-2		
Silver	Not detected	0.20		mg/kg	291	7440-22-4		
Strontium	29.2	0.50		mg/kg	291	7440-24-6		
Thallium	Not detected	0.20		mg/kg	291	7440-28-0		
Tin	Not detected	2.0		mg/kg	291	7440-31-5		



Analytical Laboratory Report

Lab Sample ID: S43471.35 (continued)

Sample Tag: AOC9-MW-22-13 (8-10)

Method: SW6020A, Run Date: 12/16/22 17:02, Analyst: JRH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Titanium	5.37	1.0		mg/kg	291	7440-32-6		
Vanadium	0.95	0.50		mg/kg	291	7440-62-2		
Zinc	2.43	0.50		mg/kg	291	7440-66-6		

Method: SW7471B, Run Date: 12/19/22 17:14, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	55	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/21/22 16:02, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	1	12674-11-2		
PCB-1242	Not detected	330		ug/kg	1	53469-21-9		
PCB-1221	Not detected	330		ug/kg	1	11104-28-2		
PCB-1232	Not detected	330		ug/kg	1	11141-16-5		
PCB-1248	Not detected	330		ug/kg	1	12672-29-6		
PCB-1254	Not detected	330		ug/kg	1	11097-69-1		
PCB-1260	Not detected	330		ug/kg	1	11096-82-5		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 12/28/22 23:03, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	6			

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 23:03, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	6	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8		
Anthracene	Not detected	330		ug/kg	6	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3		
Chrysene	Not detected	330		ug/kg	6	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2		



Analytical Laboratory Report

Lab Sample ID: S43471.35 (continued)

Sample Tag: AOC9-MW-22-13 (8-10)

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 23:03, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1		
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0		
Fluoranthene	Not detected	330		ug/kg	6	206-44-0		
Fluorene	Not detected	330		ug/kg	6	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5		
Isophorone	Not detected	330		ug/kg	6	78-59-1		
Naphthalene	Not detected	330		ug/kg	6	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5		
Phenanthrene	Not detected	330		ug/kg	6	85-01-8		
Phenol	Not detected	330		ug/kg	6	108-95-2		
Pyrene	Not detected	330		ug/kg	6	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2		
Benzidine	Not detected	330		ug/kg	6	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/27/22 16:20, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	50.8	108-20-3		

Method: SW5035A/8260C, Run Date: 12/19/22 09:57, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	50.8			

Method: SW8260B - SIM, Run Date: 12/23/22 03:55, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	50.8	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	50.8	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 09:57, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	50.8	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	50.8	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	50.8	107-13-1		
2-Butanone (MEK)	Not detected	760		ug/kg	50.8	78-93-3		



Analytical Laboratory Report

Lab Sample ID: S43471.35 (continued)

Sample Tag: AOC9-MW-22-13 (8-10)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 09:57, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Dichlorodifluoromethane	Not detected	300		ug/kg	50.8	75-71-8		
Chloromethane	Not detected	300		ug/kg	50.8	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	50.8	75-01-4		
Bromomethane	Not detected	200		ug/kg	50.8	74-83-9		
Chloroethane	Not detected	300		ug/kg	50.8	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	50.8	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	50.8	75-35-4		
Methylene chloride	Not detected	100		ug/kg	50.8	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	50.8	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	50.8	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	50.8	156-59-2		
Chloroform	Not detected	50		ug/kg	50.8	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	50.8	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	50.8	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	50.8	56-23-5		
Benzene	Not detected	50		ug/kg	50.8	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	50.8	107-06-2		
Trichloroethene	Not detected	50		ug/kg	50.8	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	50.8	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	50.8	75-27-4		
Dibromomethane	Not detected	300		ug/kg	50.8	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	50.8	10061-01-5		
Toluene	Not detected	50		ug/kg	50.8	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	50.8	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	50.8	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	50.8	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	50.8	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	50.8	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	50.8	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	50.8	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	50.8	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	50.8			
o-Xylene	Not detected	50		ug/kg	50.8	95-47-6		
Styrene	Not detected	50		ug/kg	50.8	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	50.8	98-82-8		
Bromoform	Not detected	100		ug/kg	50.8	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	50.8	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	50.8	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	50.8	103-65-1		
Bromobenzene	Not detected	100		ug/kg	50.8	108-86-1		
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	50.8	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	50.8	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	50.8	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	50.8	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	50.8	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	50.8	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	50.8	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	50.8	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	50.8	526-73-8		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43471.35 (continued)

Sample Tag: AOC9-MW-22-13 (8-10)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 09:57, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
n-Butylbenzene	Not detected	50		ug/kg	50.8	104-51-8		
1,2,4-Trichlorobenzene	Not detected	340		ug/kg	50.8	120-82-1		
1,2,3-Trichlorobenzene	Not detected	340		ug/kg	50.8	87-61-6		
Naphthalene	Not detected	300		ug/kg	50.8	91-20-3		
Acrolein	Not detected	50		ug/kg	50.8	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	50.8	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	50.8	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	50.8	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	50.8	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	50.8	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	50.8	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	50.8	76-13-1		

Other / Misc.

Method: , Run Date: 12/23/22 19:21, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 09:28, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

Method: , Run Date: 12/20/22 07:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project (Replicate 01)*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.

Merit Laboratories Login Checklist

Lab Set ID:S43471

Client:TRC (TRC)

Project: Detroit Axle Southern Invest. 495430.0001

Submitted: 12/14/2022 16:50 Login User: MMC

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place

Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Selection	Description	Note
-----------	-------------	------

Sample Receiving

- | | | |
|-----|--|--|
| 01. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples are received at 4C +/- 2C Thermometer # IR 4.2 |
| 02. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Received on ice/ cooling process begun |
| 03. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples shipped |
| 04. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples left in 24 hr. drop box |
| 05. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Are there custody seals/tape or is the drop box locked |

Chain of Custody

- | | | |
|-----|--|--|
| 06. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC adequately filled out |
| 07. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC signed and relinquished to the lab |
| 08. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Sample tag on bottles match COC
Three MeOH vial labels were illegible. Samples .03-.05 only had one MeOH each there were legible. |
| 09. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Subcontracting needed? Subcontracted to: Eurofins |

Preservation

- | | | |
|-----|--|---|
| 10. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Do sample have correct chemical preservation |
| 11. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Completed pH checks on preserved samples? (no VOAs) |
| 12. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Did any samples need to be preserved in the lab? |

Bottle Conditions

- | | | |
|-----|--|---|
| 13. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | All bottles intact |
| 14. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Appropriate analytical bottles are used |
| 15. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Merit bottles used |
| 16. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sufficient sample volume received |
| 17. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples require laboratory filtration |
| 18. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples submitted within holding time |
| 19. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Do water VOC or TOX bottles contain headspace |

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____



2680 East Lansing Dr., East Lansing, MI 48823
 Phone (517) 332-0167 Fax (517) 332-4034
 www.meritlabs.com

C.O.C. PAGE # _____ OF _____ 158705

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME: K. Gratsonburg
 COMPANY: TAL
 ADDRESS: 1540 Eisenhower place
 CITY: Ann Arbor STATE: MI ZIP CODE: 48108
 PHONE NO.: _____ CELL NO.: _____ P.O. NO.: 193431
 E-MAIL ADDRESS: Kgratsonburg@talcompanies.com QUOTE NO.: _____

CONTACT NAME: _____ SAME
 COMPANY: _____
 ADDRESS: _____
 CITY: _____ STATE: _____ ZIP CODE: _____
 PHONE NO.: _____ E-MAIL ADDRESS: _____

PROJECT NO./NAME: Detroit, The Southern Trust, 495430000 SAMPLER(S) - PLEASE PRINT/SIGN NAME: H. Schwartz
 TURNAROUND TIME REQUIRED: 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____

DELIVERABLES REQUIRED: STD LEVEL II LEVEL III LEVEL IV EDD OTHER PRELIM
 MATRIX: W=WATER GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 CODE: SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR WS=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)
 Certifications: OHIO VAP Drinking Water DoD NPDES
 Project Locations: Detroit New York Other _____
 Special Instructions: _____

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	COLLECTION		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	ANALYSIS	CERTIFICATIONS
	DATE	TIME												
43471	.01	12/13/22	825 AOC II - TPO1 - N	S	10								X X X X X X X X	* Southern Brown Project Scope 1 SOIL
43472	.02		836 AOC II - TPO1 - S											
	.03		856 AOC II - TPO1 - E											
	.04		856 AOC II - TPO1 - W											
	.05		935 AOC II - TPO1 - B											
	.06		DUP - 03s											
	.07	1016	AOC II TPO2 - N											
	.08	1033	AOC II - TPO2 - S											
	.09	1043	AOC II - TPO2 - E											
	.10	1043	AOC II - TPO2 - W											
	.11	1118	AOC II - TPO2 - B											
	.12		DUP - 04s											

VOLCS + TCs + STMS
 SVOCs + TCs
 METALS *
 Phthalates
 Aldehydes
 31 PFAS
 Heavy metal/lead
 PCBs

RELINQUISHED BY: Henry Schwartz Sampler DATE: 12/13/22 TIME: 1600
 RECEIVED BY: Sample dropoff pt DATE: 12/13/22 TIME: 1600
 RELINQUISHED BY: Bryan DATE: 12.14.22 TIME: 1450
 RECEIVED BY: M. Mer DATE: 12-14-22 TIME: 1450

RELINQUISHED BY: [Signature] DATE: 12-14-22 TIME: 1650
 RECEIVED BY: M. Chilcote DATE: 12/14/22 TIME: 1650
 SEAL NO. SEAL INTACT YES NO INITIALS _____
 SEAL NO. SEAL INTACT YES NO INITIALS _____
 NOTES: TEMP. ON ARRIVAL: 4.2

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE



2680 East Lansing Dr., East Lansing, MI 48823
 Phone (517) 332-0167 Fax (517) 332-4034
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C.O.C. PAGE # _____ OF _____ 158706

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME K. Cratsenburg
 COMPANY TRE
 ADDRESS 1540 Eisenhower Place
 CITY Ann Arbor STATE MI ZIP CODE 48103
 PHONE NO. _____ CELL NO. _____ P.O. NO. 193431
 E-MAIL ADDRESS Kcratsenburg@trecompany.com QUOTE NO. _____

CONTACT NAME _____ SAME
 COMPANY _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP CODE _____
 PHONE NO. _____ E-MAIL ADDRESS _____

PROJECT NO./NAME 495430-0001 AXLE SEARCH INVEST. SAMPLER(S) - PLEASE PRINT/SIGN NAME He Schwardt
 TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____
 DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER Pre EDD

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

MATRIX W=WATER GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 CODE: SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR WS=WASTE

# Containers & Preservatives		Certifications	
NONE HCl HNO ₃ H ₂ SO ₄ NaOH MeOH OTHER	VOCs + PICS + 1,4 Dioxane SVOCs + PICS Metals * Thorium Alcohols 31 PPAAS Trace Heavy Metals PCBs	<input type="checkbox"/> OHIO VAP <input type="checkbox"/> Drinking Water <input type="checkbox"/> DoD <input type="checkbox"/> NPDES Project Locations <input type="checkbox"/> Detroit <input type="checkbox"/> New York <input type="checkbox"/> Other _____ Special Instructions	<input type="checkbox"/> Southern Bump <input type="checkbox"/> Soil Project Scope

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	COLLECTION		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER
	DATE	TIME										
43471/43472	12/13/22	1230	AOC II - TPO3 - N	S	10	8					2	X
.12		1245	AOC II - TPO3 - S									X
.15		1300	AOC II - TPO3 - E									X
.16		1300	AOC II - TPO3 - W									X
.17		1330	AOC II - TPO3 - B									X
.18		-	Dup - 055									
.19		1410	AOC II - TPO4 - N									X
.20		1415	AOC II - TPO4 - S									X
.21		1435	AOC II - TPO4 - E									X
.22		1435	AOC II - TPO4 - W									X
.23		1503	AOC II - TPO4 - B									X
.24		-	Dup - 065									

RELINQUISHED BY: Henry Schwardt Sampler DATE 12/13/22 TIME 1600
 RECEIVED BY: Sample pickup pt DATE 12/13/22 TIME 1600
 RELINQUISHED BY: B. Yarn DATE 12.14.22 TIME 1450
 RECEIVED BY: Mered DATE 12-14-22 TIME 1456

RELINQUISHED BY: [Signature] DATE 12-14-22 TIME 1650
 RECEIVED BY: M. Chilcote DATE 12/14/22 TIME 1650
 SEAL NO. _____ SEAL INTACT YES NO INITIALS _____
 SEAL NO. _____ SEAL INTACT YES NO INITIALS _____
 NOTES: TEMP. ON ARRIVAL 4.2

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE



REPORT TO **CHAIN OF CUSTODY RECORD** **INVOICE TO**

CONTACT NAME: **K CRATSENBURG**
 COMPANY: **TRC**
 ADDRESS: **1510 EISENHOWER**
 CITY: **ANN ARBOR** STATE: **MI** ZIP CODE: **48108**
 PHONE NO. _____ CELL NO. _____ P.O. NO. **193431**
 E-MAIL ADDRESS: **Kcratsenburge@trccompanies** QUOTE NO. _____

CONTACT NAME _____ SAME
 COMPANY _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP CODE _____
 PHONE NO. _____ E-MAIL ADDRESS _____

PROJECT NO./NAME: **DETROIT AXLE 3B** SAMPLER(S) - PLEASE PRINT/SIGN NAME: **B. YELEN**
 TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____
 DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER **TRC EDD**
 MATRIX W=WATER GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 CODE: SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR WS=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

VOC/TICS 1,4-D	SUCC + TICS	METALS *	31 PFAS	PCB	TETRAETHYL Pb	THORIUM	3 ALCOHOLS		
----------------	-------------	----------	---------	-----	---------------	---------	------------	--	--

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	COLLECTION		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives													
	DATE	TIME				NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER							
43471/43472	25	12.13.22	1020	MW AOC11 - MW-22-07(2-4)	9	9													
	26		1040	AOC11 - MW-22-07(8-10)															
	27		0850	AOC 7 - MW-22-08(8-10)															
	28		1245	AOC 11 - MW-22-10(2-4)															
	29		1300	AOC 11 - MW-22-10(8-10)															
	30		1350	AOC 3 - MW-22-11(2-4)		8													
	31		1400	AOC 3 - MW-22-11(8-10)															
	32		1600	AOC 3 - MW-22-12(2-4)															
	33		1610	AOC 3 - MW-22-12(8-10)															
	34	12.14.22	0930	AOC9 - MW-22-13(2-4)	9	9													
	35	12.14.22	0940	AOC9 - MW-22-13(8-10)	1	9													

Certifications
 OHIO VAP Drinking Water
 DoD NPDES

Project Locations
 Detroit New York
 Other _____

Special Instructions
*** SEE SOUTHERN BOUNDARY? SOIL PROJECT SCOPE**

RELINQUISHED BY: **B. Yelen** (Signature) DATE: **12.14.22** TIME: **1450**
 RECEIVED BY: _____ DATE: _____ TIME: _____
 RELINQUISHED BY: _____ DATE: **12-14-22** TIME: **1650**
 RECEIVED BY: **M. Alford** (Signature) DATE: **12/14/22** TIME: **1650**

RELINQUISHED BY: _____ DATE _____ TIME _____
 RECEIVED BY: _____ DATE _____ TIME _____

SEAL NO.	SEAL INTACT	INITIALS	NOTES: TEMP. ON ARRIVAL 4.2
	YES <input type="checkbox"/> NO <input type="checkbox"/>		
SEAL NO.	SEAL INTACT	INITIALS	
	YES <input type="checkbox"/> NO <input type="checkbox"/>		



ANALYTICAL REPORT

PREPARED FOR

Attn: Lab Results
Merit Laboratories
2680 E Lansing Drive
East Lansing, Michigan 48823

Generated 1/12/2023 12:13:22 PM

JOB DESCRIPTION

Merit Laboratories

JOB NUMBER

190-30658-1

Eurofins Michigan

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



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Authorized for release by
Sue Schafer, Project Manager II
Sue.Schafer@et.eurofinsus.com
(810)229-2763



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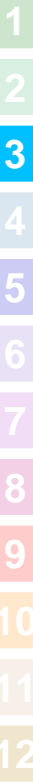
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Sample Summary

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
190-30658-1	S43471.01	Solid	12/13/22 08:25	12/16/22 12:38
190-30658-2	S43471.02	Solid	12/13/22 08:36	12/16/22 12:38
190-30658-3	S43471.03	Solid	12/13/22 08:56	12/16/22 12:38
190-30658-4	S43471.04	Solid	12/13/22 08:56	12/16/22 12:38
190-30658-5	S43471.05	Solid	12/13/22 09:35	12/16/22 12:38
190-30658-6	S43471.06	Solid	12/13/22 00:01	12/16/22 12:38
190-30658-7	S43471.07	Solid	12/13/22 10:16	12/16/22 12:38
190-30658-8	S43471.08	Solid	12/13/22 10:33	12/16/22 12:38
190-30658-9	S43471.09	Solid	12/13/22 10:43	12/16/22 12:38
190-30658-10	S43471.10	Solid	12/13/22 10:43	12/16/22 12:38
190-30658-11	S43471.11	Solid	12/13/22 11:18	12/16/22 12:38
190-30658-12	S43471.12	Solid	12/13/22 00:01	12/16/22 12:38
190-30658-13	S43471.13	Solid	12/13/22 12:30	12/16/22 12:38
190-30658-14	S43471.14	Solid	12/13/22 12:45	12/16/22 12:38
190-30658-15	S43471.15	Solid	12/13/22 13:00	12/16/22 12:38
190-30658-16	S43471.16	Solid	12/13/22 13:00	12/16/22 12:38
190-30658-17	S43471.17	Solid	12/13/22 13:30	12/16/22 12:38
190-30658-18	S43471.18	Solid	12/13/22 00:01	12/16/22 12:38
190-30658-19	S43471.19	Solid	12/13/22 14:10	12/16/22 12:38
190-30658-20	S43471.20	Solid	12/13/22 14:15	12/16/22 12:38
190-30658-21	S43471.21	Solid	12/13/22 14:35	12/16/22 12:38
190-30658-22	S43471.22	Solid	12/13/22 14:35	12/16/22 12:38
190-30658-23	S43471.23	Solid	12/13/22 15:03	12/16/22 12:38
190-30658-24	S43471.24	Solid	12/13/22 00:01	12/16/22 12:38
190-30658-25	S43471.25	Solid	12/13/22 10:20	12/16/22 12:38
190-30658-26	S43471.26	Solid	12/13/22 10:40	12/16/22 12:38
190-30658-27	S43471.27	Solid	12/13/22 08:50	12/16/22 12:38
190-30658-28	S43471.28	Solid	12/13/22 12:45	12/16/22 12:38
190-30658-29	S43471.29	Solid	12/13/22 13:00	12/16/22 12:38
190-30658-30	S43471.30	Solid	12/13/22 13:50	12/16/22 12:38
190-30658-31	S43471.31	Solid	12/13/22 14:10	12/16/22 12:38
190-30658-32	S43471.32	Solid	12/13/22 14:15	12/16/22 12:38
190-30658-33	S43471.33	Solid	12/13/22 14:35	12/16/22 12:38
190-30658-34	S43471.34	Solid	12/14/22 14:35	12/16/22 12:38
190-30658-35	S43471.35	Solid	12/14/22 15:03	12/16/22 12:38



Case Narrative

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Job ID: 190-30658-1

Laboratory: Eurofins Michigan

Narrative

Job Narrative 190-30658-1

Receipt

The samples were received on 12/16/2022 12:38 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 6.6°C

GC/MS Semi VOA

Method 8270D: The following samples: S43471.03 (190-30658-3), S43471.04 (190-30658-4), S43471.05 (190-30658-5), S43471.06 (190-30658-6), S43471.07 (190-30658-7), S43471.08 (190-30658-8), S43471.09 (190-30658-9), S43471.10 (190-30658-10) and S43471.14 (190-30658-14) was decanted prior to preparation .

Method 8270D: The following samples: S43471.16 (190-30658-16), S43471.17 (190-30658-17), S43471.23 (190-30658-23), S43471.24 (190-30658-24), (190-30658-C-16 MS) and (190-30658-C-16 MSD) was decanted prior to preparation .

Method 8270D: The following samples were diluted due to color, appearance, and viscosity: S43471.01 (190-30658-1), S43471.02 (190-30658-2), S43471.03 (190-30658-3), S43471.04 (190-30658-4), S43471.05 (190-30658-5), S43471.06 (190-30658-6), S43471.11 (190-30658-11) and S43471.15 (190-30658-15). Elevated reporting limits (RL) are provided.

Method 8270D: The following samples were diluted due to color, appearance, and viscosity: S43471.17 (190-30658-17), S43471.18 (190-30658-18), S43471.19 (190-30658-19), S43471.20 (190-30658-20), S43471.21 (190-30658-21), S43471.22 (190-30658-22), S43471.24 (190-30658-24), S43471.25 (190-30658-25) and S43471.26 (190-30658-26). Elevated reporting limits (RL) are provided.

Method 8270D: Six surrogates are used for this analysis. The laboratory's SOP allows one acid and one base of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following samples contained an allowable number of surrogate compounds outside limits: S43471.23 (190-30658-23) and S43471.25 (190-30658-25). These results have been reported and qualified.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

Method MOISTURE_2540G: The sample duplicate precision for the following sample associated with analytical batch 680-755948 was outside control limits: (190-30658-A-2 DU). The associated Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD) precision met acceptance criteria.

Method MOISTURE_2540G: The sample duplicate precision for the following sample associated with analytical batch 680-755958 was outside control limits: (190-30658-A-10 DU) and (190-30658-A-34 DU). The associated Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD) precision met acceptance criteria.

Method MOISTURE_2540G: The sample duplicate precision for the following sample associated with analytical batch 680-756199 was outside control limits: (190-30658-A-27 DU). The associated Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD) precision met acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Geotechnical

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Case Narrative

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Job ID: 190-30658-1 (Continued)

Laboratory: Eurofins Michigan (Continued)

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Client Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.01

Lab Sample ID: 190-30658-1

Date Collected: 12/13/22 08:25

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 76.5

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<13000		13000	ug/Kg	☼	12/19/22 10:57	12/20/22 20:25	10
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	93		53 - 120			12/19/22 10:57	12/20/22 20:25	10
p-Terphenyl-d14 (Surr)	92		79 - 130			12/19/22 10:57	12/20/22 20:25	10
Phenol-d5 (Surr)	90		54 - 120			12/19/22 10:57	12/20/22 20:25	10
2-Fluorophenol (Surr)	91		52 - 120			12/19/22 10:57	12/20/22 20:25	10
2,4,6-Tribromophenol (Surr)	101		54 - 120			12/19/22 10:57	12/20/22 20:25	10
2-Fluorobiphenyl (Surr)	89		60 - 120			12/19/22 10:57	12/20/22 20:25	10

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.2		0.25	mg/Kg	☼	12/27/22 09:24	12/28/22 18:09	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	23.5		0.1	%			12/20/22 10:50	1
Percent Solids (EPA Moisture)	76.5		0.1	%			12/20/22 10:50	1
Percent Moisture (SM Moisture - 2540)	7.5		0.10	%			12/19/22 15:59	1
Percent Solids (SM Moisture - 2540)	92		0.10	%			12/19/22 15:59	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	8.6		0.1	%			12/19/22 15:59	1

Client Sample ID: S43471.01

Lab Sample ID: 190-30658-1

Date Collected: 12/13/22 08:25

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 92.5

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.3		5.3	mg/Kg	☼		12/22/22 03:02	1
Methanol	<2.1		2.1	mg/Kg	☼		12/22/22 03:02	1
n-Butanol	<5.3		5.3	mg/Kg	☼		12/22/22 03:02	1

Client Sample ID: S43471.02

Lab Sample ID: 190-30658-2

Date Collected: 12/13/22 08:36

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 77.7

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<13000		13000	ug/Kg	☼	12/19/22 10:57	12/20/22 20:49	10
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	92		53 - 120			12/19/22 10:57	12/20/22 20:49	10
p-Terphenyl-d14 (Surr)	96		79 - 130			12/19/22 10:57	12/20/22 20:49	10
Phenol-d5 (Surr)	91		54 - 120			12/19/22 10:57	12/20/22 20:49	10
2-Fluorophenol (Surr)	90		52 - 120			12/19/22 10:57	12/20/22 20:49	10
2,4,6-Tribromophenol (Surr)	95		54 - 120			12/19/22 10:57	12/20/22 20:49	10
2-Fluorobiphenyl (Surr)	91		60 - 120			12/19/22 10:57	12/20/22 20:49	10

Eurofins Michigan

Client Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.02

Lab Sample ID: 190-30658-2

Date Collected: 12/13/22 08:36

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 77.7

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.1		0.22	mg/Kg	☼	01/10/23 08:01	01/10/23 13:54	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	22.3		0.1	%			01/09/23 16:16	1
Percent Solids (EPA Moisture)	77.7		0.1	%			01/09/23 16:16	1
Percent Moisture (SM Moisture - 2540)	9.9		0.10	%			12/19/22 15:59	1
Percent Solids (SM Moisture - 2540)	90		0.10	%			12/19/22 15:59	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	11.5		0.1	%			12/19/22 15:59	1

Client Sample ID: S43471.02

Lab Sample ID: 190-30658-2

Date Collected: 12/13/22 08:36

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 90.1

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.4		5.4	mg/Kg	☼		12/22/22 15:07	1
Methanol	<2.2		2.2	mg/Kg	☼		12/22/22 15:07	1
n-Butanol	<5.4		5.4	mg/Kg	☼		12/22/22 15:07	1

Client Sample ID: S43471.03

Lab Sample ID: 190-30658-3

Date Collected: 12/13/22 08:56

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 90.5

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.4		5.4	mg/Kg	☼		12/22/22 03:44	1
Methanol	<2.1		2.1	mg/Kg	☼		12/22/22 03:44	1
n-Butanol	<5.4		5.4	mg/Kg	☼		12/22/22 03:44	1

Client Sample ID: S43471.03

Lab Sample ID: 190-30658-3

Date Collected: 12/13/22 08:56

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 92.1

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<11000		11000	ug/Kg	☼	12/19/22 10:57	12/20/22 21:13	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	90		53 - 120	12/19/22 10:57	12/20/22 21:13	10
p-Terphenyl-d14 (Surr)	92		79 - 130	12/19/22 10:57	12/20/22 21:13	10
Phenol-d5 (Surr)	85		54 - 120	12/19/22 10:57	12/20/22 21:13	10
2-Fluorophenol (Surr)	86		52 - 120	12/19/22 10:57	12/20/22 21:13	10
2,4,6-Tribromophenol (Surr)	95		54 - 120	12/19/22 10:57	12/20/22 21:13	10
2-Fluorobiphenyl (Surr)	89		60 - 120	12/19/22 10:57	12/20/22 21:13	10

Eurofins Michigan

Client Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.03

Lab Sample ID: 190-30658-3

Date Collected: 12/13/22 08:56

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 92.1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.3		0.18	mg/Kg	☼	12/27/22 09:24	12/28/22 18:26	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	7.9		0.1	%			12/20/22 10:50	1
Percent Solids (EPA Moisture)	92.1		0.1	%			12/20/22 10:50	1
Percent Moisture (SM Moisture - 2540)	9.5		0.10	%			12/19/22 15:59	1
Percent Solids (SM Moisture - 2540)	90		0.10	%			12/19/22 15:59	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	11.1		0.1	%			12/19/22 15:59	1

Client Sample ID: S43471.04

Lab Sample ID: 190-30658-4

Date Collected: 12/13/22 08:56

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 76.3

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<13000		13000	ug/Kg	☼	12/19/22 10:57	12/20/22 21:37	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	98		53 - 120	12/19/22 10:57	12/20/22 21:37	10
p-Terphenyl-d14 (Surr)	94		79 - 130	12/19/22 10:57	12/20/22 21:37	10
Phenol-d5 (Surr)	90		54 - 120	12/19/22 10:57	12/20/22 21:37	10
2-Fluorophenol (Surr)	93		52 - 120	12/19/22 10:57	12/20/22 21:37	10
2,4,6-Tribromophenol (Surr)	94		54 - 120	12/19/22 10:57	12/20/22 21:37	10
2-Fluorobiphenyl (Surr)	90		60 - 120	12/19/22 10:57	12/20/22 21:37	10

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.0		0.23	mg/Kg	☼	12/27/22 09:24	12/28/22 18:29	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	23.7		0.1	%			12/20/22 10:50	1
Percent Solids (EPA Moisture)	76.3		0.1	%			12/20/22 10:50	1
Percent Moisture (SM Moisture - 2540)	7.6		0.10	%			12/19/22 15:59	1
Percent Solids (SM Moisture - 2540)	92		0.10	%			12/19/22 15:59	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	8.7		0.1	%			12/19/22 15:59	1

Client Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.04

Lab Sample ID: 190-30658-4

Date Collected: 12/13/22 08:56

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 92.4

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.2		5.2	mg/Kg	☼		12/22/22 04:05	1
Methanol	<2.1		2.1	mg/Kg	☼		12/22/22 04:05	1
n-Butanol	<5.2		5.2	mg/Kg	☼		12/22/22 04:05	1

Client Sample ID: S43471.05

Lab Sample ID: 190-30658-5

Date Collected: 12/13/22 09:35

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 77.1

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<13000		13000	ug/Kg	☼	12/19/22 10:57	12/20/22 22:01	10
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	94		53 - 120			12/19/22 10:57	12/20/22 22:01	10
p-Terphenyl-d14 (Surr)	96		79 - 130			12/19/22 10:57	12/20/22 22:01	10
Phenol-d5 (Surr)	92		54 - 120			12/19/22 10:57	12/20/22 22:01	10
2-Fluorophenol (Surr)	94		52 - 120			12/19/22 10:57	12/20/22 22:01	10
2,4,6-Tribromophenol (Surr)	93		54 - 120			12/19/22 10:57	12/20/22 22:01	10
2-Fluorobiphenyl (Surr)	91		60 - 120			12/19/22 10:57	12/20/22 22:01	10

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.82		0.25	mg/Kg	☼	12/27/22 09:24	12/28/22 18:33	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	22.9		0.1	%			12/20/22 10:50	1
Percent Solids (EPA Moisture)	77.1		0.1	%			12/20/22 10:50	1
Percent Moisture (SM Moisture - 2540)	7.7		0.10	%			12/19/22 15:59	1
Percent Solids (SM Moisture - 2540)	92		0.10	%			12/19/22 15:59	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	8.8		0.1	%			12/19/22 15:59	1

Client Sample ID: S43471.05

Lab Sample ID: 190-30658-5

Date Collected: 12/13/22 09:35

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 92.3

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.3		5.3	mg/Kg	☼		12/22/22 04:26	1
Methanol	<2.1		2.1	mg/Kg	☼		12/22/22 04:26	1
n-Butanol	<5.3		5.3	mg/Kg	☼		12/22/22 04:26	1

Client Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.06

Lab Sample ID: 190-30658-6

Date Collected: 12/13/22 00:01

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 77.5

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<13000		13000	ug/Kg	☼	12/19/22 10:57	12/20/22 22:25	10
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	97		53 - 120			12/19/22 10:57	12/20/22 22:25	10
p-Terphenyl-d14 (Surr)	93		79 - 130			12/19/22 10:57	12/20/22 22:25	10
Phenol-d5 (Surr)	90		54 - 120			12/19/22 10:57	12/20/22 22:25	10
2-Fluorophenol (Surr)	93		52 - 120			12/19/22 10:57	12/20/22 22:25	10
2,4,6-Tribromophenol (Surr)	91		54 - 120			12/19/22 10:57	12/20/22 22:25	10
2-Fluorobiphenyl (Surr)	91		60 - 120			12/19/22 10:57	12/20/22 22:25	10

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.97		0.25	mg/Kg	☼	12/27/22 09:24	12/28/22 18:46	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	22.5		0.1	%			12/20/22 12:09	1
Percent Solids (EPA Moisture)	77.5		0.1	%			12/20/22 12:09	1
Percent Moisture (SM Moisture - 2540)	8.3		0.10	%			12/19/22 15:59	1
Percent Solids (SM Moisture - 2540)	92		0.10	%			12/19/22 15:59	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	9.5		0.1	%			12/19/22 15:59	1

Client Sample ID: S43471.06

Lab Sample ID: 190-30658-6

Date Collected: 12/13/22 00:01

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 91.7

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.4		5.4	mg/Kg	☼		12/22/22 04:47	1
Methanol	<2.2		2.2	mg/Kg	☼		12/22/22 04:47	1
n-Butanol	<5.4		5.4	mg/Kg	☼		12/22/22 04:47	1

Client Sample ID: S43471.07

Lab Sample ID: 190-30658-7

Date Collected: 12/13/22 10:16

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 93.7

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<1000		1000	ug/Kg	☼	12/19/22 10:57	12/20/22 22:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	76		53 - 120			12/19/22 10:57	12/20/22 22:49	1
p-Terphenyl-d14 (Surr)	86		79 - 130			12/19/22 10:57	12/20/22 22:49	1
Phenol-d5 (Surr)	75		54 - 120			12/19/22 10:57	12/20/22 22:49	1
2-Fluorophenol (Surr)	71		52 - 120			12/19/22 10:57	12/20/22 22:49	1
2,4,6-Tribromophenol (Surr)	83		54 - 120			12/19/22 10:57	12/20/22 22:49	1
2-Fluorobiphenyl (Surr)	83		60 - 120			12/19/22 10:57	12/20/22 22:49	1

Eurofins Michigan

Client Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.07

Lab Sample ID: 190-30658-7

Date Collected: 12/13/22 10:16

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 93.7

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.98		0.18	mg/Kg	☼	12/27/22 09:24	12/28/22 18:50	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	6.3		0.1	%			12/20/22 12:09	1
Percent Solids (EPA Moisture)	93.7		0.1	%			12/20/22 12:09	1
Percent Moisture (SM Moisture - 2540)	5.3		0.10	%			12/19/22 15:59	1
Percent Solids (SM Moisture - 2540)	95		0.10	%			12/19/22 15:59	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	5.9		0.1	%			12/19/22 15:59	1

Client Sample ID: S43471.07

Lab Sample ID: 190-30658-7

Date Collected: 12/13/22 10:16

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 94.7

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.3		5.3	mg/Kg	☼		12/22/22 05:08	1
Methanol	<2.1		2.1	mg/Kg	☼		12/22/22 05:08	1
n-Butanol	<5.3		5.3	mg/Kg	☼		12/22/22 05:08	1

Client Sample ID: S43471.08

Lab Sample ID: 190-30658-8

Date Collected: 12/13/22 10:33

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 88.2

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<1100		1100	ug/Kg	☼	12/19/22 10:57	12/20/22 23:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	88		53 - 120	12/19/22 10:57	12/20/22 23:13	1
p-Terphenyl-d14 (Surr)	96		79 - 130	12/19/22 10:57	12/20/22 23:13	1
Phenol-d5 (Surr)	87		54 - 120	12/19/22 10:57	12/20/22 23:13	1
2-Fluorophenol (Surr)	82		52 - 120	12/19/22 10:57	12/20/22 23:13	1
2,4,6-Tribromophenol (Surr)	98		54 - 120	12/19/22 10:57	12/20/22 23:13	1
2-Fluorobiphenyl (Surr)	97		60 - 120	12/19/22 10:57	12/20/22 23:13	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.1		0.19	mg/Kg	☼	12/27/22 09:24	12/28/22 18:53	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	11.8		0.1	%			12/20/22 12:09	1
Percent Solids (EPA Moisture)	88.2		0.1	%			12/20/22 12:09	1
Percent Moisture (SM Moisture - 2540)	7.1		0.10	%			12/19/22 16:30	1
Percent Solids (SM Moisture - 2540)	93		0.10	%			12/19/22 16:30	1

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Client Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.08

Lab Sample ID: 190-30658-8

Date Collected: 12/13/22 10:33

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 88.2

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	8.1		0.1	%			12/19/22 16:30	1

Client Sample ID: S43471.08

Lab Sample ID: 190-30658-8

Date Collected: 12/13/22 10:33

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 92.9

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.3		5.3	mg/Kg	☼		12/22/22 05:28	1
Methanol	<2.1		2.1	mg/Kg	☼		12/22/22 05:28	1
n-Butanol	<5.3		5.3	mg/Kg	☼		12/22/22 05:28	1

Client Sample ID: S43471.09

Lab Sample ID: 190-30658-9

Date Collected: 12/13/22 10:43

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 76.3

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<1300		1300	ug/Kg	☼	12/19/22 10:57	12/20/22 23:37	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	91		53 - 120			12/19/22 10:57	12/20/22 23:37	1
p-Terphenyl-d14 (Surr)	99		79 - 130			12/19/22 10:57	12/20/22 23:37	1
Phenol-d5 (Surr)	88		54 - 120			12/19/22 10:57	12/20/22 23:37	1
2-Fluorophenol (Surr)	83		52 - 120			12/19/22 10:57	12/20/22 23:37	1
2,4,6-Tribromophenol (Surr)	104		54 - 120			12/19/22 10:57	12/20/22 23:37	1
2-Fluorobiphenyl (Surr)	99		60 - 120			12/19/22 10:57	12/20/22 23:37	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.3		0.25	mg/Kg	☼	12/27/22 09:24	12/28/22 18:57	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	23.7		0.1	%			12/20/22 12:09	1
Percent Solids (EPA Moisture)	76.3		0.1	%			12/20/22 12:09	1
Percent Moisture (SM Moisture - 2540)	4.8		0.10	%			12/19/22 16:30	1
Percent Solids (SM Moisture - 2540)	95		0.10	%			12/19/22 16:30	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	5.4		0.1	%			12/19/22 16:30	1

Client Sample ID: S43471.09

Lab Sample ID: 190-30658-9

Date Collected: 12/13/22 10:43

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 95.2

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.1		5.1	mg/Kg	☼		12/22/22 05:49	1

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Client Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.09

Lab Sample ID: 190-30658-9

Date Collected: 12/13/22 10:43

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 95.2

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<2.0		2.0	mg/Kg	☼		12/22/22 05:49	1
n-Butanol	<5.1		5.1	mg/Kg	☼		12/22/22 05:49	1

Client Sample ID: S43471.10

Lab Sample ID: 190-30658-10

Date Collected: 12/13/22 10:43

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 77.3

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<1300		1300	ug/Kg	☼	12/19/22 10:57	12/21/22 00:01	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	75		53 - 120			12/19/22 10:57	12/21/22 00:01	1
p-Terphenyl-d14 (Surr)	91		79 - 130			12/19/22 10:57	12/21/22 00:01	1
Phenol-d5 (Surr)	78		54 - 120			12/19/22 10:57	12/21/22 00:01	1
2-Fluorophenol (Surr)	71		52 - 120			12/19/22 10:57	12/21/22 00:01	1
2,4,6-Tribromophenol (Surr)	92		54 - 120			12/19/22 10:57	12/21/22 00:01	1
2-Fluorobiphenyl (Surr)	88		60 - 120			12/19/22 10:57	12/21/22 00:01	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.67		0.25	mg/Kg	☼	12/27/22 09:24	12/28/22 19:00	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	22.7		0.1	%			12/20/22 12:09	1
Percent Solids (EPA Moisture)	77.3		0.1	%			12/20/22 12:09	1
Percent Moisture (SM Moisture - 2540)	6.1		0.10	%			12/19/22 16:30	1
Percent Solids (SM Moisture - 2540)	94		0.10	%			12/19/22 16:30	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	6.8		0.1	%			12/19/22 16:30	1

Client Sample ID: S43471.10

Lab Sample ID: 190-30658-10

Date Collected: 12/13/22 10:43

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 93.9

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.2		5.2	mg/Kg	☼		12/22/22 06:10	1
Methanol	<2.1		2.1	mg/Kg	☼		12/22/22 06:10	1
n-Butanol	<5.2		5.2	mg/Kg	☼		12/22/22 06:10	1

Client Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.11

Lab Sample ID: 190-30658-11

Date Collected: 12/13/22 11:18

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 84.0

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.9		5.9	mg/Kg	☼		12/23/22 21:47	1
Methanol	<2.4		2.4	mg/Kg	☼		12/23/22 21:47	1
n-Butanol	<5.9		5.9	mg/Kg	☼		12/23/22 21:47	1

Client Sample ID: S43471.11

Lab Sample ID: 190-30658-11

Date Collected: 12/13/22 11:18

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 93.9

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<5300		5300	ug/Kg	☼	12/19/22 10:57	12/21/22 00:25	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	93		53 - 120			12/19/22 10:57	12/21/22 00:25	5
p-Terphenyl-d14 (Surr)	97		79 - 130			12/19/22 10:57	12/21/22 00:25	5
Phenol-d5 (Surr)	90		54 - 120			12/19/22 10:57	12/21/22 00:25	5
2-Fluorophenol (Surr)	88		52 - 120			12/19/22 10:57	12/21/22 00:25	5
2,4,6-Tribromophenol (Surr)	95		54 - 120			12/19/22 10:57	12/21/22 00:25	5
2-Fluorobiphenyl (Surr)	97		60 - 120			12/19/22 10:57	12/21/22 00:25	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.2		0.19	mg/Kg	☼	12/27/22 09:24	12/28/22 19:04	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	6.1		0.1	%			12/20/22 12:09	1
Percent Solids (EPA Moisture)	93.9		0.1	%			12/20/22 12:09	1
Percent Moisture (SM Moisture - 2540)	16		0.10	%			12/19/22 15:59	1
Percent Solids (SM Moisture - 2540)	84		0.10	%			12/19/22 15:59	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	20.2		0.1	%			12/19/22 16:30	1

Client Sample ID: S43471.12

Lab Sample ID: 190-30658-12

Date Collected: 12/13/22 00:01

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 77.1

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<1300		1300	ug/Kg	☼	12/19/22 10:57	12/21/22 00:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	92		53 - 120			12/19/22 10:57	12/21/22 00:49	1
p-Terphenyl-d14 (Surr)	97		79 - 130			12/19/22 10:57	12/21/22 00:49	1
Phenol-d5 (Surr)	87		54 - 120			12/19/22 10:57	12/21/22 00:49	1
2-Fluorophenol (Surr)	84		52 - 120			12/19/22 10:57	12/21/22 00:49	1
2,4,6-Tribromophenol (Surr)	100		54 - 120			12/19/22 10:57	12/21/22 00:49	1
2-Fluorobiphenyl (Surr)	102		60 - 120			12/19/22 10:57	12/21/22 00:49	1

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Client Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.12

Lab Sample ID: 190-30658-12

Date Collected: 12/13/22 00:01

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 77.1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.5		0.23	mg/Kg	☼	12/27/22 09:24	12/28/22 19:07	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	22.9		0.1	%			12/20/22 12:09	1
Percent Solids (EPA Moisture)	77.1		0.1	%			12/20/22 12:09	1
Percent Moisture (SM Moisture - 2540)	5.4		0.10	%			12/19/22 15:59	1
Percent Solids (SM Moisture - 2540)	95		0.10	%			12/19/22 15:59	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	6.0		0.1	%			12/19/22 16:30	1

Client Sample ID: S43471.12

Lab Sample ID: 190-30658-12

Date Collected: 12/13/22 00:01

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 94.6

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.1		5.1	mg/Kg	☼		12/23/22 22:07	1
Methanol	<2.1		2.1	mg/Kg	☼		12/23/22 22:07	1
n-Butanol	<5.1		5.1	mg/Kg	☼		12/23/22 22:07	1

Client Sample ID: S43471.13

Lab Sample ID: 190-30658-13

Date Collected: 12/13/22 12:30

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 83.4

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<1200		1200	ug/Kg	☼	12/19/22 10:57	12/21/22 01:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	96		53 - 120	12/19/22 10:57	12/21/22 01:13	1
p-Terphenyl-d14 (Surr)	104		79 - 130	12/19/22 10:57	12/21/22 01:13	1
Phenol-d5 (Surr)	89		54 - 120	12/19/22 10:57	12/21/22 01:13	1
2-Fluorophenol (Surr)	87		52 - 120	12/19/22 10:57	12/21/22 01:13	1
2,4,6-Tribromophenol (Surr)	102		54 - 120	12/19/22 10:57	12/21/22 01:13	1
2-Fluorobiphenyl (Surr)	108		60 - 120	12/19/22 10:57	12/21/22 01:13	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.1		0.21	mg/Kg	☼	12/27/22 09:24	12/28/22 19:10	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	16.6		0.1	%			12/20/22 12:09	1
Percent Solids (EPA Moisture)	83.4		0.1	%			12/20/22 12:09	1
Percent Moisture (SM Moisture - 2540)	6.8		0.10	%			12/19/22 15:59	1
Percent Solids (SM Moisture - 2540)	93		0.10	%			12/19/22 15:59	1

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Client Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.13

Lab Sample ID: 190-30658-13

Date Collected: 12/13/22 12:30

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 83.4

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	7.7		0.1	%			12/19/22 16:30	1

Client Sample ID: S43471.13

Lab Sample ID: 190-30658-13

Date Collected: 12/13/22 12:30

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 93.2

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.3		5.3	mg/Kg	☼		12/23/22 22:28	1
Methanol	<2.1		2.1	mg/Kg	☼		12/23/22 22:28	1
n-Butanol	<5.3		5.3	mg/Kg	☼		12/23/22 22:28	1

Client Sample ID: S43471.14

Lab Sample ID: 190-30658-14

Date Collected: 12/13/22 12:45

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 93.8

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<1000		1000	ug/Kg	☼	12/19/22 10:57	12/21/22 01:37	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	94		53 - 120			12/19/22 10:57	12/21/22 01:37	1
p-Terphenyl-d14 (Surr)	98		79 - 130			12/19/22 10:57	12/21/22 01:37	1
Phenol-d5 (Surr)	86		54 - 120			12/19/22 10:57	12/21/22 01:37	1
2-Fluorophenol (Surr)	85		52 - 120			12/19/22 10:57	12/21/22 01:37	1
2,4,6-Tribromophenol (Surr)	104		54 - 120			12/19/22 10:57	12/21/22 01:37	1
2-Fluorobiphenyl (Surr)	105		60 - 120			12/19/22 10:57	12/21/22 01:37	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.96		0.19	mg/Kg	☼	12/27/22 09:24	12/28/22 19:14	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	6.2		0.1	%			12/20/22 11:45	1
Percent Solids (EPA Moisture)	93.8		0.1	%			12/20/22 11:45	1
Percent Moisture (SM Moisture - 2540)	6.0		0.10	%			12/19/22 15:59	1
Percent Solids (SM Moisture - 2540)	94		0.10	%			12/19/22 15:59	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	6.7		0.1	%			12/19/22 16:30	1

Client Sample ID: S43471.14

Lab Sample ID: 190-30658-14

Date Collected: 12/13/22 12:45

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 94.0

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.3		5.3	mg/Kg	☼		12/23/22 22:49	1

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Client Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.14

Lab Sample ID: 190-30658-14

Date Collected: 12/13/22 12:45

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 94.0

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<2.1		2.1	mg/Kg	☼		12/23/22 22:49	1
n-Butanol	<5.3		5.3	mg/Kg	☼		12/23/22 22:49	1

Client Sample ID: S43471.15

Lab Sample ID: 190-30658-15

Date Collected: 12/13/22 13:00

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 90.7

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<5400		5400	ug/Kg	☼	12/19/22 10:57	12/21/22 02:01	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	91		53 - 120			12/19/22 10:57	12/21/22 02:01	5
p-Terphenyl-d14 (Surr)	92		79 - 130			12/19/22 10:57	12/21/22 02:01	5
Phenol-d5 (Surr)	87		54 - 120			12/19/22 10:57	12/21/22 02:01	5
2-Fluorophenol (Surr)	88		52 - 120			12/19/22 10:57	12/21/22 02:01	5
2,4,6-Tribromophenol (Surr)	89		54 - 120			12/19/22 10:57	12/21/22 02:01	5
2-Fluorobiphenyl (Surr)	95		60 - 120			12/19/22 10:57	12/21/22 02:01	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.95		0.19	mg/Kg	☼	12/27/22 09:24	12/28/22 19:17	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	9.3		0.1	%			12/20/22 11:45	1
Percent Solids (EPA Moisture)	90.7		0.1	%			12/20/22 11:45	1
Percent Moisture (SM Moisture - 2540)	6.5		0.10	%			12/19/22 16:30	1
Percent Solids (SM Moisture - 2540)	94		0.10	%			12/19/22 16:30	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	7.3		0.1	%			12/19/22 16:30	1

Client Sample ID: S43471.15

Lab Sample ID: 190-30658-15

Date Collected: 12/13/22 13:00

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 93.5

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.2		5.2	mg/Kg	☼		12/23/22 23:09	1
Methanol	<2.1		2.1	mg/Kg	☼		12/23/22 23:09	1
n-Butanol	<5.2		5.2	mg/Kg	☼		12/23/22 23:09	1

Client Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.16

Lab Sample ID: 190-30658-16

Date Collected: 12/13/22 13:00

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 77.3

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<1300		1300	ug/Kg	☼	12/20/22 07:08	12/21/22 13:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	98		53 - 120			12/20/22 07:08	12/21/22 13:49	1
p-Terphenyl-d14 (Surr)	119		79 - 130			12/20/22 07:08	12/21/22 13:49	1
Phenol-d5 (Surr)	91		54 - 120			12/20/22 07:08	12/21/22 13:49	1
2-Fluorophenol (Surr)	87		52 - 120			12/20/22 07:08	12/21/22 13:49	1
2,4,6-Tribromophenol (Surr)	103		54 - 120			12/20/22 07:08	12/21/22 13:49	1
2-Fluorobiphenyl (Surr)	97		60 - 120			12/20/22 07:08	12/21/22 13:49	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.0		0.23	mg/Kg	☼	12/27/22 09:24	12/28/22 19:31	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	22.7		0.1	%			12/20/22 11:45	1
Percent Solids (EPA Moisture)	77.3		0.1	%			12/20/22 11:45	1
Percent Moisture (SM Moisture - 2540)	7.4		0.10	%			12/19/22 16:30	1
Percent Solids (SM Moisture - 2540)	93		0.10	%			12/19/22 16:30	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	8.5		0.1	%			12/19/22 16:30	1

Client Sample ID: S43471.16

Lab Sample ID: 190-30658-16

Date Collected: 12/13/22 13:00

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 92.6

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.2		5.2	mg/Kg	☼		12/23/22 23:30	1
Methanol	<2.1		2.1	mg/Kg	☼		12/23/22 23:30	1
n-Butanol	<5.2		5.2	mg/Kg	☼		12/23/22 23:30	1

Client Sample ID: S43471.17

Lab Sample ID: 190-30658-17

Date Collected: 12/13/22 13:30

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 89.4

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.6		5.6	mg/Kg	☼		12/23/22 23:51	1
Methanol	<2.2		2.2	mg/Kg	☼		12/23/22 23:51	1
n-Butanol	<5.6		5.6	mg/Kg	☼		12/23/22 23:51	1

Client Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.17

Lab Sample ID: 190-30658-17

Date Collected: 12/13/22 13:30

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 90.4

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<5500		5500	ug/Kg	☼	12/20/22 07:08	12/21/22 14:14	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	90		53 - 120			12/20/22 07:08	12/21/22 14:14	5
p-Terphenyl-d14 (Surr)	111		79 - 130			12/20/22 07:08	12/21/22 14:14	5
Phenol-d5 (Surr)	95		54 - 120			12/20/22 07:08	12/21/22 14:14	5
2-Fluorophenol (Surr)	95		52 - 120			12/20/22 07:08	12/21/22 14:14	5
2,4,6-Tribromophenol (Surr)	92		54 - 120			12/20/22 07:08	12/21/22 14:14	5
2-Fluorobiphenyl (Surr)	98		60 - 120			12/20/22 07:08	12/21/22 14:14	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.95		0.20	mg/Kg	☼	12/27/22 09:24	12/28/22 19:35	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	9.6		0.1	%			12/20/22 11:45	1
Percent Solids (EPA Moisture)	90.4		0.1	%			12/20/22 11:45	1
Percent Moisture (SM Moisture - 2540)	11		0.10	%			12/19/22 16:30	1
Percent Solids (SM Moisture - 2540)	89		0.10	%			12/19/22 16:30	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	12.5		0.1	%			12/19/22 16:30	1

Client Sample ID: S43471.18

Lab Sample ID: 190-30658-18

Date Collected: 12/13/22 00:01

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 93.5

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<5300		5300	ug/Kg	☼	12/20/22 07:08	12/21/22 14:39	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	78		53 - 120			12/20/22 07:08	12/21/22 14:39	5
p-Terphenyl-d14 (Surr)	107		79 - 130			12/20/22 07:08	12/21/22 14:39	5
Phenol-d5 (Surr)	84		54 - 120			12/20/22 07:08	12/21/22 14:39	5
2-Fluorophenol (Surr)	76		52 - 120			12/20/22 07:08	12/21/22 14:39	5
2,4,6-Tribromophenol (Surr)	90		54 - 120			12/20/22 07:08	12/21/22 14:39	5
2-Fluorobiphenyl (Surr)	90		60 - 120			12/20/22 07:08	12/21/22 14:39	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.94		0.18	mg/Kg	☼	12/27/22 09:24	12/28/22 19:38	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	6.5		0.1	%			12/20/22 11:45	1
Percent Solids (EPA Moisture)	93.5		0.1	%			12/20/22 11:45	1

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Client Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.18

Lab Sample ID: 190-30658-18

Date Collected: 12/13/22 00:01

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 93.5

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (SM Moisture - 2540)	5.5		0.10	%			12/19/22 16:30	1
Percent Solids (SM Moisture - 2540)	94		0.10	%			12/19/22 16:30	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	6.2		0.1	%			12/19/22 16:30	1

Client Sample ID: S43471.18

Lab Sample ID: 190-30658-18

Date Collected: 12/13/22 00:01

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 94.5

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.1		5.1	mg/Kg	☼		12/24/22 00:11	1
Methanol	<2.0		2.0	mg/Kg	☼		12/24/22 00:11	1
n-Butanol	<5.1		5.1	mg/Kg	☼		12/24/22 00:11	1

Client Sample ID: S43471.19

Lab Sample ID: 190-30658-19

Date Collected: 12/13/22 14:10

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 92.1

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.3		5.3	mg/Kg	☼		12/24/22 00:32	1
Methanol	<2.1		2.1	mg/Kg	☼		12/24/22 00:32	1
n-Butanol	<5.3		5.3	mg/Kg	☼		12/24/22 00:32	1

Client Sample ID: S43471.19

Lab Sample ID: 190-30658-19

Date Collected: 12/13/22 14:10

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 92.5

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<11000		11000	ug/Kg	☼	12/20/22 07:08	12/21/22 15:03	10
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	71		53 - 120			12/20/22 07:08	12/21/22 15:03	10
p-Terphenyl-d14 (Surr)	93		79 - 130			12/20/22 07:08	12/21/22 15:03	10
Phenol-d5 (Surr)	68		54 - 120			12/20/22 07:08	12/21/22 15:03	10
2-Fluorophenol (Surr)	76		52 - 120			12/20/22 07:08	12/21/22 15:03	10
2,4,6-Tribromophenol (Surr)	84		54 - 120			12/20/22 07:08	12/21/22 15:03	10
2-Fluorobiphenyl (Surr)	87		60 - 120			12/20/22 07:08	12/21/22 15:03	10

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.89		0.20	mg/Kg	☼	12/27/22 09:24	12/28/22 19:41	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	7.5		0.1	%			12/20/22 11:45	1

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Client Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.19

Lab Sample ID: 190-30658-19

Date Collected: 12/13/22 14:10

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 92.5

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (EPA Moisture)	92.5		0.1	%			12/20/22 11:45	1
Percent Moisture (SM Moisture - 2540)	7.9		0.10	%			12/19/22 16:30	1
Percent Solids (SM Moisture - 2540)	92		0.10	%			12/19/22 16:30	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	9.0		0.1	%			12/19/22 16:30	1

Client Sample ID: S43471.20

Lab Sample ID: 190-30658-20

Date Collected: 12/13/22 14:15

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 92.2

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.3		5.3	mg/Kg	☼		12/24/22 00:52	1
Methanol	<2.1		2.1	mg/Kg	☼		12/24/22 00:52	1
n-Butanol	<5.3		5.3	mg/Kg	☼		12/24/22 00:52	1

Client Sample ID: S43471.20

Lab Sample ID: 190-30658-20

Date Collected: 12/13/22 14:15

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 93.6

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<5300		5300	ug/Kg	☼	12/20/22 07:08	12/21/22 15:28	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	86		53 - 120			12/20/22 07:08	12/21/22 15:28	5
p-Terphenyl-d14 (Surr)	105		79 - 130			12/20/22 07:08	12/21/22 15:28	5
Phenol-d5 (Surr)	90		54 - 120			12/20/22 07:08	12/21/22 15:28	5
2-Fluorophenol (Surr)	79		52 - 120			12/20/22 07:08	12/21/22 15:28	5
2,4,6-Tribromophenol (Surr)	87		54 - 120			12/20/22 07:08	12/21/22 15:28	5
2-Fluorobiphenyl (Surr)	93		60 - 120			12/20/22 07:08	12/21/22 15:28	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.91		0.19	mg/Kg	☼	12/27/22 09:24	12/28/22 19:45	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	6.4		0.1	%			12/20/22 11:45	1
Percent Solids (EPA Moisture)	93.6		0.1	%			12/20/22 11:45	1
Percent Moisture (SM Moisture - 2540)	7.8		0.10	%			12/19/22 16:30	1
Percent Solids (SM Moisture - 2540)	92		0.10	%			12/19/22 16:30	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	8.9		0.1	%			12/19/22 16:30	1

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Client Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.21

Lab Sample ID: 190-30658-21

Date Collected: 12/13/22 14:35

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 86.0

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<11000		11000	ug/Kg	☼	12/20/22 07:08	12/21/22 15:52	10
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	85		53 - 120			12/20/22 07:08	12/21/22 15:52	10
p-Terphenyl-d14 (Surr)	101		79 - 130			12/20/22 07:08	12/21/22 15:52	10
Phenol-d5 (Surr)	90		54 - 120			12/20/22 07:08	12/21/22 15:52	10
2-Fluorophenol (Surr)	84		52 - 120			12/20/22 07:08	12/21/22 15:52	10
2,4,6-Tribromophenol (Surr)	94		54 - 120			12/20/22 07:08	12/21/22 15:52	10
2-Fluorobiphenyl (Surr)	95		60 - 120			12/20/22 07:08	12/21/22 15:52	10

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.5		0.23	mg/Kg	☼	12/27/22 09:24	12/28/22 19:48	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	14.0		0.1	%			12/20/22 11:45	1
Percent Solids (EPA Moisture)	86.0		0.1	%			12/20/22 11:45	1
Percent Moisture (SM Moisture - 2540)	7.0		0.10	%			12/19/22 16:30	1
Percent Solids (SM Moisture - 2540)	93		0.10	%			12/19/22 16:30	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	7.9		0.1	%			12/19/22 16:30	1

Client Sample ID: S43471.21

Lab Sample ID: 190-30658-21

Date Collected: 12/13/22 14:35

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 93.0

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.3		5.3	mg/Kg	☼		12/24/22 01:13	1
Methanol	<2.1		2.1	mg/Kg	☼		12/24/22 01:13	1
n-Butanol	<5.3		5.3	mg/Kg	☼		12/24/22 01:13	1

Client Sample ID: S43471.22

Lab Sample ID: 190-30658-22

Date Collected: 12/13/22 14:35

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 88.8

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<11000		11000	ug/Kg	☼	12/20/22 07:08	12/21/22 16:17	10
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	82		53 - 120			12/20/22 07:08	12/21/22 16:17	10
p-Terphenyl-d14 (Surr)	100		79 - 130			12/20/22 07:08	12/21/22 16:17	10
Phenol-d5 (Surr)	83		54 - 120			12/20/22 07:08	12/21/22 16:17	10
2-Fluorophenol (Surr)	87		52 - 120			12/20/22 07:08	12/21/22 16:17	10
2,4,6-Tribromophenol (Surr)	93		54 - 120			12/20/22 07:08	12/21/22 16:17	10
2-Fluorobiphenyl (Surr)	87		60 - 120			12/20/22 07:08	12/21/22 16:17	10

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Client Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.22

Lab Sample ID: 190-30658-22

Date Collected: 12/13/22 14:35

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 88.8

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.0		0.22	mg/Kg	☼	12/27/22 09:28	12/28/22 19:59	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	11.2		0.1	%			12/20/22 11:45	1
Percent Solids (EPA Moisture)	88.8		0.1	%			12/20/22 11:45	1
Percent Moisture (SM Moisture - 2540)	5.8		0.10	%			12/19/22 16:30	1
Percent Solids (SM Moisture - 2540)	94		0.10	%			12/19/22 16:30	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	6.5		0.1	%			12/19/22 16:30	1

Client Sample ID: S43471.22

Lab Sample ID: 190-30658-22

Date Collected: 12/13/22 14:35

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 94.2

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.2		5.2	mg/Kg	☼		12/24/22 01:34	1
Methanol	<2.1		2.1	mg/Kg	☼		12/24/22 01:34	1
n-Butanol	<5.2		5.2	mg/Kg	☼		12/24/22 01:34	1

Client Sample ID: S43471.23

Lab Sample ID: 190-30658-23

Date Collected: 12/13/22 15:03

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 83.8

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.8		5.8	mg/Kg	☼		12/24/22 01:54	1
Methanol	<2.3		2.3	mg/Kg	☼		12/24/22 01:54	1
n-Butanol	<5.8		5.8	mg/Kg	☼		12/24/22 01:54	1

Client Sample ID: S43471.23

Lab Sample ID: 190-30658-23

Date Collected: 12/13/22 15:03

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 87.7

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<1100		1100	ug/Kg	☼	12/20/22 07:08	12/21/22 16:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	54		53 - 120	12/20/22 07:08	12/21/22 16:42	1
p-Terphenyl-d14 (Surr)	81		79 - 130	12/20/22 07:08	12/21/22 16:42	1
Phenol-d5 (Surr)	56		54 - 120	12/20/22 07:08	12/21/22 16:42	1
2-Fluorophenol (Surr)	51	S1-	52 - 120	12/20/22 07:08	12/21/22 16:42	1
2,4,6-Tribromophenol (Surr)	69		54 - 120	12/20/22 07:08	12/21/22 16:42	1
2-Fluorobiphenyl (Surr)	60		60 - 120	12/20/22 07:08	12/21/22 16:42	1

Eurofins Michigan

Client Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.23

Lab Sample ID: 190-30658-23

Date Collected: 12/13/22 15:03

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 87.7

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.1		0.21	mg/Kg	☼	12/27/22 09:28	12/28/22 20:26	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	12.3		0.1	%			12/20/22 12:09	1
Percent Solids (EPA Moisture)	87.7		0.1	%			12/20/22 12:09	1
Percent Moisture (SM Moisture - 2540)	16		0.10	%			12/19/22 16:30	1
Percent Solids (SM Moisture - 2540)	84		0.10	%			12/19/22 16:30	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	20.4		0.1	%			12/19/22 16:30	1

Client Sample ID: S43471.24

Lab Sample ID: 190-30658-24

Date Collected: 12/13/22 00:01

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 91.2

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.4		5.4	mg/Kg	☼		12/24/22 02:15	1
Methanol	<2.2		2.2	mg/Kg	☼		12/24/22 02:15	1
n-Butanol	<5.4		5.4	mg/Kg	☼		12/24/22 02:15	1

Client Sample ID: S43471.24

Lab Sample ID: 190-30658-24

Date Collected: 12/13/22 00:01

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 91.8

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<5300		5300	ug/Kg	☼	12/20/22 07:08	12/21/22 17:07	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	76		53 - 120	12/20/22 07:08	12/21/22 17:07	5
p-Terphenyl-d14 (Surr)	94		79 - 130	12/20/22 07:08	12/21/22 17:07	5
Phenol-d5 (Surr)	79		54 - 120	12/20/22 07:08	12/21/22 17:07	5
2-Fluorophenol (Surr)	77		52 - 120	12/20/22 07:08	12/21/22 17:07	5
2,4,6-Tribromophenol (Surr)	91		54 - 120	12/20/22 07:08	12/21/22 17:07	5
2-Fluorobiphenyl (Surr)	81		60 - 120	12/20/22 07:08	12/21/22 17:07	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.85		0.20	mg/Kg	☼	12/27/22 09:28	12/28/22 20:29	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	8.2		0.1	%			12/20/22 12:09	1
Percent Solids (EPA Moisture)	91.8		0.1	%			12/20/22 12:09	1
Percent Moisture (SM Moisture - 2540)	8.8		0.10	%			12/20/22 17:32	1
Percent Solids (SM Moisture - 2540)	91		0.10	%			12/20/22 17:32	1

Eurofins Michigan

Client Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.24

Lab Sample ID: 190-30658-24

Date Collected: 12/13/22 00:01

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 91.8

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	10.2		0.1	%			12/19/22 16:30	1

Client Sample ID: S43471.25

Lab Sample ID: 190-30658-25

Date Collected: 12/13/22 10:20

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 90.8

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<11000		11000	ug/Kg	☼	12/20/22 07:08	12/21/22 17:32	10
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	78		53 - 120			12/20/22 07:08	12/21/22 17:32	10
p-Terphenyl-d14 (Surr)	88		79 - 130			12/20/22 07:08	12/21/22 17:32	10
Phenol-d5 (Surr)	84		54 - 120			12/20/22 07:08	12/21/22 17:32	10
2-Fluorophenol (Surr)	69		52 - 120			12/20/22 07:08	12/21/22 17:32	10
2,4,6-Tribromophenol (Surr)	49	S1-	54 - 120			12/20/22 07:08	12/21/22 17:32	10
2-Fluorobiphenyl (Surr)	82		60 - 120			12/20/22 07:08	12/21/22 17:32	10

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	7.0		0.21	mg/Kg	☼	12/27/22 09:28	12/28/22 20:33	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	9.2		0.1	%			12/20/22 12:09	1
Percent Solids (EPA Moisture)	90.8		0.1	%			12/20/22 12:09	1
Percent Moisture (SM Moisture - 2540)	8.9		0.10	%			12/20/22 17:32	1
Percent Solids (SM Moisture - 2540)	91		0.10	%			12/20/22 17:32	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	10.3		0.1	%			12/19/22 16:30	1

Client Sample ID: S43471.25

Lab Sample ID: 190-30658-25

Date Collected: 12/13/22 10:20

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 91.1

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.4		5.4	mg/Kg	☼		12/24/22 02:35	1
Methanol	150		11	mg/Kg	☼		12/24/22 05:40	5
n-Butanol	<5.4		5.4	mg/Kg	☼		12/24/22 02:35	1

Client Sample ID: S43471.26

Lab Sample ID: 190-30658-26

Date Collected: 12/13/22 10:40

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 76.6

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<6500		6500	ug/Kg	☼	12/20/22 07:08	12/21/22 17:57	5

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Client Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.26

Lab Sample ID: 190-30658-26

Date Collected: 12/13/22 10:40

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 76.6

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	76		53 - 120	12/20/22 07:08	12/21/22 17:57	5
p-Terphenyl-d14 (Surr)	100		79 - 130	12/20/22 07:08	12/21/22 17:57	5
Phenol-d5 (Surr)	76		54 - 120	12/20/22 07:08	12/21/22 17:57	5
2-Fluorophenol (Surr)	79		52 - 120	12/20/22 07:08	12/21/22 17:57	5
2,4,6-Tribromophenol (Surr)	81		54 - 120	12/20/22 07:08	12/21/22 17:57	5
2-Fluorobiphenyl (Surr)	81		60 - 120	12/20/22 07:08	12/21/22 17:57	5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.80		0.25	mg/Kg	☆	12/27/22 09:28	12/28/22 20:36	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	23.4		0.1	%			12/20/22 11:45	1
Percent Solids (EPA Moisture)	76.6		0.1	%			12/20/22 11:45	1
Percent Moisture (SM Moisture - 2540)	9.3		0.10	%			12/20/22 17:32	1
Percent Solids (SM Moisture - 2540)	91		0.10	%			12/20/22 17:32	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	10.9		0.1	%			12/19/22 16:30	1

Client Sample ID: S43471.26

Lab Sample ID: 190-30658-26

Date Collected: 12/13/22 10:40

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 90.7

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.5		5.5	mg/Kg	☆		12/24/22 02:56	1
Methanol	180		11	mg/Kg	☆		12/24/22 06:01	5
n-Butanol	<5.5		5.5	mg/Kg	☆		12/24/22 02:56	1

Client Sample ID: S43471.27

Lab Sample ID: 190-30658-27

Date Collected: 12/13/22 08:50

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 76.5

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<1300		1300	ug/Kg	☆	12/20/22 07:08	12/21/22 18:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	96		53 - 120	12/20/22 07:08	12/21/22 18:22	1
p-Terphenyl-d14 (Surr)	127		79 - 130	12/20/22 07:08	12/21/22 18:22	1
Phenol-d5 (Surr)	85		54 - 120	12/20/22 07:08	12/21/22 18:22	1
2-Fluorophenol (Surr)	84		52 - 120	12/20/22 07:08	12/21/22 18:22	1
2,4,6-Tribromophenol (Surr)	97		54 - 120	12/20/22 07:08	12/21/22 18:22	1
2-Fluorobiphenyl (Surr)	97		60 - 120	12/20/22 07:08	12/21/22 18:22	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.87		0.24	mg/Kg	☆	12/27/22 09:28	12/28/22 20:40	2

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Client Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.27

Lab Sample ID: 190-30658-27

Date Collected: 12/13/22 08:50

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 76.5

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	23.5		0.1	%			12/20/22 11:45	1
Percent Solids (EPA Moisture)	76.5		0.1	%			12/20/22 11:45	1
Percent Moisture (SM Moisture - 2540)	7.6		0.10	%			12/20/22 17:32	1
Percent Solids (SM Moisture - 2540)	92		0.10	%			12/20/22 17:32	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	8.7		0.1	%			12/19/22 16:30	1

Client Sample ID: S43471.27

Lab Sample ID: 190-30658-27

Date Collected: 12/13/22 08:50

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 92.4

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.3		5.3	mg/Kg	☼		12/24/22 03:16	1
Methanol	280		11	mg/Kg	☼		12/24/22 06:21	5
n-Butanol	<5.3		5.3	mg/Kg	☼		12/24/22 03:16	1

Client Sample ID: S43471.28

Lab Sample ID: 190-30658-28

Date Collected: 12/13/22 12:45

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 90.5

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<1100		1100	ug/Kg	☼	12/20/22 07:08	12/21/22 18:46	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	88		53 - 120			12/20/22 07:08	12/21/22 18:46	1
p-Terphenyl-d14 (Surr)	111		79 - 130			12/20/22 07:08	12/21/22 18:46	1
Phenol-d5 (Surr)	81		54 - 120			12/20/22 07:08	12/21/22 18:46	1
2-Fluorophenol (Surr)	79		52 - 120			12/20/22 07:08	12/21/22 18:46	1
2,4,6-Tribromophenol (Surr)	98		54 - 120			12/20/22 07:08	12/21/22 18:46	1
2-Fluorobiphenyl (Surr)	94		60 - 120			12/20/22 07:08	12/21/22 18:46	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.3		0.19	mg/Kg	☼	12/27/22 09:28	12/28/22 20:43	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	9.5		0.1	%			12/20/22 11:45	1
Percent Solids (EPA Moisture)	90.5		0.1	%			12/20/22 11:45	1
Percent Moisture (SM Moisture - 2540)	7.3		0.10	%			12/19/22 16:30	1
Percent Solids (SM Moisture - 2540)	93		0.10	%			12/19/22 16:30	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	8.3		0.1	%			12/19/22 16:30	1

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Client Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.28

Lab Sample ID: 190-30658-28

Date Collected: 12/13/22 12:45

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 92.7

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.4		5.4	mg/Kg	☼		12/24/22 03:37	1
Methanol	160		11	mg/Kg	☼		12/24/22 06:42	5
n-Butanol	<5.4		5.4	mg/Kg	☼		12/24/22 03:37	1

Client Sample ID: S43471.29

Lab Sample ID: 190-30658-29

Date Collected: 12/13/22 13:00

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 90.1

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<1100		1100	ug/Kg	☼	12/20/22 07:08	12/21/22 19:11	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	76		53 - 120			12/20/22 07:08	12/21/22 19:11	1
p-Terphenyl-d14 (Surr)	115		79 - 130			12/20/22 07:08	12/21/22 19:11	1
Phenol-d5 (Surr)	76		54 - 120			12/20/22 07:08	12/21/22 19:11	1
2-Fluorophenol (Surr)	72		52 - 120			12/20/22 07:08	12/21/22 19:11	1
2,4,6-Tribromophenol (Surr)	92		54 - 120			12/20/22 07:08	12/21/22 19:11	1
2-Fluorobiphenyl (Surr)	84		60 - 120			12/20/22 07:08	12/21/22 19:11	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.94		0.20	mg/Kg	☼	12/27/22 09:28	12/28/22 20:47	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	9.9		0.1	%			12/20/22 11:45	1
Percent Solids (EPA Moisture)	90.1		0.1	%			12/20/22 11:45	1
Percent Moisture (SM Moisture - 2540)	5.8		0.10	%			12/19/22 16:30	1
Percent Solids (SM Moisture - 2540)	94		0.10	%			12/19/22 16:30	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	6.5		0.1	%			12/19/22 16:30	1

Client Sample ID: S43471.29

Lab Sample ID: 190-30658-29

Date Collected: 12/13/22 13:00

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 94.2

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.1		5.1	mg/Kg	☼		12/24/22 03:58	1
Methanol	110		10	mg/Kg	☼		12/24/22 07:02	5
n-Butanol	<5.1		5.1	mg/Kg	☼		12/24/22 03:58	1

Client Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.30

Lab Sample ID: 190-30658-30

Date Collected: 12/13/22 13:50

Matrix: Solid

Date Received: 12/16/22 12:38

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	23.7		0.1	%			12/20/22 11:45	1
Percent Solids (EPA Moisture)	76.3		0.1	%			12/20/22 11:45	1
Percent Moisture (SM Moisture - 2540)	8.0		0.10	%			12/19/22 16:30	1
Percent Solids (SM Moisture - 2540)	92		0.10	%			12/19/22 16:30	1

Client Sample ID: S43471.30

Lab Sample ID: 190-30658-30

Date Collected: 12/13/22 13:50

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 76.3

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.0		0.26	mg/Kg	☼	12/27/22 09:28	12/28/22 21:00	2

Client Sample ID: S43471.30

Lab Sample ID: 190-30658-30

Date Collected: 12/13/22 13:50

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 92.0

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.2		5.2	mg/Kg	☼		12/24/22 04:18	1
Methanol	270		10	mg/Kg	☼		12/24/22 07:22	5
n-Butanol	<5.2		5.2	mg/Kg	☼		12/24/22 04:18	1

Client Sample ID: S43471.31

Lab Sample ID: 190-30658-31

Date Collected: 12/13/22 14:10

Matrix: Solid

Date Received: 12/16/22 12:38

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	24.0		0.1	%			12/20/22 11:45	1
Percent Solids (EPA Moisture)	76.0		0.1	%			12/20/22 11:45	1
Percent Moisture (SM Moisture - 2540)	16		0.10	%			12/19/22 16:30	1
Percent Solids (SM Moisture - 2540)	84		0.10	%			12/19/22 16:30	1

Client Sample ID: S43471.31

Lab Sample ID: 190-30658-31

Date Collected: 12/13/22 14:10

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 76.0

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.78		0.25	mg/Kg	☼	12/27/22 09:28	12/28/22 21:04	2

Client Sample ID: S43471.31

Lab Sample ID: 190-30658-31

Date Collected: 12/13/22 14:10

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 84.2

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<58		58	mg/Kg	☼		12/23/22 18:19	10

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Client Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.31

Lab Sample ID: 190-30658-31

Date Collected: 12/13/22 14:10

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 84.2

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	560		23	mg/Kg	☼		12/23/22 18:19	10
n-Butanol	<58		58	mg/Kg	☼		12/23/22 18:19	10

Client Sample ID: S43471.32

Lab Sample ID: 190-30658-32

Date Collected: 12/13/22 14:15

Matrix: Solid

Date Received: 12/16/22 12:38

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	8.5		0.1	%			12/20/22 11:45	1
Percent Solids (EPA Moisture)	91.5		0.1	%			12/20/22 11:45	1
Percent Moisture (SM Moisture - 2540)	3.2		0.10	%			12/19/22 16:30	1
Percent Solids (SM Moisture - 2540)	97		0.10	%			12/19/22 16:30	1

Client Sample ID: S43471.32

Lab Sample ID: 190-30658-32

Date Collected: 12/13/22 14:15

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 91.5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.64		0.19	mg/Kg	☼	12/27/22 09:28	12/28/22 21:07	2

Client Sample ID: S43471.32

Lab Sample ID: 190-30658-32

Date Collected: 12/13/22 14:15

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 96.8

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<26		26	mg/Kg	☼		12/23/22 18:39	5
Methanol	140		10	mg/Kg	☼		12/23/22 18:39	5
n-Butanol	<26		26	mg/Kg	☼		12/23/22 18:39	5

Client Sample ID: S43471.33

Lab Sample ID: 190-30658-33

Date Collected: 12/13/22 14:35

Matrix: Solid

Date Received: 12/16/22 12:38

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	4.1		0.1	%			12/20/22 11:45	1
Percent Solids (EPA Moisture)	95.9		0.1	%			12/20/22 11:45	1
Percent Moisture (SM Moisture - 2540)	5.9		0.10	%			12/19/22 16:30	1
Percent Solids (SM Moisture - 2540)	94		0.10	%			12/19/22 16:30	1

Client Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.33

Lab Sample ID: 190-30658-33

Date Collected: 12/13/22 14:35

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 94.1

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<26		26	mg/Kg	☼		12/23/22 19:00	5
Methanol	250		10	mg/Kg	☼		12/23/22 19:00	5
n-Butanol	<26		26	mg/Kg	☼		12/23/22 19:00	5

Client Sample ID: S43471.33

Lab Sample ID: 190-30658-33

Date Collected: 12/13/22 14:35

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 95.9

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.82		0.19	mg/Kg	☼	12/27/22 09:28	12/28/22 21:11	2

Client Sample ID: S43471.34

Lab Sample ID: 190-30658-34

Date Collected: 12/14/22 14:35

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 72.9

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<1300		1300	ug/Kg	☼	12/20/22 07:08	12/21/22 19:35	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	89		53 - 120			12/20/22 07:08	12/21/22 19:35	1
p-Terphenyl-d14 (Surr)	109		79 - 130			12/20/22 07:08	12/21/22 19:35	1
Phenol-d5 (Surr)	83		54 - 120			12/20/22 07:08	12/21/22 19:35	1
2-Fluorophenol (Surr)	82		52 - 120			12/20/22 07:08	12/21/22 19:35	1
2,4,6-Tribromophenol (Surr)	100		54 - 120			12/20/22 07:08	12/21/22 19:35	1
2-Fluorobiphenyl (Surr)	90		60 - 120			12/20/22 07:08	12/21/22 19:35	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.1		0.24	mg/Kg	☼	12/27/22 09:28	12/28/22 21:14	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	27.1		0.1	%			12/20/22 11:45	1
Percent Solids (EPA Moisture)	72.9		0.1	%			12/20/22 11:45	1
Percent Moisture (SM Moisture - 2540)	6.9		0.10	%			12/19/22 16:30	1
Percent Solids (SM Moisture - 2540)	93		0.10	%			12/19/22 16:30	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	7.8		0.1	%			12/19/22 16:30	1

Client Sample ID: S43471.34

Lab Sample ID: 190-30658-34

Date Collected: 12/14/22 14:35

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 93.1

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.3		5.3	mg/Kg	☼		12/22/22 16:31	1

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Client Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.34

Lab Sample ID: 190-30658-34

Date Collected: 12/14/22 14:35

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 93.1

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	100		2.1	mg/Kg	☼		12/22/22 16:31	1
n-Butanol	<5.3		5.3	mg/Kg	☼		12/22/22 16:31	1

Client Sample ID: S43471.35

Lab Sample ID: 190-30658-35

Date Collected: 12/14/22 15:03

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 90.4

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<28		28	mg/Kg	☼		12/23/22 19:21	5
Methanol	210		11	mg/Kg	☼		12/23/22 19:21	5
n-Butanol	<28		28	mg/Kg	☼		12/23/22 19:21	5

Client Sample ID: S43471.35

Lab Sample ID: 190-30658-35

Date Collected: 12/14/22 15:03

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 92.0

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<1100		1100	ug/Kg	☼	12/20/22 07:08	12/21/22 20:00	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	94		53 - 120			12/20/22 07:08	12/21/22 20:00	1
p-Terphenyl-d14 (Surr)	128		79 - 130			12/20/22 07:08	12/21/22 20:00	1
Phenol-d5 (Surr)	94		54 - 120			12/20/22 07:08	12/21/22 20:00	1
2-Fluorophenol (Surr)	88		52 - 120			12/20/22 07:08	12/21/22 20:00	1
2,4,6-Tribromophenol (Surr)	103		54 - 120			12/20/22 07:08	12/21/22 20:00	1
2-Fluorobiphenyl (Surr)	98		60 - 120			12/20/22 07:08	12/21/22 20:00	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.3		0.19	mg/Kg	☼	12/27/22 09:28	12/28/22 21:18	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	8.0		0.1	%			12/20/22 11:45	1
Percent Solids (EPA Moisture)	92.0		0.1	%			12/20/22 11:45	1
Percent Moisture (SM Moisture - 2540)	9.6		0.10	%			12/19/22 16:30	1
Percent Solids (SM Moisture - 2540)	90		0.10	%			12/19/22 16:30	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	11.2		0.1	%			12/19/22 16:30	1

QC Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-653846/1-A
Matrix: Solid
Analysis Batch: 654080

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 653846

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Tetraethyl lead	<990		990	ug/Kg		12/19/22 07:33	12/20/22 16:47	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	78		53 - 120			12/19/22 07:33	12/20/22 16:47	1
p-Terphenyl-d14 (Surr)	95		79 - 130			12/19/22 07:33	12/20/22 16:47	1
Phenol-d5 (Surr)	75		54 - 120			12/19/22 07:33	12/20/22 16:47	1
2-Fluorophenol (Surr)	71		52 - 120			12/19/22 07:33	12/20/22 16:47	1
2,4,6-Tribromophenol (Surr)	74		54 - 120			12/19/22 07:33	12/20/22 16:47	1
2-Fluorobiphenyl (Surr)	85		60 - 120			12/19/22 07:33	12/20/22 16:47	1

Lab Sample ID: LCS 480-653846/2-A
Matrix: Solid
Analysis Batch: 654080

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 653846

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
Nitrobenzene-d5 (Surr)	79		53 - 120
p-Terphenyl-d14 (Surr)	97		79 - 130
Phenol-d5 (Surr)	75		54 - 120
2-Fluorophenol (Surr)	73		52 - 120
2,4,6-Tribromophenol (Surr)	98		54 - 120
2-Fluorobiphenyl (Surr)	91		60 - 120

Lab Sample ID: MB 480-653989/1-A
Matrix: Solid
Analysis Batch: 654159

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 653989

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Tetraethyl lead	<990		990	ug/Kg		12/20/22 07:08	12/21/22 12:09	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	88		53 - 120			12/20/22 07:08	12/21/22 12:09	1
p-Terphenyl-d14 (Surr)	118		79 - 130			12/20/22 07:08	12/21/22 12:09	1
Phenol-d5 (Surr)	86		54 - 120			12/20/22 07:08	12/21/22 12:09	1
2-Fluorophenol (Surr)	80		52 - 120			12/20/22 07:08	12/21/22 12:09	1
2,4,6-Tribromophenol (Surr)	90		54 - 120			12/20/22 07:08	12/21/22 12:09	1
2-Fluorobiphenyl (Surr)	91		60 - 120			12/20/22 07:08	12/21/22 12:09	1

Lab Sample ID: LCS 480-653989/2-A
Matrix: Solid
Analysis Batch: 654159

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 653989

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
Nitrobenzene-d5 (Surr)	89		53 - 120
p-Terphenyl-d14 (Surr)	122		79 - 130
Phenol-d5 (Surr)	86		54 - 120
2-Fluorophenol (Surr)	83		52 - 120
2,4,6-Tribromophenol (Surr)	117		54 - 120

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QC Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-653989/2-A
Matrix: Solid
Analysis Batch: 654159

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 653989

Surrogate	LCS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl (Surr)	98		60 - 120

Lab Sample ID: 190-30658-16 MS
Matrix: Solid
Analysis Batch: 654159

Client Sample ID: S43471.16
Prep Type: Total/NA
Prep Batch: 653989

Surrogate	MS		Limits
	%Recovery	Qualifier	
Nitrobenzene-d5 (Surr)	90		53 - 120
p-Terphenyl-d14 (Surr)	120		79 - 130
Phenol-d5 (Surr)	83		54 - 120
2-Fluorophenol (Surr)	79		52 - 120
2,4,6-Tribromophenol (Surr)	113		54 - 120
2-Fluorobiphenyl (Surr)	95		60 - 120

Lab Sample ID: 190-30658-16 MSD
Matrix: Solid
Analysis Batch: 654159

Client Sample ID: S43471.16
Prep Type: Total/NA
Prep Batch: 653989

Surrogate	MSD		Limits
	%Recovery	Qualifier	
Nitrobenzene-d5 (Surr)	94		53 - 120
p-Terphenyl-d14 (Surr)	126		79 - 130
Phenol-d5 (Surr)	89		54 - 120
2-Fluorophenol (Surr)	85		52 - 120
2,4,6-Tribromophenol (Surr)	117		54 - 120
2-Fluorobiphenyl (Surr)	100		60 - 120

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Lab Sample ID: MB 680-755693/1-A
Matrix: Solid
Analysis Batch: 756436

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Ethanol	<5.0		5.0	mg/Kg			12/21/22 22:29	1
Methanol	<2.0		2.0	mg/Kg			12/21/22 22:29	1
n-Butanol	<5.0		5.0	mg/Kg			12/21/22 22:29	1

Lab Sample ID: LCS 680-755693/2-A
Matrix: Solid
Analysis Batch: 756436

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Methanol	19.0	21.7		mg/Kg		114	59 - 153

QC Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) (Continued)

Lab Sample ID: LCSD 680-755693/3-A
Matrix: Solid
Analysis Batch: 756436

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methanol	19.7	20.2		mg/Kg		102	59 - 153	7	50

Lab Sample ID: LCS 680-755695/2-A
Matrix: Solid
Analysis Batch: 756541

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methanol	20.0	21.1		mg/Kg		105	59 - 153

Lab Sample ID: LCSD 680-755695/3-A
Matrix: Solid
Analysis Batch: 756541

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methanol	19.7	20.8		mg/Kg		106	59 - 153	1	50

Lab Sample ID: MB 680-755695/1-A
Matrix: Solid
Analysis Batch: 756693

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.0		5.0	mg/Kg			12/23/22 17:58	1
Methanol	<2.0		2.0	mg/Kg			12/23/22 17:58	1
n-Butanol	<5.0		5.0	mg/Kg			12/23/22 17:58	1

Lab Sample ID: MB 680-755694/1-A
Matrix: Solid
Analysis Batch: 756696

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<4.8		4.8	mg/Kg			12/23/22 20:44	1
Methanol	<1.9		1.9	mg/Kg			12/23/22 20:44	1
n-Butanol	<4.8		4.8	mg/Kg			12/23/22 20:44	1

Lab Sample ID: LCS 680-755694/2-A
Matrix: Solid
Analysis Batch: 756696

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methanol	19.4	20.0		mg/Kg		103	59 - 153

Lab Sample ID: LCSD 680-755694/3-A
Matrix: Solid
Analysis Batch: 756696

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methanol	19.8	18.4		mg/Kg		93	59 - 153	8	50

QC Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 160-594809/1-A
Matrix: Solid
Analysis Batch: 595048

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 594809

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<0.18		0.18	mg/Kg		12/27/22 09:24	12/28/22 18:02	2

Lab Sample ID: LCS 160-594809/2-A
Matrix: Solid
Analysis Batch: 595048

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 594809

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Thorium	90.8	93.5		mg/Kg		103	80 - 120

Lab Sample ID: 190-30658-1 MS
Matrix: Solid
Analysis Batch: 595048

Client Sample ID: S43471.01
Prep Type: Total/NA
Prep Batch: 594809

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Thorium	1.2		111	111		mg/Kg	⊛	98	75 - 125

Lab Sample ID: 190-30658-1 MSD
Matrix: Solid
Analysis Batch: 595048

Client Sample ID: S43471.01
Prep Type: Total/NA
Prep Batch: 594809

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Thorium	1.2		109	112		mg/Kg	⊛	101	75 - 125	1	30

Lab Sample ID: MB 160-594810/1-A
Matrix: Solid
Analysis Batch: 595048

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 594810

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<0.17		0.17	mg/Kg		12/27/22 09:28	12/28/22 19:52	2

Lab Sample ID: LCS 160-594810/2-A
Matrix: Solid
Analysis Batch: 595048

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 594810

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Thorium	90.6	89.6		mg/Kg		99	80 - 120

Lab Sample ID: 190-30658-22 MS
Matrix: Solid
Analysis Batch: 595048

Client Sample ID: S43471.22
Prep Type: Total/NA
Prep Batch: 594810

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Thorium	1.0		98.0	99.0		mg/Kg	⊛	100	75 - 125

Lab Sample ID: 190-30658-22 MSD
Matrix: Solid
Analysis Batch: 595048

Client Sample ID: S43471.22
Prep Type: Total/NA
Prep Batch: 594810

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Thorium	1.0		94.9	97.4		mg/Kg	⊛	102	75 - 125	2	30

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QC Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 160-596234/1-A
Matrix: Solid
Analysis Batch: 596409

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 596234

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<0.20		0.20	mg/Kg		01/10/23 08:01	01/10/23 12:52	2

Lab Sample ID: LCS 160-596234/2-A
Matrix: Solid
Analysis Batch: 596409

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 596234

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Thorium	84.7	87.8		mg/Kg		104	80 - 120

Method: Moisture - Percent Moisture

Lab Sample ID: 190-30658-26 DU
Matrix: Solid
Analysis Batch: 594376

Client Sample ID: S43471.26
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	23.4		23.2		%		0.5	30
Percent Solids	76.6		76.8		%		0.2	30

Lab Sample ID: 190-30658-23 DU
Matrix: Solid
Analysis Batch: 594378

Client Sample ID: S43471.23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	12.3		10.9		%		12	30
Percent Solids	87.7		89.1		%		2	30

Lab Sample ID: 190-30658-2 DU
Matrix: Solid
Analysis Batch: 596162

Client Sample ID: S43471.02
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	22.3		20.4		%		9	30
Percent Solids	77.7		79.6		%		2	30

Method: Moisture - 2540 - Percent Moisture

Lab Sample ID: MB 680-755948/1
Matrix: Solid
Analysis Batch: 755948

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	<0.10		0.10	%			12/19/22 15:59	1
Percent Solids	100		0.10	%			12/19/22 15:59	1

QC Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Method: Moisture - 2540 - Percent Moisture (Continued)

Lab Sample ID: 190-30658-2 DU
Matrix: Solid
Analysis Batch: 755948

Client Sample ID: S43471.02
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Percent Moisture	9.9		8.9	F3	%		10	5
Percent Solids	90		91		%		1	

Lab Sample ID: MB 680-755958/1
Matrix: Solid
Analysis Batch: 755958

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Percent Moisture	<0.10		0.10	%			12/19/22 16:30	1
Percent Solids	100		0.10	%			12/19/22 16:30	1

Lab Sample ID: 190-30658-10 DU
Matrix: Solid
Analysis Batch: 755958

Client Sample ID: S43471.10
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Percent Moisture	6.1		5.6	F3	%		8	5
Percent Solids	94		94		%		0.5	

Lab Sample ID: 190-30658-34 DU
Matrix: Solid
Analysis Batch: 755958

Client Sample ID: S43471.34
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Percent Moisture	6.9		8.2	F3	%		17	5
Percent Solids	93		92		%		1	

Lab Sample ID: MB 680-756199/1
Matrix: Solid
Analysis Batch: 756199

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Percent Moisture	<0.10		0.10	%			12/20/22 17:32	1
Percent Solids	100		0.10	%			12/20/22 17:32	1

Lab Sample ID: 190-30658-27 DU
Matrix: Solid
Analysis Batch: 756199

Client Sample ID: S43471.27
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Percent Moisture	7.6		8.4	F3	%		10	5
Percent Solids	92		92		%		0.9	

Definitions/Glossary

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.

General Chemistry

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Association Summary

Client: Merit Laboratories
 Project/Site: Merit Laboratories

Job ID: 190-30658-1

GC/MS Semi VOA

Prep Batch: 653846

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30658-1	S43471.01	Total/NA	Solid	3550C	
190-30658-2	S43471.02	Total/NA	Solid	3550C	
190-30658-3	S43471.03	Total/NA	Solid	3550C	
190-30658-4	S43471.04	Total/NA	Solid	3550C	
190-30658-5	S43471.05	Total/NA	Solid	3550C	
190-30658-6	S43471.06	Total/NA	Solid	3550C	
190-30658-7	S43471.07	Total/NA	Solid	3550C	
190-30658-8	S43471.08	Total/NA	Solid	3550C	
190-30658-9	S43471.09	Total/NA	Solid	3550C	
190-30658-10	S43471.10	Total/NA	Solid	3550C	
190-30658-11	S43471.11	Total/NA	Solid	3550C	
190-30658-12	S43471.12	Total/NA	Solid	3550C	
190-30658-13	S43471.13	Total/NA	Solid	3550C	
190-30658-14	S43471.14	Total/NA	Solid	3550C	
190-30658-15	S43471.15	Total/NA	Solid	3550C	
MB 480-653846/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-653846/2-A	Lab Control Sample	Total/NA	Solid	3550C	

Prep Batch: 653989

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30658-16	S43471.16	Total/NA	Solid	3550C	
190-30658-17	S43471.17	Total/NA	Solid	3550C	
190-30658-18	S43471.18	Total/NA	Solid	3550C	
190-30658-19	S43471.19	Total/NA	Solid	3550C	
190-30658-20	S43471.20	Total/NA	Solid	3550C	
190-30658-21	S43471.21	Total/NA	Solid	3550C	
190-30658-22	S43471.22	Total/NA	Solid	3550C	
190-30658-23	S43471.23	Total/NA	Solid	3550C	
190-30658-24	S43471.24	Total/NA	Solid	3550C	
190-30658-25	S43471.25	Total/NA	Solid	3550C	
190-30658-26	S43471.26	Total/NA	Solid	3550C	
190-30658-27	S43471.27	Total/NA	Solid	3550C	
190-30658-28	S43471.28	Total/NA	Solid	3550C	
190-30658-29	S43471.29	Total/NA	Solid	3550C	
190-30658-34	S43471.34	Total/NA	Solid	3550C	
190-30658-35	S43471.35	Total/NA	Solid	3550C	
MB 480-653989/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-653989/2-A	Lab Control Sample	Total/NA	Solid	3550C	
190-30658-16 MS	S43471.16	Total/NA	Solid	3550C	
190-30658-16 MSD	S43471.16	Total/NA	Solid	3550C	

Analysis Batch: 654080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30658-1	S43471.01	Total/NA	Solid	8270D	653846
190-30658-2	S43471.02	Total/NA	Solid	8270D	653846
190-30658-3	S43471.03	Total/NA	Solid	8270D	653846
190-30658-4	S43471.04	Total/NA	Solid	8270D	653846
190-30658-5	S43471.05	Total/NA	Solid	8270D	653846
190-30658-6	S43471.06	Total/NA	Solid	8270D	653846
190-30658-7	S43471.07	Total/NA	Solid	8270D	653846
190-30658-8	S43471.08	Total/NA	Solid	8270D	653846

Eurofins Michigan



QC Association Summary

Client: Merit Laboratories
 Project/Site: Merit Laboratories

Job ID: 190-30658-1

GC/MS Semi VOA (Continued)

Analysis Batch: 654080 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30658-9	S43471.09	Total/NA	Solid	8270D	653846
190-30658-10	S43471.10	Total/NA	Solid	8270D	653846
190-30658-11	S43471.11	Total/NA	Solid	8270D	653846
190-30658-12	S43471.12	Total/NA	Solid	8270D	653846
190-30658-13	S43471.13	Total/NA	Solid	8270D	653846
190-30658-14	S43471.14	Total/NA	Solid	8270D	653846
190-30658-15	S43471.15	Total/NA	Solid	8270D	653846
MB 480-653846/1-A	Method Blank	Total/NA	Solid	8270D	653846
LCS 480-653846/2-A	Lab Control Sample	Total/NA	Solid	8270D	653846

Analysis Batch: 654159

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30658-16	S43471.16	Total/NA	Solid	8270D	653989
190-30658-17	S43471.17	Total/NA	Solid	8270D	653989
190-30658-18	S43471.18	Total/NA	Solid	8270D	653989
190-30658-19	S43471.19	Total/NA	Solid	8270D	653989
190-30658-20	S43471.20	Total/NA	Solid	8270D	653989
190-30658-21	S43471.21	Total/NA	Solid	8270D	653989
190-30658-22	S43471.22	Total/NA	Solid	8270D	653989
190-30658-23	S43471.23	Total/NA	Solid	8270D	653989
190-30658-24	S43471.24	Total/NA	Solid	8270D	653989
190-30658-25	S43471.25	Total/NA	Solid	8270D	653989
190-30658-26	S43471.26	Total/NA	Solid	8270D	653989
190-30658-27	S43471.27	Total/NA	Solid	8270D	653989
190-30658-28	S43471.28	Total/NA	Solid	8270D	653989
190-30658-29	S43471.29	Total/NA	Solid	8270D	653989
190-30658-34	S43471.34	Total/NA	Solid	8270D	653989
190-30658-35	S43471.35	Total/NA	Solid	8270D	653989
MB 480-653989/1-A	Method Blank	Total/NA	Solid	8270D	653989
LCS 480-653989/2-A	Lab Control Sample	Total/NA	Solid	8270D	653989
190-30658-16 MS	S43471.16	Total/NA	Solid	8270D	653989
190-30658-16 MSD	S43471.16	Total/NA	Solid	8270D	653989

GC Semi VOA

Leach Batch: 755693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30658-1	S43471.01	Soluble	Solid	DI Leach	
190-30658-2	S43471.02	Soluble	Solid	DI Leach	
190-30658-3	S43471.03	Soluble	Solid	DI Leach	
190-30658-4	S43471.04	Soluble	Solid	DI Leach	
190-30658-5	S43471.05	Soluble	Solid	DI Leach	
190-30658-6	S43471.06	Soluble	Solid	DI Leach	
190-30658-7	S43471.07	Soluble	Solid	DI Leach	
190-30658-8	S43471.08	Soluble	Solid	DI Leach	
190-30658-9	S43471.09	Soluble	Solid	DI Leach	
190-30658-10	S43471.10	Soluble	Solid	DI Leach	
MB 680-755693/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 680-755693/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 680-755693/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

QC Association Summary

Client: Merit Laboratories
 Project/Site: Merit Laboratories

Job ID: 190-30658-1

GC Semi VOA

Leach Batch: 755694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30658-11	S43471.11	Soluble	Solid	DI Leach	
190-30658-12	S43471.12	Soluble	Solid	DI Leach	
190-30658-13	S43471.13	Soluble	Solid	DI Leach	
190-30658-14	S43471.14	Soluble	Solid	DI Leach	
190-30658-15	S43471.15	Soluble	Solid	DI Leach	
190-30658-16	S43471.16	Soluble	Solid	DI Leach	
190-30658-17	S43471.17	Soluble	Solid	DI Leach	
190-30658-18	S43471.18	Soluble	Solid	DI Leach	
190-30658-19	S43471.19	Soluble	Solid	DI Leach	
190-30658-20	S43471.20	Soluble	Solid	DI Leach	
190-30658-21	S43471.21	Soluble	Solid	DI Leach	
190-30658-22	S43471.22	Soluble	Solid	DI Leach	
190-30658-23	S43471.23	Soluble	Solid	DI Leach	
190-30658-24	S43471.24	Soluble	Solid	DI Leach	
190-30658-25	S43471.25	Soluble	Solid	DI Leach	
190-30658-26	S43471.26	Soluble	Solid	DI Leach	
190-30658-27	S43471.27	Soluble	Solid	DI Leach	
190-30658-28	S43471.28	Soluble	Solid	DI Leach	
190-30658-29	S43471.29	Soluble	Solid	DI Leach	
190-30658-30	S43471.30	Soluble	Solid	DI Leach	
MB 680-755694/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 680-755694/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 680-755694/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Leach Batch: 755695

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30658-31	S43471.31	Soluble	Solid	DI Leach	
190-30658-32	S43471.32	Soluble	Solid	DI Leach	
190-30658-33	S43471.33	Soluble	Solid	DI Leach	
190-30658-34	S43471.34	Soluble	Solid	DI Leach	
190-30658-35	S43471.35	Soluble	Solid	DI Leach	
MB 680-755695/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 680-755695/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 680-755695/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 756436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30658-1	S43471.01	Soluble	Solid	8015C	755693
190-30658-3	S43471.03	Soluble	Solid	8015C	755693
190-30658-4	S43471.04	Soluble	Solid	8015C	755693
190-30658-5	S43471.05	Soluble	Solid	8015C	755693
190-30658-6	S43471.06	Soluble	Solid	8015C	755693
190-30658-7	S43471.07	Soluble	Solid	8015C	755693
190-30658-8	S43471.08	Soluble	Solid	8015C	755693
190-30658-9	S43471.09	Soluble	Solid	8015C	755693
190-30658-10	S43471.10	Soluble	Solid	8015C	755693
MB 680-755693/1-A	Method Blank	Soluble	Solid	8015C	755693
LCS 680-755693/2-A	Lab Control Sample	Soluble	Solid	8015C	755693
LCSD 680-755693/3-A	Lab Control Sample Dup	Soluble	Solid	8015C	755693

QC Association Summary

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

GC Semi VOA

Analysis Batch: 756541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30658-2	S43471.02	Soluble	Solid	8015C	755693
190-30658-34	S43471.34	Soluble	Solid	8015C	755695
LCS 680-755695/2-A	Lab Control Sample	Soluble	Solid	8015C	755695
LCSD 680-755695/3-A	Lab Control Sample Dup	Soluble	Solid	8015C	755695

Analysis Batch: 756693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30658-31	S43471.31	Soluble	Solid	8015C	755695
190-30658-32	S43471.32	Soluble	Solid	8015C	755695
190-30658-33	S43471.33	Soluble	Solid	8015C	755695
190-30658-35	S43471.35	Soluble	Solid	8015C	755695
MB 680-755695/1-A	Method Blank	Soluble	Solid	8015C	755695

Analysis Batch: 756696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30658-11	S43471.11	Soluble	Solid	8015C	755694
190-30658-12	S43471.12	Soluble	Solid	8015C	755694
190-30658-13	S43471.13	Soluble	Solid	8015C	755694
190-30658-14	S43471.14	Soluble	Solid	8015C	755694
190-30658-15	S43471.15	Soluble	Solid	8015C	755694
190-30658-16	S43471.16	Soluble	Solid	8015C	755694
190-30658-17	S43471.17	Soluble	Solid	8015C	755694
190-30658-18	S43471.18	Soluble	Solid	8015C	755694
190-30658-19	S43471.19	Soluble	Solid	8015C	755694
190-30658-20	S43471.20	Soluble	Solid	8015C	755694
190-30658-21	S43471.21	Soluble	Solid	8015C	755694
190-30658-22	S43471.22	Soluble	Solid	8015C	755694
190-30658-23	S43471.23	Soluble	Solid	8015C	755694
190-30658-24	S43471.24	Soluble	Solid	8015C	755694
190-30658-25	S43471.25	Soluble	Solid	8015C	755694
190-30658-26	S43471.26	Soluble	Solid	8015C	755694
190-30658-27	S43471.27	Soluble	Solid	8015C	755694
190-30658-28	S43471.28	Soluble	Solid	8015C	755694
190-30658-29	S43471.29	Soluble	Solid	8015C	755694
190-30658-30	S43471.30	Soluble	Solid	8015C	755694
MB 680-755694/1-A	Method Blank	Soluble	Solid	8015C	755694
LCS 680-755694/2-A	Lab Control Sample	Soluble	Solid	8015C	755694
LCSD 680-755694/3-A	Lab Control Sample Dup	Soluble	Solid	8015C	755694

Analysis Batch: 756715

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30658-25	S43471.25	Soluble	Solid	8015C	755694
190-30658-26	S43471.26	Soluble	Solid	8015C	755694
190-30658-27	S43471.27	Soluble	Solid	8015C	755694
190-30658-28	S43471.28	Soluble	Solid	8015C	755694
190-30658-29	S43471.29	Soluble	Solid	8015C	755694
190-30658-30	S43471.30	Soluble	Solid	8015C	755694

QC Association Summary

Client: Merit Laboratories
 Project/Site: Merit Laboratories

Job ID: 190-30658-1

Metals

Prep Batch: 594809

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30658-1	S43471.01	Total/NA	Solid	3050B	
190-30658-3	S43471.03	Total/NA	Solid	3050B	
190-30658-4	S43471.04	Total/NA	Solid	3050B	
190-30658-5	S43471.05	Total/NA	Solid	3050B	
190-30658-6	S43471.06	Total/NA	Solid	3050B	
190-30658-7	S43471.07	Total/NA	Solid	3050B	
190-30658-8	S43471.08	Total/NA	Solid	3050B	
190-30658-9	S43471.09	Total/NA	Solid	3050B	
190-30658-10	S43471.10	Total/NA	Solid	3050B	
190-30658-11	S43471.11	Total/NA	Solid	3050B	
190-30658-12	S43471.12	Total/NA	Solid	3050B	
190-30658-13	S43471.13	Total/NA	Solid	3050B	
190-30658-14	S43471.14	Total/NA	Solid	3050B	
190-30658-15	S43471.15	Total/NA	Solid	3050B	
190-30658-16	S43471.16	Total/NA	Solid	3050B	
190-30658-17	S43471.17	Total/NA	Solid	3050B	
190-30658-18	S43471.18	Total/NA	Solid	3050B	
190-30658-19	S43471.19	Total/NA	Solid	3050B	
190-30658-20	S43471.20	Total/NA	Solid	3050B	
190-30658-21	S43471.21	Total/NA	Solid	3050B	
MB 160-594809/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 160-594809/2-A	Lab Control Sample	Total/NA	Solid	3050B	
190-30658-1 MS	S43471.01	Total/NA	Solid	3050B	
190-30658-1 MSD	S43471.01	Total/NA	Solid	3050B	

Prep Batch: 594810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30658-22	S43471.22	Total/NA	Solid	3050B	
190-30658-23	S43471.23	Total/NA	Solid	3050B	
190-30658-24	S43471.24	Total/NA	Solid	3050B	
190-30658-25	S43471.25	Total/NA	Solid	3050B	
190-30658-26	S43471.26	Total/NA	Solid	3050B	
190-30658-27	S43471.27	Total/NA	Solid	3050B	
190-30658-28	S43471.28	Total/NA	Solid	3050B	
190-30658-29	S43471.29	Total/NA	Solid	3050B	
190-30658-30	S43471.30	Total/NA	Solid	3050B	
190-30658-31	S43471.31	Total/NA	Solid	3050B	
190-30658-32	S43471.32	Total/NA	Solid	3050B	
190-30658-33	S43471.33	Total/NA	Solid	3050B	
190-30658-34	S43471.34	Total/NA	Solid	3050B	
190-30658-35	S43471.35	Total/NA	Solid	3050B	
MB 160-594810/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 160-594810/2-A	Lab Control Sample	Total/NA	Solid	3050B	
190-30658-22 MS	S43471.22	Total/NA	Solid	3050B	
190-30658-22 MSD	S43471.22	Total/NA	Solid	3050B	

Analysis Batch: 595048

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30658-1	S43471.01	Total/NA	Solid	6020B	594809
190-30658-3	S43471.03	Total/NA	Solid	6020B	594809
190-30658-4	S43471.04	Total/NA	Solid	6020B	594809



QC Association Summary

Client: Merit Laboratories
 Project/Site: Merit Laboratories

Job ID: 190-30658-1

Metals (Continued)

Analysis Batch: 595048 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30658-5	S43471.05	Total/NA	Solid	6020B	594809
190-30658-6	S43471.06	Total/NA	Solid	6020B	594809
190-30658-7	S43471.07	Total/NA	Solid	6020B	594809
190-30658-8	S43471.08	Total/NA	Solid	6020B	594809
190-30658-9	S43471.09	Total/NA	Solid	6020B	594809
190-30658-10	S43471.10	Total/NA	Solid	6020B	594809
190-30658-11	S43471.11	Total/NA	Solid	6020B	594809
190-30658-12	S43471.12	Total/NA	Solid	6020B	594809
190-30658-13	S43471.13	Total/NA	Solid	6020B	594809
190-30658-14	S43471.14	Total/NA	Solid	6020B	594809
190-30658-15	S43471.15	Total/NA	Solid	6020B	594809
190-30658-16	S43471.16	Total/NA	Solid	6020B	594809
190-30658-17	S43471.17	Total/NA	Solid	6020B	594809
190-30658-18	S43471.18	Total/NA	Solid	6020B	594809
190-30658-19	S43471.19	Total/NA	Solid	6020B	594809
190-30658-20	S43471.20	Total/NA	Solid	6020B	594809
190-30658-21	S43471.21	Total/NA	Solid	6020B	594809
190-30658-22	S43471.22	Total/NA	Solid	6020B	594810
190-30658-23	S43471.23	Total/NA	Solid	6020B	594810
190-30658-24	S43471.24	Total/NA	Solid	6020B	594810
190-30658-25	S43471.25	Total/NA	Solid	6020B	594810
190-30658-26	S43471.26	Total/NA	Solid	6020B	594810
190-30658-27	S43471.27	Total/NA	Solid	6020B	594810
190-30658-28	S43471.28	Total/NA	Solid	6020B	594810
190-30658-29	S43471.29	Total/NA	Solid	6020B	594810
190-30658-30	S43471.30	Total/NA	Solid	6020B	594810
190-30658-31	S43471.31	Total/NA	Solid	6020B	594810
190-30658-32	S43471.32	Total/NA	Solid	6020B	594810
190-30658-33	S43471.33	Total/NA	Solid	6020B	594810
190-30658-34	S43471.34	Total/NA	Solid	6020B	594810
190-30658-35	S43471.35	Total/NA	Solid	6020B	594810
MB 160-594809/1-A	Method Blank	Total/NA	Solid	6020B	594809
MB 160-594810/1-A	Method Blank	Total/NA	Solid	6020B	594810
LCS 160-594809/2-A	Lab Control Sample	Total/NA	Solid	6020B	594809
LCS 160-594810/2-A	Lab Control Sample	Total/NA	Solid	6020B	594810
190-30658-1 MSD	S43471.01	Total/NA	Solid	6020B	594809
190-30658-1 MSD	S43471.01	Total/NA	Solid	6020B	594809
190-30658-22 MS	S43471.22	Total/NA	Solid	6020B	594810
190-30658-22 MSD	S43471.22	Total/NA	Solid	6020B	594810

Prep Batch: 596234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30658-2	S43471.02	Total/NA	Solid	3050B	
MB 160-596234/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 160-596234/2-A	Lab Control Sample	Total/NA	Solid	3050B	

Analysis Batch: 596409

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30658-2	S43471.02	Total/NA	Solid	6020B	596234
MB 160-596234/1-A	Method Blank	Total/NA	Solid	6020B	596234
LCS 160-596234/2-A	Lab Control Sample	Total/NA	Solid	6020B	596234

QC Association Summary

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

General Chemistry

Analysis Batch: 594371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30658-1	S43471.01	Total/NA	Solid	Moisture	
190-30658-3	S43471.03	Total/NA	Solid	Moisture	
190-30658-4	S43471.04	Total/NA	Solid	Moisture	
190-30658-5	S43471.05	Total/NA	Solid	Moisture	

Analysis Batch: 594376

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30658-14	S43471.14	Total/NA	Solid	Moisture	
190-30658-15	S43471.15	Total/NA	Solid	Moisture	
190-30658-16	S43471.16	Total/NA	Solid	Moisture	
190-30658-17	S43471.17	Total/NA	Solid	Moisture	
190-30658-18	S43471.18	Total/NA	Solid	Moisture	
190-30658-19	S43471.19	Total/NA	Solid	Moisture	
190-30658-20	S43471.20	Total/NA	Solid	Moisture	
190-30658-21	S43471.21	Total/NA	Solid	Moisture	
190-30658-22	S43471.22	Total/NA	Solid	Moisture	
190-30658-26	S43471.26	Total/NA	Solid	Moisture	
190-30658-27	S43471.27	Total/NA	Solid	Moisture	
190-30658-28	S43471.28	Total/NA	Solid	Moisture	
190-30658-29	S43471.29	Total/NA	Solid	Moisture	
190-30658-30	S43471.30	Total/NA	Solid	Moisture	
190-30658-31	S43471.31	Total/NA	Solid	Moisture	
190-30658-32	S43471.32	Total/NA	Solid	Moisture	
190-30658-33	S43471.33	Total/NA	Solid	Moisture	
190-30658-34	S43471.34	Total/NA	Solid	Moisture	
190-30658-35	S43471.35	Total/NA	Solid	Moisture	
190-30658-26 DU	S43471.26	Total/NA	Solid	Moisture	

Analysis Batch: 594378

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30658-6	S43471.06	Total/NA	Solid	Moisture	
190-30658-7	S43471.07	Total/NA	Solid	Moisture	
190-30658-8	S43471.08	Total/NA	Solid	Moisture	
190-30658-9	S43471.09	Total/NA	Solid	Moisture	
190-30658-10	S43471.10	Total/NA	Solid	Moisture	
190-30658-11	S43471.11	Total/NA	Solid	Moisture	
190-30658-12	S43471.12	Total/NA	Solid	Moisture	
190-30658-13	S43471.13	Total/NA	Solid	Moisture	
190-30658-23	S43471.23	Total/NA	Solid	Moisture	
190-30658-24	S43471.24	Total/NA	Solid	Moisture	
190-30658-25	S43471.25	Total/NA	Solid	Moisture	
190-30658-23 DU	S43471.23	Total/NA	Solid	Moisture	

Analysis Batch: 596162

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30658-2	S43471.02	Total/NA	Solid	Moisture	
190-30658-2 DU	S43471.02	Total/NA	Solid	Moisture	

Analysis Batch: 755948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30658-1	S43471.01	Total/NA	Solid	Moisture - 2540	

Eurofins Michigan

QC Association Summary

Client: Merit Laboratories
 Project/Site: Merit Laboratories

Job ID: 190-30658-1

General Chemistry (Continued)

Analysis Batch: 755948 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30658-2	S43471.02	Total/NA	Solid	Moisture - 2540	
190-30658-3	S43471.03	Total/NA	Solid	Moisture - 2540	
190-30658-4	S43471.04	Total/NA	Solid	Moisture - 2540	
190-30658-5	S43471.05	Total/NA	Solid	Moisture - 2540	
190-30658-6	S43471.06	Total/NA	Solid	Moisture - 2540	
190-30658-7	S43471.07	Total/NA	Solid	Moisture - 2540	
190-30658-11	S43471.11	Total/NA	Solid	Moisture - 2540	
190-30658-12	S43471.12	Total/NA	Solid	Moisture - 2540	
190-30658-13	S43471.13	Total/NA	Solid	Moisture - 2540	
190-30658-14	S43471.14	Total/NA	Solid	Moisture - 2540	
MB 680-755948/1	Method Blank	Total/NA	Solid	Moisture - 2540	
190-30658-2 DU	S43471.02	Total/NA	Solid	Moisture - 2540	

Analysis Batch: 755958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30658-8	S43471.08	Total/NA	Solid	Moisture - 2540	
190-30658-9	S43471.09	Total/NA	Solid	Moisture - 2540	
190-30658-10	S43471.10	Total/NA	Solid	Moisture - 2540	
190-30658-15	S43471.15	Total/NA	Solid	Moisture - 2540	
190-30658-16	S43471.16	Total/NA	Solid	Moisture - 2540	
190-30658-17	S43471.17	Total/NA	Solid	Moisture - 2540	
190-30658-18	S43471.18	Total/NA	Solid	Moisture - 2540	
190-30658-19	S43471.19	Total/NA	Solid	Moisture - 2540	
190-30658-20	S43471.20	Total/NA	Solid	Moisture - 2540	
190-30658-21	S43471.21	Total/NA	Solid	Moisture - 2540	
190-30658-22	S43471.22	Total/NA	Solid	Moisture - 2540	
190-30658-23	S43471.23	Total/NA	Solid	Moisture - 2540	
190-30658-28	S43471.28	Total/NA	Solid	Moisture - 2540	
190-30658-29	S43471.29	Total/NA	Solid	Moisture - 2540	
190-30658-30	S43471.30	Total/NA	Solid	Moisture - 2540	
190-30658-31	S43471.31	Total/NA	Solid	Moisture - 2540	
190-30658-32	S43471.32	Total/NA	Solid	Moisture - 2540	
190-30658-33	S43471.33	Total/NA	Solid	Moisture - 2540	
190-30658-34	S43471.34	Total/NA	Solid	Moisture - 2540	
190-30658-35	S43471.35	Total/NA	Solid	Moisture - 2540	
MB 680-755958/1	Method Blank	Total/NA	Solid	Moisture - 2540	
190-30658-10 DU	S43471.10	Total/NA	Solid	Moisture - 2540	
190-30658-34 DU	S43471.34	Total/NA	Solid	Moisture - 2540	

Analysis Batch: 756199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30658-24	S43471.24	Total/NA	Solid	Moisture - 2540	
190-30658-25	S43471.25	Total/NA	Solid	Moisture - 2540	
190-30658-26	S43471.26	Total/NA	Solid	Moisture - 2540	
190-30658-27	S43471.27	Total/NA	Solid	Moisture - 2540	
MB 680-756199/1	Method Blank	Total/NA	Solid	Moisture - 2540	
190-30658-27 DU	S43471.27	Total/NA	Solid	Moisture - 2540	

QC Association Summary

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Geotechnical

Analysis Batch: 654441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30658-1	S43471.01	Total/NA	Solid	D2216-90	
190-30658-2	S43471.02	Total/NA	Solid	D2216-90	
190-30658-3	S43471.03	Total/NA	Solid	D2216-90	
190-30658-4	S43471.04	Total/NA	Solid	D2216-90	
190-30658-5	S43471.05	Total/NA	Solid	D2216-90	
190-30658-6	S43471.06	Total/NA	Solid	D2216-90	
190-30658-7	S43471.07	Total/NA	Solid	D2216-90	
190-30658-8	S43471.08	Total/NA	Solid	D2216-90	
190-30658-9	S43471.09	Total/NA	Solid	D2216-90	
190-30658-10	S43471.10	Total/NA	Solid	D2216-90	
190-30658-11	S43471.11	Total/NA	Solid	D2216-90	
190-30658-12	S43471.12	Total/NA	Solid	D2216-90	
190-30658-13	S43471.13	Total/NA	Solid	D2216-90	
190-30658-14	S43471.14	Total/NA	Solid	D2216-90	
190-30658-15	S43471.15	Total/NA	Solid	D2216-90	
190-30658-16	S43471.16	Total/NA	Solid	D2216-90	
190-30658-17	S43471.17	Total/NA	Solid	D2216-90	
190-30658-18	S43471.18	Total/NA	Solid	D2216-90	
190-30658-19	S43471.19	Total/NA	Solid	D2216-90	
190-30658-20	S43471.20	Total/NA	Solid	D2216-90	
190-30658-21	S43471.21	Total/NA	Solid	D2216-90	
190-30658-22	S43471.22	Total/NA	Solid	D2216-90	
190-30658-23	S43471.23	Total/NA	Solid	D2216-90	
190-30658-24	S43471.24	Total/NA	Solid	D2216-90	
190-30658-25	S43471.25	Total/NA	Solid	D2216-90	
190-30658-26	S43471.26	Total/NA	Solid	D2216-90	
190-30658-27	S43471.27	Total/NA	Solid	D2216-90	
190-30658-28	S43471.28	Total/NA	Solid	D2216-90	
190-30658-29	S43471.29	Total/NA	Solid	D2216-90	
190-30658-34	S43471.34	Total/NA	Solid	D2216-90	
190-30658-35	S43471.35	Total/NA	Solid	D2216-90	

Lab Chronicle

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.01

Lab Sample ID: 190-30658-1

Date Collected: 12/13/22 08:25

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594371	JML	EET SL	12/20/22 10:50
Total/NA	Analysis	Moisture - 2540		1	755948	PG	EET SAV	12/19/22 15:59
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 15:59

Client Sample ID: S43471.01

Lab Sample ID: 190-30658-1

Date Collected: 12/13/22 08:25

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 76.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653846	MLK	EET BUF	12/19/22 10:57
Total/NA	Analysis	8270D		10	654080	JMM	EET BUF	12/20/22 20:25
Total/NA	Prep	3050B			594809	LKP	EET SL	12/27/22 09:24
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 18:09

Client Sample ID: S43471.01

Lab Sample ID: 190-30658-1

Date Collected: 12/13/22 08:25

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 92.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755693	GEM	EET SAV	12/17/22 18:00
Soluble	Analysis	8015C		1	756436	JCK	EET SAV	12/22/22 03:02

Client Sample ID: S43471.02

Lab Sample ID: 190-30658-2

Date Collected: 12/13/22 08:36

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	596162	SRE	EET SL	01/09/23 16:16
Total/NA	Analysis	Moisture - 2540		1	755948	PG	EET SAV	12/19/22 15:59
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 15:59

Client Sample ID: S43471.02

Lab Sample ID: 190-30658-2

Date Collected: 12/13/22 08:36

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 77.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653846	MLK	EET BUF	12/19/22 10:57
Total/NA	Analysis	8270D		10	654080	JMM	EET BUF	12/20/22 20:49
Total/NA	Prep	3050B			596234	LKP	EET SL	01/10/23 08:01
Total/NA	Analysis	6020B		2	596409	CGB	EET SL	01/10/23 13:54

Lab Chronicle

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.02

Lab Sample ID: 190-30658-2

Date Collected: 12/13/22 08:36

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 90.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755693	GEM	EET SAV	12/17/22 18:00
Soluble	Analysis	8015C		1	756541	JCK	EET SAV	12/22/22 15:07

Client Sample ID: S43471.03

Lab Sample ID: 190-30658-3

Date Collected: 12/13/22 08:56

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594371	JML	EET SL	12/20/22 10:50
Total/NA	Analysis	Moisture - 2540		1	755948	PG	EET SAV	12/19/22 15:59
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 15:59

Client Sample ID: S43471.03

Lab Sample ID: 190-30658-3

Date Collected: 12/13/22 08:56

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 90.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755693	GEM	EET SAV	12/17/22 18:00
Soluble	Analysis	8015C		1	756436	JCK	EET SAV	12/22/22 03:44

Client Sample ID: S43471.03

Lab Sample ID: 190-30658-3

Date Collected: 12/13/22 08:56

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 92.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653846	MLK	EET BUF	12/19/22 10:57
Total/NA	Analysis	8270D		10	654080	JMM	EET BUF	12/20/22 21:13
Total/NA	Prep	3050B			594809	LKP	EET SL	12/27/22 09:24
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 18:26

Client Sample ID: S43471.04

Lab Sample ID: 190-30658-4

Date Collected: 12/13/22 08:56

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594371	JML	EET SL	12/20/22 10:50
Total/NA	Analysis	Moisture - 2540		1	755948	PG	EET SAV	12/19/22 15:59
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 15:59

Client Sample ID: S43471.04

Lab Sample ID: 190-30658-4

Date Collected: 12/13/22 08:56

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 76.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653846	MLK	EET BUF	12/19/22 10:57
Total/NA	Analysis	8270D		10	654080	JMM	EET BUF	12/20/22 21:37

Eurofins Michigan

Lab Chronicle

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.04

Lab Sample ID: 190-30658-4

Date Collected: 12/13/22 08:56

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 76.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			594809	LKP	EET SL	12/27/22 09:24
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 18:29

Client Sample ID: S43471.04

Lab Sample ID: 190-30658-4

Date Collected: 12/13/22 08:56

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 92.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755693	GEM	EET SAV	12/17/22 18:00
Soluble	Analysis	8015C		1	756436	JCK	EET SAV	12/22/22 04:05

Client Sample ID: S43471.05

Lab Sample ID: 190-30658-5

Date Collected: 12/13/22 09:35

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594371	JML	EET SL	12/20/22 10:50
Total/NA	Analysis	Moisture - 2540		1	755948	PG	EET SAV	12/19/22 15:59
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 15:59

Client Sample ID: S43471.05

Lab Sample ID: 190-30658-5

Date Collected: 12/13/22 09:35

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 77.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653846	MLK	EET BUF	12/19/22 10:57
Total/NA	Analysis	8270D		10	654080	JMM	EET BUF	12/20/22 22:01
Total/NA	Prep	3050B			594809	LKP	EET SL	12/27/22 09:24
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 18:33

Client Sample ID: S43471.05

Lab Sample ID: 190-30658-5

Date Collected: 12/13/22 09:35

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 92.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755693	GEM	EET SAV	12/17/22 18:00
Soluble	Analysis	8015C		1	756436	JCK	EET SAV	12/22/22 04:26

Client Sample ID: S43471.06

Lab Sample ID: 190-30658-6

Date Collected: 12/13/22 00:01

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594378	JML	EET SL	12/20/22 12:09
Total/NA	Analysis	Moisture - 2540		1	755948	PG	EET SAV	12/19/22 15:59
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 15:59

Eurofins Michigan

Lab Chronicle

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.06

Lab Sample ID: 190-30658-6

Date Collected: 12/13/22 00:01

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 77.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653846	MLK	EET BUF	12/19/22 10:57
Total/NA	Analysis	8270D		10	654080	JMM	EET BUF	12/20/22 22:25
Total/NA	Prep	3050B			594809	LKP	EET SL	12/27/22 09:24
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 18:46

Client Sample ID: S43471.06

Lab Sample ID: 190-30658-6

Date Collected: 12/13/22 00:01

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 91.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755693	GEM	EET SAV	12/17/22 18:00
Soluble	Analysis	8015C		1	756436	JCK	EET SAV	12/22/22 04:47

Client Sample ID: S43471.07

Lab Sample ID: 190-30658-7

Date Collected: 12/13/22 10:16

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594378	JML	EET SL	12/20/22 12:09
Total/NA	Analysis	Moisture - 2540		1	755948	PG	EET SAV	12/19/22 15:59
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 15:59

Client Sample ID: S43471.07

Lab Sample ID: 190-30658-7

Date Collected: 12/13/22 10:16

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 93.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653846	MLK	EET BUF	12/19/22 10:57
Total/NA	Analysis	8270D		1	654080	JMM	EET BUF	12/20/22 22:49
Total/NA	Prep	3050B			594809	LKP	EET SL	12/27/22 09:24
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 18:50

Client Sample ID: S43471.07

Lab Sample ID: 190-30658-7

Date Collected: 12/13/22 10:16

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 94.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755693	GEM	EET SAV	12/17/22 18:00
Soluble	Analysis	8015C		1	756436	JCK	EET SAV	12/22/22 05:08

Client Sample ID: S43471.08

Lab Sample ID: 190-30658-8

Date Collected: 12/13/22 10:33

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594378	JML	EET SL	12/20/22 12:09

Eurofins Michigan

Lab Chronicle

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.08

Lab Sample ID: 190-30658-8

Date Collected: 12/13/22 10:33

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture - 2540		1	755958	PG	EET SAV	12/19/22 16:30
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 16:30

Client Sample ID: S43471.08

Lab Sample ID: 190-30658-8

Date Collected: 12/13/22 10:33

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 88.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653846	MLK	EET BUF	12/19/22 10:57
Total/NA	Analysis	8270D		1	654080	JMM	EET BUF	12/20/22 23:13
Total/NA	Prep	3050B			594809	LKP	EET SL	12/27/22 09:24
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 18:53

Client Sample ID: S43471.08

Lab Sample ID: 190-30658-8

Date Collected: 12/13/22 10:33

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 92.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755693	GEM	EET SAV	12/17/22 18:00
Soluble	Analysis	8015C		1	756436	JCK	EET SAV	12/22/22 05:28

Client Sample ID: S43471.09

Lab Sample ID: 190-30658-9

Date Collected: 12/13/22 10:43

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594378	JML	EET SL	12/20/22 12:09
Total/NA	Analysis	Moisture - 2540		1	755958	PG	EET SAV	12/19/22 16:30
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 16:30

Client Sample ID: S43471.09

Lab Sample ID: 190-30658-9

Date Collected: 12/13/22 10:43

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 76.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653846	MLK	EET BUF	12/19/22 10:57
Total/NA	Analysis	8270D		1	654080	JMM	EET BUF	12/20/22 23:37
Total/NA	Prep	3050B			594809	LKP	EET SL	12/27/22 09:24
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 18:57

Lab Chronicle

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.09

Lab Sample ID: 190-30658-9

Date Collected: 12/13/22 10:43

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 95.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755693	GEM	EET SAV	12/17/22 18:00
Soluble	Analysis	8015C		1	756436	JCK	EET SAV	12/22/22 05:49

Client Sample ID: S43471.10

Lab Sample ID: 190-30658-10

Date Collected: 12/13/22 10:43

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594378	JML	EET SL	12/20/22 12:09
Total/NA	Analysis	Moisture - 2540		1	755958	PG	EET SAV	12/19/22 16:30
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 16:30

Client Sample ID: S43471.10

Lab Sample ID: 190-30658-10

Date Collected: 12/13/22 10:43

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 77.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653846	MLK	EET BUF	12/19/22 10:57
Total/NA	Analysis	8270D		1	654080	JMM	EET BUF	12/21/22 00:01
Total/NA	Prep	3050B			594809	LKP	EET SL	12/27/22 09:24
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 19:00

Client Sample ID: S43471.10

Lab Sample ID: 190-30658-10

Date Collected: 12/13/22 10:43

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 93.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755693	GEM	EET SAV	12/17/22 18:00
Soluble	Analysis	8015C		1	756436	JCK	EET SAV	12/22/22 06:10

Client Sample ID: S43471.11

Lab Sample ID: 190-30658-11

Date Collected: 12/13/22 11:18

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594378	JML	EET SL	12/20/22 12:09
Total/NA	Analysis	Moisture - 2540		1	755948	PG	EET SAV	12/19/22 15:59
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 16:30

Client Sample ID: S43471.11

Lab Sample ID: 190-30658-11

Date Collected: 12/13/22 11:18

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 84.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755694	GEM	EET SAV	12/17/22 18:05
Soluble	Analysis	8015C		1	756696	JCK	EET SAV	12/23/22 21:47

Eurofins Michigan

Lab Chronicle

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.11

Lab Sample ID: 190-30658-11

Date Collected: 12/13/22 11:18

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 93.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653846	MLK	EET BUF	12/19/22 10:57
Total/NA	Analysis	8270D		5	654080	JMM	EET BUF	12/21/22 00:25
Total/NA	Prep	3050B			594809	LKP	EET SL	12/27/22 09:24
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 19:04

Client Sample ID: S43471.12

Lab Sample ID: 190-30658-12

Date Collected: 12/13/22 00:01

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594378	JML	EET SL	12/20/22 12:09
Total/NA	Analysis	Moisture - 2540		1	755948	PG	EET SAV	12/19/22 15:59
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 16:30

Client Sample ID: S43471.12

Lab Sample ID: 190-30658-12

Date Collected: 12/13/22 00:01

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 77.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653846	MLK	EET BUF	12/19/22 10:57
Total/NA	Analysis	8270D		1	654080	JMM	EET BUF	12/21/22 00:49
Total/NA	Prep	3050B			594809	LKP	EET SL	12/27/22 09:24
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 19:07

Client Sample ID: S43471.12

Lab Sample ID: 190-30658-12

Date Collected: 12/13/22 00:01

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 94.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755694	GEM	EET SAV	12/17/22 18:05
Soluble	Analysis	8015C		1	756696	JCK	EET SAV	12/23/22 22:07

Client Sample ID: S43471.13

Lab Sample ID: 190-30658-13

Date Collected: 12/13/22 12:30

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594378	JML	EET SL	12/20/22 12:09
Total/NA	Analysis	Moisture - 2540		1	755948	PG	EET SAV	12/19/22 15:59
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 16:30

Lab Chronicle

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.13

Lab Sample ID: 190-30658-13

Date Collected: 12/13/22 12:30

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 83.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653846	MLK	EET BUF	12/19/22 10:57
Total/NA	Analysis	8270D		1	654080	JMM	EET BUF	12/21/22 01:13
Total/NA	Prep	3050B			594809	LKP	EET SL	12/27/22 09:24
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 19:10

Client Sample ID: S43471.13

Lab Sample ID: 190-30658-13

Date Collected: 12/13/22 12:30

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 93.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755694	GEM	EET SAV	12/17/22 18:05
Soluble	Analysis	8015C		1	756696	JCK	EET SAV	12/23/22 22:28

Client Sample ID: S43471.14

Lab Sample ID: 190-30658-14

Date Collected: 12/13/22 12:45

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594376	JML	EET SL	12/20/22 11:45
Total/NA	Analysis	Moisture - 2540		1	755948	PG	EET SAV	12/19/22 15:59
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 16:30

Client Sample ID: S43471.14

Lab Sample ID: 190-30658-14

Date Collected: 12/13/22 12:45

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 93.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653846	MLK	EET BUF	12/19/22 10:57
Total/NA	Analysis	8270D		1	654080	JMM	EET BUF	12/21/22 01:37
Total/NA	Prep	3050B			594809	LKP	EET SL	12/27/22 09:24
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 19:14

Client Sample ID: S43471.14

Lab Sample ID: 190-30658-14

Date Collected: 12/13/22 12:45

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 94.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755694	GEM	EET SAV	12/17/22 18:05
Soluble	Analysis	8015C		1	756696	JCK	EET SAV	12/23/22 22:49

Client Sample ID: S43471.15

Lab Sample ID: 190-30658-15

Date Collected: 12/13/22 13:00

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594376	JML	EET SL	12/20/22 11:45

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Lab Chronicle

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.15

Lab Sample ID: 190-30658-15

Date Collected: 12/13/22 13:00

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture - 2540		1	755958	PG	EET SAV	12/19/22 16:30
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 16:30

Client Sample ID: S43471.15

Lab Sample ID: 190-30658-15

Date Collected: 12/13/22 13:00

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 90.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653846	MLK	EET BUF	12/19/22 10:57
Total/NA	Analysis	8270D		5	654080	JMM	EET BUF	12/21/22 02:01
Total/NA	Prep	3050B			594809	LKP	EET SL	12/27/22 09:24
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 19:17

Client Sample ID: S43471.15

Lab Sample ID: 190-30658-15

Date Collected: 12/13/22 13:00

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 93.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755694	GEM	EET SAV	12/17/22 18:05
Soluble	Analysis	8015C		1	756696	JCK	EET SAV	12/23/22 23:09

Client Sample ID: S43471.16

Lab Sample ID: 190-30658-16

Date Collected: 12/13/22 13:00

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594376	JML	EET SL	12/20/22 11:45
Total/NA	Analysis	Moisture - 2540		1	755958	PG	EET SAV	12/19/22 16:30
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 16:30

Client Sample ID: S43471.16

Lab Sample ID: 190-30658-16

Date Collected: 12/13/22 13:00

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 77.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653989	MLK	EET BUF	12/20/22 07:08
Total/NA	Analysis	8270D		1	654159	JMM	EET BUF	12/21/22 13:49
Total/NA	Prep	3050B			594809	LKP	EET SL	12/27/22 09:24
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 19:31

Lab Chronicle

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.16

Lab Sample ID: 190-30658-16

Date Collected: 12/13/22 13:00

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 92.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755694	GEM	EET SAV	12/17/22 18:05
Soluble	Analysis	8015C		1	756696	JCK	EET SAV	12/23/22 23:30

Client Sample ID: S43471.17

Lab Sample ID: 190-30658-17

Date Collected: 12/13/22 13:30

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594376	JML	EET SL	12/20/22 11:45
Total/NA	Analysis	Moisture - 2540		1	755958	PG	EET SAV	12/19/22 16:30
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 16:30

Client Sample ID: S43471.17

Lab Sample ID: 190-30658-17

Date Collected: 12/13/22 13:30

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 89.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755694	GEM	EET SAV	12/17/22 18:05
Soluble	Analysis	8015C		1	756696	JCK	EET SAV	12/23/22 23:51

Client Sample ID: S43471.17

Lab Sample ID: 190-30658-17

Date Collected: 12/13/22 13:30

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 90.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653989	MLK	EET BUF	12/20/22 07:08
Total/NA	Analysis	8270D		5	654159	JMM	EET BUF	12/21/22 14:14
Total/NA	Prep	3050B			594809	LKP	EET SL	12/27/22 09:24
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 19:35

Client Sample ID: S43471.18

Lab Sample ID: 190-30658-18

Date Collected: 12/13/22 00:01

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594376	JML	EET SL	12/20/22 11:45
Total/NA	Analysis	Moisture - 2540		1	755958	PG	EET SAV	12/19/22 16:30
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 16:30

Client Sample ID: S43471.18

Lab Sample ID: 190-30658-18

Date Collected: 12/13/22 00:01

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 93.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653989	MLK	EET BUF	12/20/22 07:08
Total/NA	Analysis	8270D		5	654159	JMM	EET BUF	12/21/22 14:39

Eurofins Michigan

Lab Chronicle

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.18

Lab Sample ID: 190-30658-18

Date Collected: 12/13/22 00:01

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 93.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			594809	LKP	EET SL	12/27/22 09:24
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 19:38

Client Sample ID: S43471.18

Lab Sample ID: 190-30658-18

Date Collected: 12/13/22 00:01

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 94.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755694	GEM	EET SAV	12/17/22 18:05
Soluble	Analysis	8015C		1	756696	JCK	EET SAV	12/24/22 00:11

Client Sample ID: S43471.19

Lab Sample ID: 190-30658-19

Date Collected: 12/13/22 14:10

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594376	JML	EET SL	12/20/22 11:45
Total/NA	Analysis	Moisture - 2540		1	755958	PG	EET SAV	12/19/22 16:30
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 16:30

Client Sample ID: S43471.19

Lab Sample ID: 190-30658-19

Date Collected: 12/13/22 14:10

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 92.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755694	GEM	EET SAV	12/17/22 18:05
Soluble	Analysis	8015C		1	756696	JCK	EET SAV	12/24/22 00:32

Client Sample ID: S43471.19

Lab Sample ID: 190-30658-19

Date Collected: 12/13/22 14:10

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 92.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653989	MLK	EET BUF	12/20/22 07:08
Total/NA	Analysis	8270D		10	654159	JMM	EET BUF	12/21/22 15:03
Total/NA	Prep	3050B			594809	LKP	EET SL	12/27/22 09:24
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 19:41

Client Sample ID: S43471.20

Lab Sample ID: 190-30658-20

Date Collected: 12/13/22 14:15

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594376	JML	EET SL	12/20/22 11:45
Total/NA	Analysis	Moisture - 2540		1	755958	PG	EET SAV	12/19/22 16:30
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 16:30

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Lab Chronicle

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.20

Lab Sample ID: 190-30658-20

Date Collected: 12/13/22 14:15

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 92.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755694	GEM	EET SAV	12/17/22 18:05
Soluble	Analysis	8015C		1	756696	JCK	EET SAV	12/24/22 00:52

Client Sample ID: S43471.20

Lab Sample ID: 190-30658-20

Date Collected: 12/13/22 14:15

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 93.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653989	MLK	EET BUF	12/20/22 07:08
Total/NA	Analysis	8270D		5	654159	JMM	EET BUF	12/21/22 15:28
Total/NA	Prep	3050B			594809	LKP	EET SL	12/27/22 09:24
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 19:45

Client Sample ID: S43471.21

Lab Sample ID: 190-30658-21

Date Collected: 12/13/22 14:35

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594376	JML	EET SL	12/20/22 11:45
Total/NA	Analysis	Moisture - 2540		1	755958	PG	EET SAV	12/19/22 16:30
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 16:30

Client Sample ID: S43471.21

Lab Sample ID: 190-30658-21

Date Collected: 12/13/22 14:35

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 86.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653989	MLK	EET BUF	12/20/22 07:08
Total/NA	Analysis	8270D		10	654159	JMM	EET BUF	12/21/22 15:52
Total/NA	Prep	3050B			594809	LKP	EET SL	12/27/22 09:24
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 19:48

Client Sample ID: S43471.21

Lab Sample ID: 190-30658-21

Date Collected: 12/13/22 14:35

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 93.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755694	GEM	EET SAV	12/17/22 18:05
Soluble	Analysis	8015C		1	756696	JCK	EET SAV	12/24/22 01:13

Client Sample ID: S43471.22

Lab Sample ID: 190-30658-22

Date Collected: 12/13/22 14:35

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594376	JML	EET SL	12/20/22 11:45

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Lab Chronicle

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.22

Lab Sample ID: 190-30658-22

Date Collected: 12/13/22 14:35

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture - 2540		1	755958	PG	EET SAV	12/19/22 16:30
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 16:30

Client Sample ID: S43471.22

Lab Sample ID: 190-30658-22

Date Collected: 12/13/22 14:35

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 88.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653989	MLK	EET BUF	12/20/22 07:08
Total/NA	Analysis	8270D		10	654159	JMM	EET BUF	12/21/22 16:17
Total/NA	Prep	3050B			594810	LKP	EET SL	12/27/22 09:28
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 19:59

Client Sample ID: S43471.22

Lab Sample ID: 190-30658-22

Date Collected: 12/13/22 14:35

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 94.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755694	GEM	EET SAV	12/17/22 18:05
Soluble	Analysis	8015C		1	756696	JCK	EET SAV	12/24/22 01:34

Client Sample ID: S43471.23

Lab Sample ID: 190-30658-23

Date Collected: 12/13/22 15:03

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594378	JML	EET SL	12/20/22 12:09
Total/NA	Analysis	Moisture - 2540		1	755958	PG	EET SAV	12/19/22 16:30
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 16:30

Client Sample ID: S43471.23

Lab Sample ID: 190-30658-23

Date Collected: 12/13/22 15:03

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 83.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755694	GEM	EET SAV	12/17/22 18:05
Soluble	Analysis	8015C		1	756696	JCK	EET SAV	12/24/22 01:54

Client Sample ID: S43471.23

Lab Sample ID: 190-30658-23

Date Collected: 12/13/22 15:03

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 87.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653989	MLK	EET BUF	12/20/22 07:08
Total/NA	Analysis	8270D		1	654159	JMM	EET BUF	12/21/22 16:42

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Lab Chronicle

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.23

Lab Sample ID: 190-30658-23

Date Collected: 12/13/22 15:03

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 87.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			594810	LKP	EET SL	12/27/22 09:28
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 20:26

Client Sample ID: S43471.24

Lab Sample ID: 190-30658-24

Date Collected: 12/13/22 00:01

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594378	JML	EET SL	12/20/22 12:09
Total/NA	Analysis	Moisture - 2540		1	756199	PG	EET SAV	12/20/22 17:32
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 16:30

Client Sample ID: S43471.24

Lab Sample ID: 190-30658-24

Date Collected: 12/13/22 00:01

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 91.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			756694	GEM	EET SAV	12/17/22 18:05
Soluble	Analysis	8015C		1	756696	JCK	EET SAV	12/24/22 02:15

Client Sample ID: S43471.24

Lab Sample ID: 190-30658-24

Date Collected: 12/13/22 00:01

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 91.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653989	MLK	EET BUF	12/20/22 07:08
Total/NA	Analysis	8270D		5	654159	JMM	EET BUF	12/21/22 17:07
Total/NA	Prep	3050B			594810	LKP	EET SL	12/27/22 09:28
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 20:29

Client Sample ID: S43471.25

Lab Sample ID: 190-30658-25

Date Collected: 12/13/22 10:20

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594378	JML	EET SL	12/20/22 12:09
Total/NA	Analysis	Moisture - 2540		1	756199	PG	EET SAV	12/20/22 17:32
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 16:30

Client Sample ID: S43471.25

Lab Sample ID: 190-30658-25

Date Collected: 12/13/22 10:20

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 90.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653989	MLK	EET BUF	12/20/22 07:08
Total/NA	Analysis	8270D		10	654159	JMM	EET BUF	12/21/22 17:32

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Lab Chronicle

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.25

Lab Sample ID: 190-30658-25

Date Collected: 12/13/22 10:20

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 90.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			594810	LKP	EET SL	12/27/22 09:28
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 20:33

Client Sample ID: S43471.25

Lab Sample ID: 190-30658-25

Date Collected: 12/13/22 10:20

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 91.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755694	GEM	EET SAV	12/17/22 18:05
Soluble	Analysis	8015C		1	756696	JCK	EET SAV	12/24/22 02:35
Soluble	Leach	DI Leach			755694	GEM	EET SAV	12/17/22 18:05
Soluble	Analysis	8015C		5	756715	JCK	EET SAV	12/24/22 05:40

Client Sample ID: S43471.26

Lab Sample ID: 190-30658-26

Date Collected: 12/13/22 10:40

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594376	JML	EET SL	12/20/22 11:45
Total/NA	Analysis	Moisture - 2540		1	756199	PG	EET SAV	12/20/22 17:32
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 16:30

Client Sample ID: S43471.26

Lab Sample ID: 190-30658-26

Date Collected: 12/13/22 10:40

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 76.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653989	MLK	EET BUF	12/20/22 07:08
Total/NA	Analysis	8270D		5	654159	JMM	EET BUF	12/21/22 17:57
Total/NA	Prep	3050B			594810	LKP	EET SL	12/27/22 09:28
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 20:36

Client Sample ID: S43471.26

Lab Sample ID: 190-30658-26

Date Collected: 12/13/22 10:40

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 90.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755694	GEM	EET SAV	12/17/22 18:07
Soluble	Analysis	8015C		1	756696	JCK	EET SAV	12/24/22 02:56
Soluble	Leach	DI Leach			755694	GEM	EET SAV	12/17/22 18:07
Soluble	Analysis	8015C		5	756715	JCK	EET SAV	12/24/22 06:01

Lab Chronicle

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.27

Lab Sample ID: 190-30658-27

Date Collected: 12/13/22 08:50

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594376	JML	EET SL	12/20/22 11:45
Total/NA	Analysis	Moisture - 2540		1	756199	PG	EET SAV	12/20/22 17:32
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 16:30

Client Sample ID: S43471.27

Lab Sample ID: 190-30658-27

Date Collected: 12/13/22 08:50

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 76.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653989	MLK	EET BUF	12/20/22 07:08
Total/NA	Analysis	8270D		1	654159	JMM	EET BUF	12/21/22 18:22
Total/NA	Prep	3050B			594810	LKP	EET SL	12/27/22 09:28
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 20:40

Client Sample ID: S43471.27

Lab Sample ID: 190-30658-27

Date Collected: 12/13/22 08:50

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 92.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755694	GEM	EET SAV	12/17/22 18:07
Soluble	Analysis	8015C		1	756696	JCK	EET SAV	12/24/22 03:16
Soluble	Leach	DI Leach			755694	GEM	EET SAV	12/17/22 18:07
Soluble	Analysis	8015C		5	756715	JCK	EET SAV	12/24/22 06:21

Client Sample ID: S43471.28

Lab Sample ID: 190-30658-28

Date Collected: 12/13/22 12:45

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594376	JML	EET SL	12/20/22 11:45
Total/NA	Analysis	Moisture - 2540		1	755958	PG	EET SAV	12/19/22 16:30
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 16:30

Client Sample ID: S43471.28

Lab Sample ID: 190-30658-28

Date Collected: 12/13/22 12:45

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 90.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653989	MLK	EET BUF	12/20/22 07:08
Total/NA	Analysis	8270D		1	654159	JMM	EET BUF	12/21/22 18:46
Total/NA	Prep	3050B			594810	LKP	EET SL	12/27/22 09:28
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 20:43

Lab Chronicle

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.28

Lab Sample ID: 190-30658-28

Date Collected: 12/13/22 12:45

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 92.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755694	GEM	EET SAV	12/17/22 18:07
Soluble	Analysis	8015C		1	756696	JCK	EET SAV	12/24/22 03:37
Soluble	Leach	DI Leach			755694	GEM	EET SAV	12/17/22 18:07
Soluble	Analysis	8015C		5	756715	JCK	EET SAV	12/24/22 06:42

Client Sample ID: S43471.29

Lab Sample ID: 190-30658-29

Date Collected: 12/13/22 13:00

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594376	JML	EET SL	12/20/22 11:45
Total/NA	Analysis	Moisture - 2540		1	755958	PG	EET SAV	12/19/22 16:30
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 16:30

Client Sample ID: S43471.29

Lab Sample ID: 190-30658-29

Date Collected: 12/13/22 13:00

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 90.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653989	MLK	EET BUF	12/20/22 07:08
Total/NA	Analysis	8270D		1	654159	JMM	EET BUF	12/21/22 19:11
Total/NA	Prep	3050B			594810	LKP	EET SL	12/27/22 09:28
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 20:47

Client Sample ID: S43471.29

Lab Sample ID: 190-30658-29

Date Collected: 12/13/22 13:00

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 94.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755694	GEM	EET SAV	12/17/22 18:07
Soluble	Analysis	8015C		1	756696	JCK	EET SAV	12/24/22 03:58
Soluble	Leach	DI Leach			755694	GEM	EET SAV	12/17/22 18:07
Soluble	Analysis	8015C		5	756715	JCK	EET SAV	12/24/22 07:02

Client Sample ID: S43471.30

Lab Sample ID: 190-30658-30

Date Collected: 12/13/22 13:50

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594376	JML	EET SL	12/20/22 11:45
Total/NA	Analysis	Moisture - 2540		1	755958	PG	EET SAV	12/19/22 16:30

Lab Chronicle

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.30

Lab Sample ID: 190-30658-30

Date Collected: 12/13/22 13:50

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 76.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			594810	LKP	EET SL	12/27/22 09:28
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 21:00

Client Sample ID: S43471.30

Lab Sample ID: 190-30658-30

Date Collected: 12/13/22 13:50

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 92.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755694	GEM	EET SAV	12/17/22 18:07
Soluble	Analysis	8015C		1	756696	JCK	EET SAV	12/24/22 04:18
Soluble	Leach	DI Leach			755694	GEM	EET SAV	12/17/22 18:07
Soluble	Analysis	8015C		5	756715	JCK	EET SAV	12/24/22 07:22

Client Sample ID: S43471.31

Lab Sample ID: 190-30658-31

Date Collected: 12/13/22 14:10

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594376	JML	EET SL	12/20/22 11:45
Total/NA	Analysis	Moisture - 2540		1	755958	PG	EET SAV	12/19/22 16:30

Client Sample ID: S43471.31

Lab Sample ID: 190-30658-31

Date Collected: 12/13/22 14:10

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 76.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			594810	LKP	EET SL	12/27/22 09:28
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 21:04

Client Sample ID: S43471.31

Lab Sample ID: 190-30658-31

Date Collected: 12/13/22 14:10

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 84.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755695	GEM	EET SAV	12/17/22 18:08
Soluble	Analysis	8015C		10	756693	GEM	EET SAV	12/23/22 18:19

Client Sample ID: S43471.32

Lab Sample ID: 190-30658-32

Date Collected: 12/13/22 14:15

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594376	JML	EET SL	12/20/22 11:45
Total/NA	Analysis	Moisture - 2540		1	755958	PG	EET SAV	12/19/22 16:30

Lab Chronicle

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.32

Lab Sample ID: 190-30658-32

Date Collected: 12/13/22 14:15

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 91.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			594810	LKP	EET SL	12/27/22 09:28
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 21:07

Client Sample ID: S43471.32

Lab Sample ID: 190-30658-32

Date Collected: 12/13/22 14:15

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 96.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755695	GEM	EET SAV	12/17/22 18:08
Soluble	Analysis	8015C		5	756693	GEM	EET SAV	12/23/22 18:39

Client Sample ID: S43471.33

Lab Sample ID: 190-30658-33

Date Collected: 12/13/22 14:35

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594376	JML	EET SL	12/20/22 11:45
Total/NA	Analysis	Moisture - 2540		1	755958	PG	EET SAV	12/19/22 16:30

Client Sample ID: S43471.33

Lab Sample ID: 190-30658-33

Date Collected: 12/13/22 14:35

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 94.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755695	GEM	EET SAV	12/17/22 18:08
Soluble	Analysis	8015C		5	756693	GEM	EET SAV	12/23/22 19:00

Client Sample ID: S43471.33

Lab Sample ID: 190-30658-33

Date Collected: 12/13/22 14:35

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 95.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			594810	LKP	EET SL	12/27/22 09:28
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 21:11

Client Sample ID: S43471.34

Lab Sample ID: 190-30658-34

Date Collected: 12/14/22 14:35

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594376	JML	EET SL	12/20/22 11:45
Total/NA	Analysis	Moisture - 2540		1	755958	PG	EET SAV	12/19/22 16:30
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 16:30

Lab Chronicle

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Client Sample ID: S43471.34

Lab Sample ID: 190-30658-34

Date Collected: 12/14/22 14:35

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 72.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653989	MLK	EET BUF	12/20/22 07:08
Total/NA	Analysis	8270D		1	654159	JMM	EET BUF	12/21/22 19:35
Total/NA	Prep	3050B			594810	LKP	EET SL	12/27/22 09:28
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 21:14

Client Sample ID: S43471.34

Lab Sample ID: 190-30658-34

Date Collected: 12/14/22 14:35

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 93.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755695	GEM	EET SAV	12/17/22 18:08
Soluble	Analysis	8015C		1	756541	JCK	EET SAV	12/22/22 16:31

Client Sample ID: S43471.35

Lab Sample ID: 190-30658-35

Date Collected: 12/14/22 15:03

Matrix: Solid

Date Received: 12/16/22 12:38

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594376	JML	EET SL	12/20/22 11:45
Total/NA	Analysis	Moisture - 2540		1	755958	PG	EET SAV	12/19/22 16:30
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 16:30

Client Sample ID: S43471.35

Lab Sample ID: 190-30658-35

Date Collected: 12/14/22 15:03

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 90.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755695	GEM	EET SAV	12/17/22 18:08
Soluble	Analysis	8015C		5	756693	GEM	EET SAV	12/23/22 19:21

Client Sample ID: S43471.35

Lab Sample ID: 190-30658-35

Date Collected: 12/14/22 15:03

Matrix: Solid

Date Received: 12/16/22 12:38

Percent Solids: 92.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			653989	MLK	EET BUF	12/20/22 07:08
Total/NA	Analysis	8270D		1	654159	JMM	EET BUF	12/21/22 20:00
Total/NA	Prep	3050B			594810	LKP	EET SL	12/27/22 09:28
Total/NA	Analysis	6020B		2	595048	CGB	EET SL	12/28/22 21:18

Laboratory References:

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600
 EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858
 EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Lab Chronicle

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

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Analyst References:

Lab: EET BUF

Batch Type: Prep

MLK = Marissa Kordal

Batch Type: Analysis

DLG = Denise Giglia

JMM = Joseph Marshall

Lab: EET SAV

Batch Type: Leach

GEM = Griffin Meincke

Batch Type: Analysis

GEM = Griffin Meincke

JCK = Joshua Kellar

PG = Patrick Gardner

Lab: EET SL

Batch Type: Prep

LKP = Laura Pemberton

Batch Type: Analysis

CGB = Cory Buffington

JML = Jessica LaDuron

SRE = Sabrina Early

Accreditation/Certification Summary

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Laboratory: Eurofins Buffalo

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-0686	07-06-22 *
Connecticut	State	PH-0568	03-31-24
Florida	NELAP	E87672	06-30-23
Georgia	State	10026 (NY)	04-01-23
Georgia	State Program	N/A	03-31-09 *
Georgia (DW)	State	956	03-31-23
Illinois	NELAP	200003	09-30-23
Iowa	State	374	03-01-23
Iowa	State Program	374	03-01-09 *
Kansas	NELAP	E-10187	01-31-23
Kentucky (DW)	State	90029	12-31-22
Kentucky (UST)	State	30	04-01-23
Kentucky (WWW)	State	KY90029	12-31-22
Louisiana	NELAP	02031	06-30-23
Louisiana (All)	NELAP	02031	06-30-23
Maine	State	NY00044	12-04-22 *
Maryland	State	294	03-31-23
Massachusetts	State	M-NY044	06-30-23
Michigan	State	9937	03-31-23
Michigan	State Program	9937	04-01-09 *
New Hampshire	NELAP	2973	09-11-19 *
New Hampshire	NELAP	2337	11-17-22 *
New Jersey	NELAP	NY455	06-30-23
New York	NELAP	10026	03-31-23
Pennsylvania	NELAP	68-00281	07-31-23
Rhode Island	State	LAO00328	12-30-22
Tennessee	State	02970	04-01-23
Texas	NELAP	T104704412-18-10	07-31-23
USDA	US Federal Programs	P330-18-00039	03-25-24
Virginia	NELAP	460185	09-14-23
Washington	State	C784	02-10-23
Wisconsin	State	998310390	08-31-23

Laboratory: Eurofins Savannah

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	SAVLAB	
Alabama	State	41450	06-30-23
ANAB	Dept. of Defense ELAP	L2463	09-22-24
Arkansas DEQ	State	19-015-0	02-01-23
California	State	2939	06-30-22 *
Connecticut	State	PH-0161	03-31-23
Florida	NELAP	E87052	06-30-23
Georgia	State	E87052	06-30-23
Georgia (DW)	State	803	06-30-23
Guam	State	19-007R	04-17-23
Hawaii	State	<cert No.>	06-30-23
Illinois	NELAP	200022	11-30-23
Indiana	State	C-GA-02	06-30-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Michigan

Accreditation/Certification Summary

Client: Merit Laboratories
 Project/Site: Merit Laboratories

Job ID: 190-30658-1

Laboratory: Eurofins Savannah (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Iowa	State	353	07-01-23
Kentucky (UST)	State	NA	06-30-23
Louisiana	NELAP	30690	06-30-23
Louisiana (All)	NELAP	30690	06-30-23
Louisiana (DW)	State	LA009	12-31-22
Maine	State	GA00006	12-27-22
Maryland	State	250	12-31-23
Massachusetts	State	M-GA006	01-14-23
Michigan	State	9925	06-30-23
Mississippi	State	<cert No.>	06-30-23
Nebraska	State	NE-OS-7-04	06-30-23
New Jersey	NELAP	GA769	06-30-23
New Mexico	State	GA00006	06-30-23
New York	NELAP	10842	04-01-23
North Carolina (DW)	State	13701	07-31-23
North Carolina (WW/SW)	State	269	12-31-22
Pennsylvania	NELAP	68-00474	06-30-23
Puerto Rico	State	GA00006	12-30-22
South Carolina	State	98001	06-30-23
Tennessee	State	TN02961	06-30-23
Texas	NELAP	T1047004185-19-14	11-30-23
Texas	TCEQ Water Supply	T104704185	06-30-23
USDA	US Federal Programs	P330-18-00313	09-03-24
Virginia	NELAP	460161	06-14-23
Wisconsin	State	999819810	08-31-23
Wyoming	State	8TMS-L	06-30-23

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-23
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-23
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-23
HI - RadChem Recognition	State	n/a	06-30-23
Illinois	NELAP	200023	11-30-23
Iowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-23
Kentucky (DW)	State	KY90125	12-31-22 *
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-23
Louisiana (All)	NELAP	04080	06-30-23
Louisiana (DW)	State	LA011	12-31-23
Maryland	State	310	09-30-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Michigan

Accreditation/Certification Summary

Client: Merit Laboratories
 Project/Site: Merit Laboratories

Job ID: 190-30658-1

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
MI - RadChem Recognition	State	9005	06-30-23
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-23
New Jersey	NELAP	MO002	06-30-23
New York	NELAP	11616	04-01-23
North Dakota	State	R-207	06-30-23
Oklahoma	NELAP	9997	08-31-23
Oregon	NELAP	4157	09-01-23
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-23
Texas	NELAP	T104704193	07-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-24
Washington	State	C592	08-30-23
West Virginia DEP	State	381	10-31-23



Method Summary

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30658-1

Method	Method Description	Protocol	Laboratory
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	EET BUF
8015C	Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)	SW846	EET SAV
6020B	Metals (ICP/MS)	SW846	EET SL
Moisture	Percent Moisture	EPA	EET SL
Moisture - 2540	Percent Moisture	SM	EET SAV
D2216-90	Water (Moisture) Content	ASTM	EET BUF
3050B	Preparation, Metals	SW846	EET SL
3550C	Ultrasonic Extraction	SW846	EET BUF
DI Leach	Deionized Water Leaching Procedure	ASTM	EET SAV

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



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C.O.C. PAGE # 1 OF 3

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME **Project Management Team** CONTACT NAME **Julie Teague**
 COMPANY **Merit Laboratories** COMPANY **Merit Laboratories**
 ADDRESS **2680 East Lansing Drive** ADDRESS **2680 East Lansing Drive**
 CITY **East Lansing** CITY **East Lansing** STATE **MI** STATE **MI** ZIP CODE **48823**
 PHONE NO. **517-332-0167** PHONE NO. **517-332-0167** E-MAIL ADDRESS **results@meritlabs.com** E-MAIL ADDRESS **juliet@meritlabs.com**

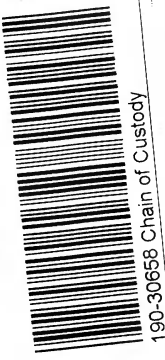
PROJECT NO./NAME **S43471** ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER

DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER

MATRIX CODE GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

MERIT LAB NO. FOR LAB USE ONLY	YEAR		IDENTIFICATION-DESCRIPTION	# Containers & Preservatives				OTHER								
	DATE	TIME		MATRIX	# OF BOTTLES	NONE	HCl		HNO ₃							
	12/13/22	0825	S43471.01	S	3	3										
	12/13/22	0836	S43471.02	S	3	3										
	12/13/22	0856	S43471.03	S	3	3										
	12/13/22	0856	S43471.04	S	3	3										
	12/13/22	0935	S43471.05	S	3	3										
	12/13/22	0001	S43471.06	S	3	3										
	12/13/22	1016	S43471.07	S	3	3										
	12/13/22	1033	S43471.08	S	3	3										
	12/13/22	1043	S43471.09	S	3	3										
	12/13/22	1043	S43471.10	S	3	3										
	12/13/22	1118	S43471.11	S	3	3										
	12/13/22	0001	S43471.12	S	3	3										



Subcontracted to
Eurofins

RELINQUISHED BY: **[Signature]** DATE: **12/15/22** TIME: **17:30**
 SIGNATURE/Organization: **Merit Sleepsback** SIGNATURE/Organization: **Merit Sleepsback**
 SEAL NO.: **196** SEAL NO.: **121051**
 SEAL INTACT: **100** SEAL INTACT: **100**
 INITIALS: **[Initials]** INITIALS: **[Initials]**

RELINQUISHED BY: **[Signature]** DATE: **12/15/22** TIME: **15:45**
 SIGNATURE/Organization: **Merit Sleepsback** SIGNATURE/Organization: **Merit Sleepsback**
 SEAL NO.: **196** SEAL NO.: **121051**
 SEAL INTACT: **100** SEAL INTACT: **100**
 INITIALS: **[Initials]** INITIALS: **[Initials]**

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Received by **[Signature]** **12/16/22** **12:38**



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C.O.C. PAGE # 2 OF 3

REPORT TO

CONTACT NAME: Project Management Team
 COMPANY: Merit Laboratories
 ADDRESS: 2680 East Lansing Drive
 CITY: East Lansing MI 48823
 PHONE NO.: 517-332-0167
 E-MAIL ADDRESS: results@meritlabs.com

CHAIN OF CUSTODY RECORD

CONTACT NAME: Julie Teague
 COMPANY: Merit Laboratories
 ADDRESS: 2680 East Lansing Drive
 CITY: East Lansing MI 48823
 PHONE NO.: 517-332-0167
 E-MAIL ADDRESS: juliet@meritlabs.com

INVOICE TO

PROJECT NO./NAME: S43471

TURNAROUND TIME REQUIRED: 1 DAY 2 DAYS 3 DAYS STANDARD OTHER

DELIVERABLES REQUIRED: STD LEVEL II LEVEL III LEVEL IV EDD OTHER

SAMPLER(S) - PLEASE PRINT/SIGN NAME

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	YEAR	DATE	TIME	IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives													
							HQ	HQ	HQ	HQ	OTHER									
	12/13/22	1230		S43471.13	S	3														
	12/13/22	1245		S43471.14	S	3														
	12/13/22	1300		S43471.15	S	3														
	12/13/22	1300		S43471.16	S	3														
	12/13/22	1330		S43471.17	S	3														
	12/13/22	0001		S43471.18	S	3														
	12/13/22	1410		S43471.19	S	3														
	12/13/22	1415		S43471.20	S	3														
	12/13/22	1435		S43471.21	S	3														
	12/13/22	1435		S43471.22	S	3														
	12/13/22	1503		S43471.23	S	3														
	12/13/22	0001		S43471.24	S	3														

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Alcohols: Tetraethyl Lead

Alcohols: * Ethanol, Methanol, N-Butanol

Certifications: OHIO VAP Drinking Water DoD NPDES Project Locations Detroit New York Other Special Instructions

RELINQUISHED BY: [Signature] DATE: 12/15/22 TIME: 11:30

RECEIVED BY: [Signature] DATE: 12/15/22 TIME: 11:30

RELINQUISHED BY: [Signature] DATE: 12/15/22 TIME: 10:45

RECEIVED BY: [Signature] DATE: 12/15/22 TIME: 10:45

RELINQUISHED BY: [Signature] DATE: 12/15/22 TIME: 12:45

RECEIVED BY: [Signature] DATE: 12/15/22 TIME: 12:45

SEAL NO. [] SEAL INTACT [] INITIALS []

SEAL NO. [] SEAL INTACT [] INITIALS []

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Received by [Signature] 12/16/22 10:38





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C.O.C. PAGE # 3 OF 3

REPORT TO PROJECT MANAGEMENT TEAM **INVOICE TO**

CONTACT NAME: Julie Teague SAME

COMPANY: Merit Laboratories

ADDRESS: 2680 East Lansing Drive

CITY: East Lansing STATE: MI ZIP CODE: 48823

PHONE NO.: 517-332-0167 E-MAIL ADDRESS: juliet@meritlabs.com

CHAIN OF CUSTODY RECORD

PROJECT NO./NAME: S43471

TURNAROUND TIME REQUIRED: 1 DAY 2 DAYS 3 DAYS STANDARD OTHER

DELIVERABLES REQUIRED: STD LEVEL II LEVEL III LEVEL IV EDD OTHER

MATRIX: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

SAMPLER(S) - PLEASE PRINT/SIGN NAME

MERIT LAB NO. (FOR LAB USE ONLY)	YEAR	DATE	TIME	IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives							Alcohols*	Thorium	Tetraethyl Lead	Certifications	
							H ₂ O	H ₂ SO ₄	HNO ₃	HCl	None	MeOH	NaOH					Other
	12/13/22	1020		S43471.25	S	3									✓	✓		
	12/13/22	1040		S43471.26	S	3									✓	✓		
	12/13/22	0850		S43471.27	S	3									✓	✓		
	12/13/22	1245		S43471.28	S	3									✓	✓		
	12/13/22	1300		S43471.29	S	3									✓	✓		
	12/13/22	1350		S43471.30	S	2									✓	✓		
	12/13/22	1410		S43471.31	S	2									✓	✓		
	12/13/22	1415		S43471.32	S	2									✓	✓		
	12/13/22	1435		S43471.33	S	2									✓	✓		
	12/14/22	1435		S43471.34	S	3									✓	✓		
	12/14/22	1503		S43471.35	S	3									✓	✓		

RELINQUISHED BY: [Signature] DATE: 12/15/22 TIME: 1:30 PM

RECEIVED BY: [Signature] DATE: 12/15/22 TIME: 14:30

RELINQUISHED BY: [Signature] DATE: 12/14/22 TIME: 16:11

RECEIVED BY: [Signature] DATE: 12/15/22 TIME: 16:11

SEAL NO. INITIALS

SEAL IN CONTACT YES/NO

SEAL INTACT YES/NO

NOTES: 140 cold storage

TEMP ON ARRIVAL

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Received by [Signature] 12/16/22 12:38



Environment Testing
TestAmerica

- SDS or Known Hazard Information Supplied by Client
- Discrepancies
- Short Hold
- Rush 24 Hr 2-Day 3-Day 5-Day Other:

Client ID: Moil Laboratories
Work Order #: 30658

Cooler / Sample Receipt

After hours receipt: complete gray areas. Place cooler in walk-in, place form in Receiving box. Date: _____ Time: _____

Receipt Evaluation Performed by: Initials: _____ Date: 12/16 Time: 12:38

Method of Shipment:

Walk-In Client Eurofins TA Field/Courier
 Other Client / 3rd Party Courier: _____
 Fed Ex Tracking #: _____
 UPS Tracking #: _____
 Other: _____

Shipping Container Type:

Cooler Box
 None Other: _____

Custody Seals Intact:

Yes No
 NA (not used or required)

Packing Materials:

Plastic Bags Foam
 Bubble Wrap Paper
 Packing Peanuts None
 Other: _____

Cooling Materials:

Ice (Solid) Ice (Melted)
 Blue Ice None
 Other: _____

Bacteriological Samples	Temp Corrected (°C)	Frozen?		Rec'd Within 2 Hrs?		Sample Flagged?	
		Yes	No	Yes	No	Yes	No

Received on same day sampled? Yes No

Additional Sheets Required? Yes No

Receipt Temperatures

Thermometer ID	Observed (°C)	Corrected (°C)	Temp Blank	Sample Temp	Acceptable	Cooler ID	Affected Samples
<u>CP313207</u>	<u>6.6</u>	<u>6.6</u>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N		
					<input type="checkbox"/> Y <input type="checkbox"/> N		
					<input type="checkbox"/> Y <input type="checkbox"/> N		

Receipt Questions**	Y	N	NA	"No" answers require additional comment
CoC present and ETA receipt signature, date, and time properly documented?	<input checked="" type="checkbox"/>			
Containers and Labels in good condition? (unbroken, not leaking, appropriately filled, labels legible & attached)	<input checked="" type="checkbox"/>			
Appropriate containers used and adequate volume provided?	<input checked="" type="checkbox"/>			Preserved bottles checked for pH? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Number of sample containers match CoC?	<input checked="" type="checkbox"/>			pH strip lot # _____
Samples received within hold?	<input checked="" type="checkbox"/>			
Samples submitted for GRO and Volatiles analysis (8260, 624, 524) received without headspace?			<input checked="" type="checkbox"/>	
Was a Trip Blank received with VOA samples?			<input checked="" type="checkbox"/>	
Were the samples free of any questionable physical conformities? (i.e.; field duplicates or multiple bottles of the same sample do not significantly vary in appearance - color, solid proportions, etc.)	<input checked="" type="checkbox"/>			
Were the CoC bottle labels and all other items free of all other discrepancies or issues that would need to be addressed with the Project Manager and/or Client?	<input checked="" type="checkbox"/>			

Client Contact Record

Contact Via: Phone Email Other: _____ Person Contacted: _____ Date/Time: _____
 Discrepancy allowance agreement is on record in the client project file

Discussion / Resolution

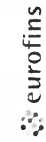
Any additional documentation and clarification from the client must be noted in the narrative and/or scanned into the CoC directory.

Reviewed by [Signature] Date: 12/16/22

WI-MI-010_020720

Eurofins Savannah
 5102 LaRoche Avenue
 Savannah, GA 31404
 Phone: 912-354-7858 Fax: 912-352-0165

Chain of Custody Record



Environment Testing



Client Information (Sub Contract Lab)		Lab PM: Schaefer, Sue	Carrier: Tracking No(s) 680-723226.1
Company: TestAmerica Laboratories, Inc.		E-Mail: Sue.Schaefer@et.eurofins.com	Page: Page 1 of 1
Address: 13715 Rider Trail North, Earth City State, Zip MO, 63045		State of Origin: Michigan	Job #: 190-30658-1
Phone: 314-298-8566(Tel) 314-298-8757(Fax)		Accreditations Required (See note)	Preservation Codes: M - Hexane N - None O - ASN02 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)
Email: Project Name: Merit Laboratories		Analysis Requested	Other: L - EDTA K - EDTA J - DI Water I - Ice H - Ascorbic Acid G - Amchlor F - MeOH E - NaHSO4 D - Nitric Acid C - Zn Acetate B - NaOH A - HCL
SSOW#: 19001249		Field Filtered Sample (Yes or No)	Total Number of containers
Sample Date: 12/13/22		Perform MS/MSD (Yes or No)	Special Instructions/Note:
Sample Time: 08:36 Eastern		6020B/3050B 2% (MD) Specialty Metals	1
Sample Type (C=Comp, G=grab)		Molture	
Sample Preservation Code: Solid			
Matrix (W=water, S=solid, O=other)			

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Southeast, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/testing/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Southeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Southeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Southeast, LLC.

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements:

Reinquired by:	Date/Time:	Company:
Reinquired by:	Date/Time:	Company:
Reinquired by:	Date/Time:	Company:

Method of Shipment: _____
 Date: 1/6/23 1800
 Received by: _____
 Date/Time: JAN 09 2023 0540
 Company: _____
 Date/Time: _____
 Company: _____

Custody Seals Intact:
 Δ Yes Δ No _____
 Cooler Temperature(s) °C and Other Remarks:



Chain of Custody Record



Environment Testing



Client Information (Sub Contract Lab)			Sampler:			Lab PM:			Carrier Tracking No(s):		
Client Contact: Shipping/Receiving Company TesAmerica Laboratories, Inc.			Phone E-Mail Sue.Schafer@et.eurofins.com			Schafer, Sue			190-34932.1		
Address 13715 Rider Trail North, City Earth City State, Zip MO, 63045 Phone: 314-298-8566(Tel) 314-298-8757(Fax) Email:			Due Date Requested: 1/3/2023 TAT Requested (days):			State of Origin: Michigan			Page Page 1 of 4		
Project Name: Ment Laboratories Site			Project # 19001249 SSOW#:			Accreditations Required (See note):			Job # 190-30658-1		
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Over-sat, etc - Please Add)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B/3060B_2% (MOD) Specialty Metals	Mixture	Analysis Requested		
									Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2SO3 Q - Na2SO4 R - H2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)		
S43471.01 (190-30658-1)	12/13/22	08:25 Eastern	Solid	Solid	X	X	X		Total Number of containers		
S43471.02 (190-30658-2)	12/13/22	08:36 Eastern	Solid	Solid	X	X	X		1		
S43471.03 (190-30658-3)	12/13/22	08:56 Eastern	Solid	Solid	X	X	X		1		
S43471.04 (190-30658-4)	12/13/22	08:56 Eastern	Solid	Solid	X	X	X		1		
S43471.05 (190-30658-5)	12/13/22	09:35 Eastern	Solid	Solid	X	X	X		1		
S43471.06 (190-30658-6)	12/13/22	00:01 Eastern	Solid	Solid	X	X	X		1		
S43471.07 (190-30658-7)	12/13/22	10:16 Eastern	Solid	Solid	X	X	X		1		
S43471.08 (190-30658-8)	12/13/22	10:33 Eastern	Solid	Solid	X	X	X		1		
S43471.09 (190-30658-9)	12/13/22	10:43 Eastern	Solid	Solid	X	X	X		1		

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) _____
 Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____
 Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: _____ Company: _____
 Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: _____ Company: _____
 Relinquished by: _____ Date/Time: _____ Received by: _____ Date/Time: _____ Company: _____

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
 Special Instructions/QC Requirements:

Custody Seal No.: _____
 Custody Seals Intact: Yes No
 Cooler Temperature(s) °C and Other Remarks:



Chain of Custody Record



Client Information (Sub Contract Lab)			Lab PM		Carrier Tracking No(s)		COC No:			
Client Contact: Shipping/Receiving Company TestAmerica Laboratories, Inc.			Schafer, Sue E-Mail Sue.Schafer@et.eurofins.com		State of Origin: Michigan		190-34932.2			
Address: 13715 Rider Trail North, City Earth City State, Zip: MO, 63045			Phone: 314-298-8566(Tel) 314-298-8757(Fax)		Job #: 190-30658-1		Page: Page 2 of 4			
PO #: WO #: Project #: Merit Laboratories Site S50WH			Due Date Requested: 1/3/2023 TAT Requested (days):		Accreditations Required (See note):		Preservation Codes: M - Hexane N - None O - AsNo2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma L - EDA Other:			
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=solid, O=ores/sed, BT=Trace, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Moisture	Analysis Requested	Total Number of containers	Special Instructions/Note:
S43471.10 (190-30658-10)	12/13/22	10:43 Eastern	Solid	Solid	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			1	
S43471.11 (190-30658-11)	12/13/22	11:18 Eastern	Solid	Solid	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			1	
S43471.12 (190-30658-12)	12/13/22	00:01 Eastern	Solid	Solid	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			1	
S43471.13 (190-30658-13)	12/13/22	12:30 Eastern	Solid	Solid	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			1	
S43471.14 (190-30658-14)	12/13/22	12:45 Eastern	Solid	Solid	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			1	
S43471.15 (190-30658-15)	12/13/22	13:00 Eastern	Solid	Solid	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			1	
S43471.16 (190-30658-16)	12/13/22	13:00 Eastern	Solid	Solid	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			1	
S43471.17 (190-30658-17)	12/13/22	13:30 Eastern	Solid	Solid	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			1	
S43471.18 (190-30658-18)	12/13/22	00:01 Eastern	Solid	Solid	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			1	

Possible Hazard Identification

Unconfirmed

Deliverable Requested: I, II, III, IV, Other (specify) _____

Primary Deliverable Rank: 2

Empty Kit Relinquished by: _____ Date: _____

Time: _____

Method of Shipment: _____

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements:

Relinquished by:	Relinquished by:	Relinquished by:	Relinquished by:
<i>(Signature)</i>	<i>(Signature)</i>	<i>(Signature)</i>	<i>(Signature)</i>
FEDEX	FEDEX	FEDEX	FEDEX
Date/Time: 12/16/22 4:00 PM	Date/Time: 12/19/21 8:25 AM	Date/Time:	Date/Time:

Custody Seal No.: _____
 Δ Yes Δ No

Cooler Temperature(s) °C and Other Remarks:



Chain of Custody Record



Client Information (Sub Contract Lab)		Lab PW: Schafer, Sue	Carrier Tracking No(s):	COC No: 190-34932.3
Client Contact: Shipping/Receiving		E-Mail: Sue.Schafer@et.eurofins.com	State of Origin: Michigan	Page: Page 3 of 4
Company: Tesi/America Laboratories, Inc.		Job #: 190-30658-1		
Address: 13715 Rider Trail North, City: Earth City State, Zip: MO, 63045 Phone: 314-298-8566(Tel) 314-298-8757(Fax) Email:		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify) Other:		
Due Date Requested: 1/3/2023		Analysis Requested		
TAT Requested (days):		Total Number of Containers		
PO #:		6020B/3060B, 2% (MOD) Specialty Metals		
WO #:		Field Filtered Sample (Yes or No)		
Project #: 19001249		Perform MS/MSD (Yes or No)		
SSOW#:		Mixture		
Sample Date		Sample Time		Sample Type (C=Comp, G=grab)
Sample ID (Lab ID)		Sample Time		Matrix (W=water, S=solid, O=soil, B=biomass, A=air)
Sample Date		Sample Time		Preservation Code:
S43471.19 (190-30658-19)	12/13/22	14:10 Eastern	14:15 Eastern	Solid
S43471.20 (190-30658-20)	12/13/22	14:15 Eastern	14:35 Eastern	Solid
S43471.21 (190-30658-21)	12/13/22	14:35 Eastern	14:35 Eastern	Solid
S43471.22 (190-30658-22)	12/13/22	14:35 Eastern	15:03 Eastern	Solid
S43471.23 (190-30658-23)	12/13/22	15:03 Eastern	00:01 Eastern	Solid
S43471.24 (190-30658-24)	12/13/22	00:01 Eastern	10:20 Eastern	Solid
S43471.25 (190-30658-25)	12/13/22	10:20 Eastern	10:40 Eastern	Solid
S43471.26 (190-30658-26)	12/13/22	10:40 Eastern	08:50 Eastern	Solid
S43471.27 (190-30658-27)	12/13/22	08:50 Eastern		Solid
<p>Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyze & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.</p>				
Possible Hazard Identification				
Unconfirmed				
Deliverable Requested: I, II, III, IV, Other (specify)				
Primary Deliverable Rank: 2				
Empty Kit Relinquished by:				
Relinquished by: <i>[Signature]</i>				
Relinquished by: FED EX				
Relinquished by:				
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No				
Custody Seal No.:				
Colder Temperature(s) °C and Other Remarks:				
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements:				
Received by: FED EX Date/Time: 12/16/22 14:00 Company: FEPA				
Received by: <i>[Signature]</i> Date/Time: 12/19/22 8:25 Company: ETATL				
Received by: Date/Time: Company:				
Method of Shipment: Date/Time: Company:				



Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler: Lab PM: Schafer, Sue		Carrier Tracking No(s): 190-34932.4							
Client Contact: Shipping/Receiving		E-Mail: Sue.Schafer@et.eurofins.com		Page: Page 4 of 4							
Company: TesAmerica Laboratories, Inc.		State of Origin: Michigan		Job #: 190-30658-1							
Address: 13715 Rider Trail North,		Due Date Requested: 1/3/2023		Preservation Codes:							
City: Earth City		TAT Requested (days):		A - HCL M - Hexane N - None O - AsNaO2 P - NaZSO3 Q - NaZSO3 R - NaZSO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - PH 4-5 Y - Trizma Z - other (specify)							
State, Zip: MO, 63045		PO #:		Other:							
Phone: 314-298-8566(Tel) 314-298-8757(Fax)		WO #:									
Email:		Project # 19001249									
Project Name: Merit Laboratories		SSOW#:									
Site:											
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=organic, BT=Trace, AA=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B/3060B_2% (MOD) Specialty Metals	Moisture	Analysis Requested	Total Number of Containers	Special Instructions/Note:
S43471.28 (190-30658-28)	12/13/22	12:45 Eastern	Solid	Solid	X	X	X	X		1	
S43471.29 (190-30658-29)	12/13/22	13:00 Eastern	Solid	Solid	X	X	X	X		1	
S43471.30 (190-30658-30)	12/13/22	13:50 Eastern	Solid	Solid	X	X	X	X		1	
S43471.31 (190-30658-31)	12/13/22	14:10 Eastern	Solid	Solid	X	X	X	X		1	
S43471.32 (190-30658-32)	12/13/22	14:15 Eastern	Solid	Solid	X	X	X	X		1	
S43471.33 (190-30658-33)	12/13/22	14:35 Eastern	Solid	Solid	X	X	X	X		1	
S43471.34 (190-30658-34)	12/14/22	14:35 Eastern	Solid	Solid	X	X	X	X		1	
S43471.35 (190-30658-35)	12/14/22	15:03 Eastern	Solid	Solid	X	X	X	X		1	
<p>Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.</p>											
<p>Possible Hazard Identification</p> <p>Unconfirmed <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For <input type="checkbox"/> Months</p> <p>Deliverable Requested: I, II, III, IV, Other (specify) _____</p> <p>Primary Deliverable Rank: 2</p> <p>Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____</p> <p>Relinquished by: _____ Date/Time: 12/16/22 4:10 PM Company: BETA Company</p> <p>Relinquished by: _____ Date/Time: _____ Company: _____</p> <p>Relinquished by: _____ Date/Time: _____ Company: _____</p> <p>Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Custody Seal No.: _____</p> <p>Relinquished by: _____ Date/Time: 12/19/22 8:25 AM Company: ETASTL Company</p> <p>Relinquished by: _____ Date/Time: _____ Company: _____</p> <p>Cooler Temperature(s) °C and Other Remarks: _____</p>											



ICOC No:
190-34932

Containers

Count
35

Container Type
Soil jar 4oz - clear glass

Preservative
None



ICOC No:
190-34932

Containers

Count
35

Container Type
Soil jar 4oz - clear glass

Preservative
None



Chain of Custody Record



Environment Testing

Client Information (Sub Contract Lab)		Sampler:	Lab PM Schafer, Sue	Carrier Tracking No(s)	COC No 190-34930.1																																																																																																																																														
Client Contact Shipping/Receiving		Phone	E-Mail Sue.Schafer@eurolins.com	State of Origin Michigan	Page Page 1 of 4																																																																																																																																														
Company Eurolins Environment Testing Northeast,		Accreditations Required (See note):		Job # 190-30658-1																																																																																																																																															
Address 10 Hazelwood Drive, Amherst		Due Date Requested: 1/3/2023	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">Analysis Requested</th> <th colspan="2">Field Filtered Sample (Yes or No)</th> <th colspan="2">Perform MS/MSD (Yes or No)</th> <th colspan="2">8270D/3560C Tetraethyl Lead</th> <th colspan="2">D2216_90</th> <th colspan="2">Total Number of Containers</th> <th rowspan="2">Special Instructions/Note:</th> </tr> <tr> <th>Sample Date</th> <th>Sample Time</th> <th>Sample Type (C=comp, G=grab)</th> <th>Matrix (W=water, S=solid, O=soil/sediment, B=biological)</th> <th>Preservation Code:</th> <th>Field Filtered</th> <th>Perform MS/MSD</th> <th>8270D/3560C</th> <th>D2216_90</th> <th>Total</th> <th></th> <th></th> </tr> </thead> <tbody> <tr><td>12/13/22</td><td>08:25 Eastern</td><td>Solid</td><td>Solid</td><td></td><td>X</td><td>X</td><td>X</td><td>X</td><td>1</td><td></td><td></td><td></td></tr> <tr><td>12/13/22</td><td>08:36 Eastern</td><td>Solid</td><td>Solid</td><td></td><td>X</td><td>X</td><td>X</td><td>X</td><td>1</td><td></td><td></td><td></td></tr> <tr><td>12/13/22</td><td>08:56 Eastern</td><td>Solid</td><td>Solid</td><td></td><td>X</td><td>X</td><td>X</td><td>X</td><td>1</td><td></td><td></td><td></td></tr> <tr><td>12/13/22</td><td>08:56 Eastern</td><td>Solid</td><td>Solid</td><td></td><td>X</td><td>X</td><td>X</td><td>X</td><td>1</td><td></td><td></td><td></td></tr> <tr><td>12/13/22</td><td>09:35 Eastern</td><td>Solid</td><td>Solid</td><td></td><td>X</td><td>X</td><td>X</td><td>X</td><td>1</td><td></td><td></td><td></td></tr> <tr><td>12/13/22</td><td>00:01 Eastern</td><td>Solid</td><td>Solid</td><td></td><td>X</td><td>X</td><td>X</td><td>X</td><td>1</td><td></td><td></td><td></td></tr> <tr><td>12/13/22</td><td>10:16 Eastern</td><td>Solid</td><td>Solid</td><td></td><td>X</td><td>X</td><td>X</td><td>X</td><td>1</td><td></td><td></td><td></td></tr> <tr><td>12/13/22</td><td>10:33 Eastern</td><td>Solid</td><td>Solid</td><td></td><td>X</td><td>X</td><td>X</td><td>X</td><td>1</td><td></td><td></td><td></td></tr> <tr><td>12/13/22</td><td>10:43 Eastern</td><td>Solid</td><td>Solid</td><td></td><td>X</td><td>X</td><td>X</td><td>X</td><td>1</td><td></td><td></td><td></td></tr> </tbody> </table>			Analysis Requested		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		8270D/3560C Tetraethyl Lead		D2216_90		Total Number of Containers		Special Instructions/Note:	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=soil/sediment, B=biological)	Preservation Code:	Field Filtered	Perform MS/MSD	8270D/3560C	D2216_90	Total			12/13/22	08:25 Eastern	Solid	Solid		X	X	X	X	1				12/13/22	08:36 Eastern	Solid	Solid		X	X	X	X	1				12/13/22	08:56 Eastern	Solid	Solid		X	X	X	X	1				12/13/22	08:56 Eastern	Solid	Solid		X	X	X	X	1				12/13/22	09:35 Eastern	Solid	Solid		X	X	X	X	1				12/13/22	00:01 Eastern	Solid	Solid		X	X	X	X	1				12/13/22	10:16 Eastern	Solid	Solid		X	X	X	X	1				12/13/22	10:33 Eastern	Solid	Solid		X	X	X	X	1				12/13/22	10:43 Eastern	Solid	Solid		X	X	X	X	1			
Analysis Requested		Field Filtered Sample (Yes or No)				Perform MS/MSD (Yes or No)		8270D/3560C Tetraethyl Lead		D2216_90		Total Number of Containers		Special Instructions/Note:																																																																																																																																					
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City		PO #		Preservation Codes:																																																																																																																																															
State, Zip NY, 14228-2298		WO #		M - Hexane N - None O - As/NaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)																																																																																																																																															
Phone 716-691-2600(Tel) 716-691-7981(Fax)		Project # 19001249		Other:																																																																																																																																															
Email		SSOWN#																																																																																																																																																	
Project Name Merit Laboratories																																																																																																																																																			
Site																																																																																																																																																			

Sample Identification - Client ID (Lab ID)

S43471.01 (190-30658-1)	12/13/22	08:25 Eastern	Solid		X	X	X	X	1			
S43471.02 (190-30658-2)	12/13/22	08:36 Eastern	Solid		X	X	X	X	1			
S43471.03 (190-30658-3)	12/13/22	08:56 Eastern	Solid		X	X	X	X	1			
S43471.04 (190-30658-4)	12/13/22	08:56 Eastern	Solid		X	X	X	X	1			
S43471.05 (190-30658-5)	12/13/22	09:35 Eastern	Solid		X	X	X	X	1			
S43471.06 (190-30658-6)	12/13/22	00:01 Eastern	Solid		X	X	X	X	1			
S43471.07 (190-30658-7)	12/13/22	10:16 Eastern	Solid		X	X	X	X	1			
S43471.08 (190-30658-8)	12/13/22	10:33 Eastern	Solid		X	X	X	X	1			
S43471.09 (190-30658-9)	12/13/22	10:43 Eastern	Solid		X	X	X	X	1			

Note: Since laboratory accreditations are subject to change, Eurolins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody if the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/method being analyzed; the samples must be shipped back to the Eurolins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurolins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurolins Environment Testing North Central, LLC

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) _____
 Primary Deliverable Rank: 2
 Date: _____



Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: _____ Date: 12/16/22 13:53
 Relinquished by: _____ Date: _____
 Relinquished by: _____ Date: _____

Custody Seal No.: _____
 Custody Seals Intact: Yes No
 Cooler Temperature(s): _____ Other Remarks: _____



Chain of Custody Record

10448 Citation, Drive Suite 200
Brighton, MI 48116
Phone: 810-229-2763 Fax: 810-229-0000

Client Information (Sub Contract Lab)		Lab PM Schafer, Sue	Camera Tracking No(s)	COC No 190-34930.2							
Client Contact Shipping/Receiving		E-Mail Sue.Schafer@et.euofins.com	State of Origin Michigan	Page Page 2 of 4							
Company Eurofins Environment Testing Northeast,		Job # 190-30658-1									
Address 10 Hazelwood Drive, Amherst		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsH2O2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)									
City Amherst		Analysis Requested									
State, Zip NY, 14228-2288		Total Number of Containers									
Phone 716-691-2600(Tel) 716-691-7991(Fax)		Field Filtered Sample (Yes or No)									
Email		Perform MS/MSD (Yes or No)									
Project Name Merit Laboratories		8270D/3560C Tetraethyl Lead									
Site		D2216_90									
Due Date Requested: 1/3/2023		Special Instructions/Note:									
TAT Requested (days):		Total Number of Containers									
PO #		Field Filtered Sample (Yes or No)									
WO #		Perform MS/MSD (Yes or No)									
Project # 19001249		8270D/3560C Tetraethyl Lead									
SSOW#		D2216_90									
Sample Identification - Client ID (Lab ID)		Special Instructions/Note:									
S43471.10 (190-30658-10)	Sample Date 12/13/22	Sample Time 10:43 Eastern	Sample Type (C-comp, G-grab)	Matrix (Water, Brackish, Over-sat, 81-Trace, Any)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270D/3560C Tetraethyl Lead	D2216_90	Total Number of Containers	Special Instructions/Note:
S43471.11 (190-30658-11)	12/13/22	11:18 Eastern	Solid	Solid		X	X	X	X	1	
S43471.12 (190-30658-12)	12/13/22	00:01 Eastern	Solid	Solid		X	X	X	X	1	
S43471.13 (190-30658-13)	12/13/22	12:30 Eastern	Solid	Solid		X	X	X	X	1	
S43471.14 (190-30658-14)	12/13/22	12:45 Eastern	Solid	Solid		X	X	X	X	1	
S43471.15 (190-30658-15)	12/13/22	13:00 Eastern	Solid	Solid		X	X	X	X	1	
S43471.16 (190-30658-16)	12/13/22	13:00 Eastern	Solid	Solid		X	X	X	X	1	
S43471.17 (190-30658-17)	12/13/22	13:30 Eastern	Solid	Solid		X	X	X	X	1	
S43471.18 (190-30658-18)	12/13/22	00:01 Eastern	Solid	Solid		X	X	X	X	1	
<p>Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analytes/matrices being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.</p>											
Possible Hazard Identification											
Unconfirmed											
Deliverable Requested: I, II, III, IV, Other (specify)											
Primary Deliverable Rank: 2											
Date: _____ Time: _____											
Empty Kit Relinquished by: _____											
Relinquished by:  Date/Time: 12/16/22 13:55 Company: 											
Relinquished by: _____ Date/Time: _____ Company: _____											
Relinquished by: _____ Date/Time: _____ Company: _____											
Custody Seals Intact: _____ Custody Seal No.: _____											
Cooler Temperature(s) °C and Other Remarks: _____											



Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler: Schaefer, Sue		Lab PM: Schaefer, Sue		COC No: 190-34930.3				
Client Contact: Shipping/Receiving		Phone: Sue Schaefer@eurofins.com		E-Mail: Sue Schaefer@eurofins.com		Page: Page 3 of 4				
Company: Eurofins Environment Testing Northeast		Address: 10 Hazelwood Drive, Amherst, NY 14228-2298		Phone: 716-691-2800(Tel) 716-691-7991(Fax)		Job #: 190-30658-1				
Due Date Requested: 1/3/2023		TAT Requested (days):		PO #:		WO #:				
Project Name: Merit Laboratories		Project #: 19001249		SSOW#:		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)				
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=soil, etc.)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8270D/35650C Tetraethyl Lead	D2216_90	Total Number of Containers	Special Instructions/Note:
S43471.19 (190-30658-19)	12/13/22	14:10 Eastern	Solid	Solid	X	X	X	X	1	
S43471.20 (190-30658-20)	12/13/22	14:15 Eastern	Solid	Solid	X	X	X	X	1	
S43471.21 (190-30658-21)	12/13/22	14:35 Eastern	Solid	Solid	X	X	X	X	1	
S43471.22 (190-30658-22)	12/13/22	14:35 Eastern	Solid	Solid	X	X	X	X	1	
S43471.23 (190-30658-23)	12/13/22	15:03 Eastern	Solid	Solid	X	X	X	X	1	
S43471.24 (190-30658-24)	12/13/22	00:01 Eastern	Solid	Solid	X	X	X	X	1	
S43471.25 (190-30658-25)	12/13/22	10:20 Eastern	Solid	Solid	X	X	X	X	1	
S43471.26 (190-30658-26)	12/13/22	10:40 Eastern	Solid	Solid	X	X	X	X	1	
S43471.27 (190-30658-27)	12/13/22	08:50 Eastern	Solid	Solid	X	X	X	X	1	
<p>Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/testing being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.</p>										
<p>Possible Hazard Identification <input type="checkbox"/> Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) _____ Empty Kit Relinquished by: _____ Date: _____ Relinquished by: _____ Date: 12/16/22 13:55 Relinquished by: _____ Date/Time: _____ Relinquished by: _____ Date/Time: _____ Relinquished by: _____ Date/Time: _____</p>										
<p>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab Special Instructions/QC Requirements: _____ Archive For _____ Months</p>										
<p>Cooler Temperature(s) °C and Other Remarks: _____ Custody Seal No.: _____ Δ Yes Δ No</p>										



Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:
Client Contact:		Phone:	Schafer, Sue		190-34930.4
Shipping/Receiving:		E-Mail:	Sue.Schafer@eurofins.com	State of Origin:	Page 4 of 4
Company:		Eurofins Environment Testing Northeast		Accreditations Required (See note):	Job #: 190-30658-1
Address:		Due Date Requested:	Preservation Codes:		
10 Hazelwood Drive, Amherst		1/3/2023	A - HCL M - Hexane B - NaOH N - None O - AsNaO2 C - Zn Acetate P - Na2O4S D - Nitric Acid Q - Na2SO3 E - NaHSO4 R - Na2S2O3 F - MeOH S - H2SO4 G - Amchlor H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone V - MCAA W - pH 4-5 K - EDTA Y - Trizma L - EDA Z - other (specify) Other:		
City:		TAT Requested (days):	Analysis Requested		
State, Zip:		PO #:	Total Number of containers		
NY, 14228-2298		WO #:			
Phone:		Project #:			
716-691-2600(Tel) 716-691-7991(Fax)		19001249			
Email:		SSOW#:			
Project Name:		Field Filtered Sample (Yes or No)			
Merit Laboratories		Perform MS/MSD (Yes or No)			
Site:		8270D/3560C Tetraethyl Lead			
Sample Identification - Client ID (Lab ID)		Matrix (W=Water, S=Soil, O=Soil, I=Ice, A=Air)	Special Instructions/Note:		
S43471.28 (190-30658-28)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Preservation Code:	
	12/13/22	12:45 Eastern	Solid		
S43471.29 (190-30658-29)	12/13/22	13:00 Eastern	Solid		
S43471.34 (190-30658-34)	12/14/22	14:35 Eastern	Solid		
S43471.35 (190-30658-35)	12/14/22	15:03 Eastern	Solid		
<p>Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.</p>					
Possible Hazard Identification					
Unconfirmed					
Deliverable Requested: I, II, III, IV, Other (specify)					
Primary Deliverable Rank: 2					
Empty Kit Relinquished by:					
Relinquished by: <i>[Signature]</i>					
Date/Time: 12/16/22 13:55					
Relinquished by: <i>[Signature]</i>					
Date/Time: <i>[Signature]</i>					
Relinquished by:					
Date/Time:					
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No					
Custody Seal No.:					
Cooler Temperature(s) °C and Other Remarks:					
<p>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</p> <p><input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months</p> <p>Special Instructions/QC Requirements:</p>					
Method of Shipment:					
Received by: <i>[Signature]</i>					
Date/Time:					
Received by:					
Date/Time:					
Received by:					
Date/Time:					





Analytical Laboratory Report

Report ID: S43472.01(01)
Generated on 01/17/2023

Report to
Attention: Kelly Cratsenburg
TRC
1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: 734-412-5424 FAX:
Email: KCratsenburg@trccompanies.com

Report produced by
Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Additional Contacts: Vince Buening

Report Summary

Lab Sample ID(s): S43472.01-S43472.35
Project: Detroit Axle Southern Invest. 495430.0001
Collected Date(s): 12/13/2022 - 12/14/2022
Submitted Date/Time: 12/14/2022 16:50
Sampled by: B. Yelen / H. Schnaidt
P.O. #: 193431

Table of Contents

- Cover Page (Page 1)
- General Report Notes (Page 2)
- Report Narrative (Page 2)
- Laboratory Certifications (Page 3)
- Qualifier Descriptions (Page 3)
- Glossary of Abbreviations (Page 3)
- Method Summary (Page 4)
- Sample Summary (Page 5)

Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched

Method Summary

Method	Version
ASTM D7968-17M	ASTM Method D7968 - 17 Modified (Isotopic Dilution)
SM2540B	Standard Method 2540 B 2015

Parameter Summary

Parameter	Synonym	Cas #
PFBA	Perfluorobutanoic Acid	375-22-4
PFPeA	Perfluoropentanoic Acid	2706-90-3
4:2 FTSA	4:2 Fluorotelomer Sulfonic Acid	757124-72-4
PFHxA	Perfluorohexanoic Acid	307-24-4
PFBS	Perfluorobutane sulfonic Acid	375-73-5
PFHpA	Perfluoroheptanoic Acid	375-85-9
PFPeS	Perfluoropentane Sulfonic Acid	2706-91-4
6:2 FTSA	6:2 Fluorotelomer Sulfonic Acid	27619-97-2
PFOA	Perfluorooctanoic Acid	335-67-1
PFHxS	Perfluorohexane Sulfonic Acid	355-46-4
PFHxS-LN	Perfluorohexane Sulfonic Acid - LN	355-46-4-LN
PFHxS-BR	Perfluorohexane Sulfonic Acid - BR	355-46-4-BR
PFNA	Perfluorononanoic Acid	375-95-1
8:2 FTSA	8:2 Fluorotelomer Sulfonic Acid	39108-34-4
PFHpS	Perfluoroheptane Sulfonic Acid	375-92-8
PFDA	Perfluorodecanoic Acid	335-76-2
N-MeFOSAA	N-methyl perfluorooctanesulfonamidoacetic acid	2355-31-9
EtFOSAA	N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	2991-50-6
PFOS	Perfluorooctane Sulfonic Acid	1763-23-1
PFOS-LN	Perfluorooctane Sulfonic Acid - LN	1763-23-1-LN
PFOS-BR	Perfluorooctane Sulfonic Acid - BR	1763-23-1-BR
PFUnDA	Perfluoroundecanoic Acid	2058-94-8
PFNS	Perfluorononane Sulfonic Acid	68259-12-1
PFDoDA	Perfluorododecanoic Acid	307-55-1
PFDS	Perfluorodecane Sulfonic Acid	335-77-3
PFTTrDA	Perfluorotridecanoic Acid	72629-94-8
FOSA	Perfluorooctane Sulfonamide	754-91-6
PFTeDA	Perfluorotetradecanoic Acid	376-06-7
11Cl-PF3OUdS	11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	763051-92-9
9Cl-PF3ONS	9-chlorohexadecafluoro-3-oxanone1-sulfonic acid	756426-58-1
ADONA	4,8-dioxa-3H-perfluorononanoic acid	919005-14-4
HFPO-DA	Hexafluoropropylene oxide dimer	13252-13-6
PFECBS	Perfluoro-4-ethylcyclohexanesulfonate	67584-42-3
PFBSA	Perfluorobutanesulfonamide	30334-69-1
PFHxSA	Perfluorohexanesulfonamide	41997-13-1



Analytical Laboratory Report

Sample Summary (35 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S43472.01	AOC11-TP01-N	Soil	12/13/22 08:25
S43472.02	AOC11-TP01-S	Soil	12/13/22 08:36
S43472.03	AOC11-TP01-E	Soil	12/13/22 08:56
S43472.04	AOC11-TP01-W	Soil	12/13/22 08:56
S43472.05	AOC11-TP01-B	Soil	12/13/22 09:35
S43472.06	DUP-03S	Soil	12/13/22 00:01
S43472.07	AOC11-TP02-N	Soil	12/13/22 10:16
S43472.08	AOC11-TP02-S	Soil	12/13/22 10:33
S43472.09	AOC11-TP02-E	Soil	12/13/22 10:43
S43472.10	AOC11-TP02-W	Soil	12/13/22 10:43
S43472.11	AOC11-TP02-B	Soil	12/13/22 11:18
S43472.12	DUP-04S	Soil	12/13/22 00:01
S43472.13	AOC11-TP03-N	Soil	12/13/22 12:30
S43472.14	AOC11-TP03-S	Soil	12/13/22 12:45
S43472.15	AOC11-TP03-E	Soil	12/13/22 13:00
S43472.16	AOC11-TP03-W	Soil	12/13/22 13:00
S43472.17	AOC11-TP03-B	Soil	12/13/22 13:30
S43472.18	DUP-05S	Soil	12/13/22 00:01
S43472.19	AOC11-TP04-N	Soil	12/13/22 14:10
S43472.20	AOC11-TP04-S	Soil	12/13/22 14:15
S43472.21	AOC11-TP04-E	Soil	12/13/22 14:35
S43472.22	AOC11-TP04-W	Soil	12/13/22 14:35
S43472.23	AOC11-TP04-B	Soil	12/13/22 15:03
S43472.24	DUP-06S	Soil	12/13/22 00:01
S43472.25	AOC11-MW-22-07 (2-4)	Soil	12/13/22 10:20
S43472.26	AOC11-MW-22-07 (8-10)	Soil	12/13/22 10:40
S43472.27	AOC7-MW-22-08 (8-10)	Soil	12/13/22 08:50
S43472.28	AOC11-MW-22-10 (2-4)	Soil	12/13/22 12:45
S43472.29	AOC11-MW-22-10 (8-10)	Soil	12/13/22 13:00
S43472.30	AOC3-MW-22-11 (2-4)	Soil	12/13/22 13:50
S43472.31	AOC3-MW-22-11 (8-10)	Soil	12/13/22 14:00
S43472.32	AOC3-MW-22-12 (2-4)	Soil	12/13/22 16:00
S43472.33	AOC3-MW-22-12 (8-10)	Soil	12/13/22 16:10
S43472.34	AOC9-MW-22-13 (2-4)	Soil	12/14/22 09:30
S43472.35	AOC9-MW-22-13 (8-10)	Soil	12/14/22 09:40



Analytical Laboratory Report

Lab Sample ID: S43472.01

Sample Tag: AOC11-TP01-N

Collected Date/Time: 12/13/2022 08:25

Matrix: Soil

COC Reference: 158705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	7.75/6.57/10	ASTM D7968-17M	12/19/22 10:00	KCV	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	93	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 08:02, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	180		ng/kg	9.11	375-22-4		
PFPeA*	Not detected	91		ng/kg	9.11	2706-90-3		
4:2 FTSA*	Not detected	91		ng/kg	9.11	757124-72-4		
PFHxA*	Not detected	91		ng/kg	9.11	307-24-4		
PFBS*	Not detected	91		ng/kg	9.11	375-73-5		
PFHpA*	Not detected	91		ng/kg	9.11	375-85-9		
PFPeS*	Not detected	91		ng/kg	9.11	2706-91-4		
6:2 FTSA*	Not detected	91		ng/kg	9.11	27619-97-2		
PFOA*	Not detected	91		ng/kg	9.11	335-67-1		
PFHxS*	Not detected	91		ng/kg	9.11	355-46-4		
PFHxS-LN*	Not detected	91		ng/kg	9.11	355-46-4-LN		
PFHxS-BR*	Not detected	91		ng/kg	9.11	355-46-4-BR		
PFNA*	Not detected	91		ng/kg	9.11	375-95-1		
8:2 FTSA*	Not detected	91		ng/kg	9.11	39108-34-4		
PFHpS*	Not detected	91		ng/kg	9.11	375-92-8		
PFDA*	Not detected	91		ng/kg	9.11	335-76-2		
N-MeFOSAA*	Not detected	91		ng/kg	9.11	2355-31-9		
EtFOSAA*	Not detected	91		ng/kg	9.11	2991-50-6		
PFOS*	970	91		ng/kg	9.11	1763-23-1		
PFOS-LN*	640	91		ng/kg	9.11	1763-23-1-LN		
PFOS-BR*	330	91		ng/kg	9.11	1763-23-1-BR		
PFUnDA*	Not detected	91		ng/kg	9.11	2058-94-8		
PFNS*	Not detected	91		ng/kg	9.11	68259-12-1		
PFDODA*	Not detected	91		ng/kg	9.11	307-55-1		
PFDS*	Not detected	91		ng/kg	9.11	335-77-3		
PFTTrDA*	Not detected	91		ng/kg	9.11	72629-94-8		
FOSA*	Not detected	91		ng/kg	9.11	754-91-6		
PFTeDA*	Not detected	91		ng/kg	9.11	376-06-7		
11Cl-PF3OUdS*	Not detected	91		ng/kg	9.11	763051-92-9		
9Cl-PF3ONS*	Not detected	91		ng/kg	9.11	756426-58-1		
ADONA*	Not detected	91		ng/kg	9.11	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.01 (continued)

Sample Tag: AOC11-TP01-N

31 PFAs, Method: ASTM D7968-17M, Run Date: 12/20/22 08:02, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	91		ng/kg	9.11	13252-13-6		
PFECHS*	Not detected	91		ng/kg	9.11	67584-42-3		
PFBSA*	Not detected	91		ng/kg	9.11	30334-69-1		
PFHxSA*	Not detected	91		ng/kg	9.11	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.02

Sample Tag: AOC11-TP01-S

Collected Date/Time: 12/13/2022 08:36

Matrix: Soil

COC Reference: 158705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	7.76/6.51/10	ASTM D7968-17M	01/04/23 11:11	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	91	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 17:57, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	180		ng/kg	8.79	375-22-4		
PFPeA*	Not detected	88		ng/kg	8.79	2706-90-3		
4:2 FTSA*	Not detected	88		ng/kg	8.79	757124-72-4		
PFHxA*	Not detected	88		ng/kg	8.79	307-24-4		
PFBS*	Not detected	88		ng/kg	8.79	375-73-5		
PFHpA*	Not detected	88		ng/kg	8.79	375-85-9		
PFPeS*	Not detected	88		ng/kg	8.79	2706-91-4		
6:2 FTSA*	Not detected	88		ng/kg	8.79	27619-97-2		
PFOA*	Not detected	88		ng/kg	8.79	335-67-1		
PFHxS*	Not detected	88		ng/kg	8.79	355-46-4		
PFHxS-LN*	Not detected	88		ng/kg	8.79	355-46-4-LN		
PFHxS-BR*	Not detected	88		ng/kg	8.79	355-46-4-BR		
PFNA*	Not detected	88		ng/kg	8.79	375-95-1		
8:2 FTSA*	Not detected	88		ng/kg	8.79	39108-34-4		
PFHpS*	Not detected	88		ng/kg	8.79	375-92-8		
PFDA*	Not detected	88		ng/kg	8.79	335-76-2		
N-MeFOSAA*	Not detected	88		ng/kg	8.79	2355-31-9		
EtFOSAA*	Not detected	88		ng/kg	8.79	2991-50-6		
PFOS*	200	88		ng/kg	8.79	1763-23-1		
PFOS-LN*	160	88		ng/kg	8.79	1763-23-1-LN		
PFOS-BR*	Not detected	88		ng/kg	8.79	1763-23-1-BR		
PFUnDA*	Not detected	88		ng/kg	8.79	2058-94-8		
PFNS*	Not detected	88		ng/kg	8.79	68259-12-1		
PFDODA*	Not detected	88		ng/kg	8.79	307-55-1		
PFDS*	Not detected	88		ng/kg	8.79	335-77-3		
PFTTrDA*	Not detected	88		ng/kg	8.79	72629-94-8		
FOSA*	Not detected	88		ng/kg	8.79	754-91-6		
PFTeDA*	Not detected	88		ng/kg	8.79	376-06-7		
11Cl-PF3OUdS*	Not detected	88		ng/kg	8.79	763051-92-9		
9Cl-PF3ONS*	Not detected	88		ng/kg	8.79	756426-58-1		
ADONA*	Not detected	88		ng/kg	8.79	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.02 (continued)

Sample Tag: AOC11-TP01-S

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 17:57, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	88		ng/kg	8.79	13252-13-6		
PFECHS*	Not detected	88		ng/kg	8.79	67584-42-3		
PFBSA*	Not detected	88		ng/kg	8.79	30334-69-1		
PFHxSA*	Not detected	88		ng/kg	8.79	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.03

Sample Tag: AOC11-TP01-E

Collected Date/Time: 12/13/2022 08:56

Matrix: Soil

COC Reference: 158705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	7.83/6.52/10	ASTM D7968-17M	01/04/23 11:11	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 14:19, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	92	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 18:36, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	170		ng/kg	8.3	375-22-4		
PFPeA*	Not detected	83		ng/kg	8.3	2706-90-3		
4:2 FTSA*	Not detected	83		ng/kg	8.3	757124-72-4		
PFHxA*	Not detected	83		ng/kg	8.3	307-24-4		
PFBS*	Not detected	83		ng/kg	8.3	375-73-5		
PFHpA*	Not detected	83		ng/kg	8.3	375-85-9		
PFPeS*	Not detected	83		ng/kg	8.3	2706-91-4		
6:2 FTSA*	Not detected	83		ng/kg	8.3	27619-97-2		
PFOA*	260	83		ng/kg	8.3	335-67-1		
PFHxS*	Not detected	83		ng/kg	8.3	355-46-4		
PFHxS-LN*	Not detected	83		ng/kg	8.3	355-46-4-LN		
PFHxS-BR*	Not detected	83		ng/kg	8.3	355-46-4-BR		
PFNA*	Not detected	83		ng/kg	8.3	375-95-1		
8:2 FTSA*	Not detected	83		ng/kg	8.3	39108-34-4		
PFHpS*	Not detected	83		ng/kg	8.3	375-92-8		
PFDA*	Not detected	83		ng/kg	8.3	335-76-2		
N-MeFOSAA*	Not detected	83		ng/kg	8.3	2355-31-9		
EtFOSAA*	Not detected	83		ng/kg	8.3	2991-50-6		
PFOS*	Not detected	83		ng/kg	8.3	1763-23-1		
PFOS-LN*	Not detected	83		ng/kg	8.3	1763-23-1-LN		
PFOS-BR*	Not detected	83		ng/kg	8.3	1763-23-1-BR		
PFUnDA*	Not detected	83		ng/kg	8.3	2058-94-8		
PFNS*	Not detected	83		ng/kg	8.3	68259-12-1		
PFDODA*	Not detected	83		ng/kg	8.3	307-55-1		
PFDS*	Not detected	83		ng/kg	8.3	335-77-3		
PFTTrDA*	Not detected	83		ng/kg	8.3	72629-94-8		
FOSA*	Not detected	83		ng/kg	8.3	754-91-6		
PFTeDA*	Not detected	83		ng/kg	8.3	376-06-7		
11Cl-PF3OUdS*	Not detected	83		ng/kg	8.3	763051-92-9		
9Cl-PF3ONS*	Not detected	83		ng/kg	8.3	756426-58-1		
ADONA*	Not detected	83		ng/kg	8.3	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.03 (continued)

Sample Tag: AOC11-TP01-E

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 18:36, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	83		ng/kg	8.3	13252-13-6		
PFECHS*	Not detected	83		ng/kg	8.3	67584-42-3		
PFBSA*	Not detected	83		ng/kg	8.3	30334-69-1		
PFHxSA*	Not detected	83		ng/kg	8.3	41997-13-1		

31 PFAs (Replicate 01), Method: ASTM D7968-17M, Run Date: 01/04/23 18:56, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	94		ng/kg	4.7	375-22-4		
PFPeA*	74	47		ng/kg	4.7	2706-90-3		
4:2 FTSA*	Not detected	47		ng/kg	4.7	757124-72-4		
PFHxA*	59	47		ng/kg	4.7	307-24-4		
PFBS*	Not detected	47		ng/kg	4.7	375-73-5		
PFHpA*	53	47		ng/kg	4.7	375-85-9		
PFPeS*	Not detected	47		ng/kg	4.7	2706-91-4		
6:2 FTSA*	Not detected	47		ng/kg	4.7	27619-97-2		
PFOA*	110	47		ng/kg	4.7	335-67-1		
PFHxS*	Not detected	47		ng/kg	4.7	355-46-4		
PFHxS-LN*	Not detected	47		ng/kg	4.7	355-46-4-LN		
PFHxS-BR*	Not detected	47		ng/kg	4.7	355-46-4-BR		
PFNA*	Not detected	47		ng/kg	4.7	375-95-1		
8:2 FTSA*	Not detected	47		ng/kg	4.7	39108-34-4		
PFHpS*	Not detected	47		ng/kg	4.7	375-92-8		
PFDA*	Not detected	47		ng/kg	4.7	335-76-2		
N-MeFOSAA*	Not detected	47		ng/kg	4.7	2355-31-9		
EtFOSAA*	Not detected	47		ng/kg	4.7	2991-50-6		
PFOS*	120	47		ng/kg	4.7	1763-23-1		
PFOS-LN*	Not detected	47		ng/kg	4.7	1763-23-1-LN		
PFOS-BR*	99	47		ng/kg	4.7	1763-23-1-BR		
PFUnDA*	Not detected	47		ng/kg	4.7	2058-94-8		
PFNS*	Not detected	47		ng/kg	4.7	68259-12-1		
PFDoDA*	Not detected	47		ng/kg	4.7	307-55-1		
PFDS*	Not detected	47		ng/kg	4.7	335-77-3		
PFTTrDA*	Not detected	47		ng/kg	4.7	72629-94-8		
FOSA*	Not detected	47		ng/kg	4.7	754-91-6		
PFTeDA*	Not detected	47		ng/kg	4.7	376-06-7		
11Cl-PF3OUdS*	Not detected	47		ng/kg	4.7	763051-92-9		
9Cl-PF3ONS*	Not detected	47		ng/kg	4.7	756426-58-1		
ADONA*	Not detected	47		ng/kg	4.7	919005-14-4		
HFPO-DA*	Not detected	47		ng/kg	4.7	13252-13-6		
PFECHS*	Not detected	47		ng/kg	4.7	67584-42-3		
PFBSA*	Not detected	47		ng/kg	4.7	30334-69-1		
PFHxSA*	Not detected	47		ng/kg	4.7	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.04

Sample Tag: AOC11-TP01-W

Collected Date/Time: 12/13/2022 08:56

Matrix: Soil

COC Reference: 158705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.51/6.57/10	ASTM D7968-17M	01/04/23 11:11	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	92	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 19:15, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	110		ng/kg	5.6	375-22-4		
PFPeA*	Not detected	56		ng/kg	5.6	2706-90-3		
4:2 FTSA*	Not detected	56		ng/kg	5.6	757124-72-4		
PFHxA*	Not detected	56		ng/kg	5.6	307-24-4		
PFBS*	Not detected	56		ng/kg	5.6	375-73-5		
PFHpA*	Not detected	56		ng/kg	5.6	375-85-9		
PFPeS*	Not detected	56		ng/kg	5.6	2706-91-4		
6:2 FTSA*	Not detected	56		ng/kg	5.6	27619-97-2		
PFOA*	160	56		ng/kg	5.6	335-67-1		
PFHxS*	Not detected	56		ng/kg	5.6	355-46-4		
PFHxS-LN*	Not detected	56		ng/kg	5.6	355-46-4-LN		
PFHxS-BR*	Not detected	56		ng/kg	5.6	355-46-4-BR		
PFNA*	Not detected	56		ng/kg	5.6	375-95-1		
8:2 FTSA*	Not detected	56		ng/kg	5.6	39108-34-4		
PFHpS*	Not detected	56		ng/kg	5.6	375-92-8		
PFDA*	Not detected	56		ng/kg	5.6	335-76-2		
N-MeFOSAA*	Not detected	56		ng/kg	5.6	2355-31-9		
EtFOSAA*	Not detected	56		ng/kg	5.6	2991-50-6		
PFOS*	Not detected	56		ng/kg	5.6	1763-23-1		
PFOS-LN*	Not detected	56		ng/kg	5.6	1763-23-1-LN		
PFOS-BR*	Not detected	56		ng/kg	5.6	1763-23-1-BR		
PFUnDA*	Not detected	56		ng/kg	5.6	2058-94-8		
PFNS*	Not detected	56		ng/kg	5.6	68259-12-1		
PFDODA*	Not detected	56		ng/kg	5.6	307-55-1		
PFDS*	Not detected	56		ng/kg	5.6	335-77-3		
PFTTrDA*	Not detected	56		ng/kg	5.6	72629-94-8		
FOSA*	Not detected	56		ng/kg	5.6	754-91-6		
PFTeDA*	Not detected	56		ng/kg	5.6	376-06-7		
11Cl-PF3OUdS*	Not detected	56		ng/kg	5.6	763051-92-9		
9Cl-PF3ONS*	Not detected	56		ng/kg	5.6	756426-58-1		
ADONA*	Not detected	56		ng/kg	5.6	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.04 (continued)

Sample Tag: AOC11-TP01-W

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 19:15, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	56		ng/kg	5.6	13252-13-6		
PFECHS*	Not detected	56		ng/kg	5.6	67584-42-3		
PFBSA*	Not detected	56		ng/kg	5.6	30334-69-1		
PFHxSA*	Not detected	56		ng/kg	5.6	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.05

Sample Tag: AOC11-TP01-B

Collected Date/Time: 12/13/2022 09:35

Matrix: Soil

COC Reference: 158705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.03/6.49/10	ASTM D7968-17M	01/04/23 11:11	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	92	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 19:35, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	86		ng/kg	4.28	375-22-4		
PFPeA*	Not detected	43		ng/kg	4.28	2706-90-3		
4:2 FTSA*	Not detected	43		ng/kg	4.28	757124-72-4		
PFHxA*	Not detected	43		ng/kg	4.28	307-24-4		
PFBS*	Not detected	43		ng/kg	4.28	375-73-5		
PFHpA*	Not detected	43		ng/kg	4.28	375-85-9		
PFPeS*	Not detected	43		ng/kg	4.28	2706-91-4		
6:2 FTSA*	Not detected	43		ng/kg	4.28	27619-97-2		
PFOA*	68	43		ng/kg	4.28	335-67-1		
PFHxS*	Not detected	43		ng/kg	4.28	355-46-4		
PFHxS-LN*	Not detected	43		ng/kg	4.28	355-46-4-LN		
PFHxS-BR*	Not detected	43		ng/kg	4.28	355-46-4-BR		
PFNA*	Not detected	43		ng/kg	4.28	375-95-1		
8:2 FTSA*	Not detected	43		ng/kg	4.28	39108-34-4		
PFHpS*	Not detected	43		ng/kg	4.28	375-92-8		
PFDA*	Not detected	43		ng/kg	4.28	335-76-2		
N-MeFOSAA*	Not detected	43		ng/kg	4.28	2355-31-9		
EtFOSAA*	Not detected	43		ng/kg	4.28	2991-50-6		
PFOS*	300	43		ng/kg	4.28	1763-23-1		
PFOS-LN*	230	43		ng/kg	4.28	1763-23-1-LN		
PFOS-BR*	68	43		ng/kg	4.28	1763-23-1-BR		
PFUnDA*	Not detected	43		ng/kg	4.28	2058-94-8		
PFNS*	Not detected	43		ng/kg	4.28	68259-12-1		
PFDODA*	Not detected	43		ng/kg	4.28	307-55-1		
PFDS*	Not detected	43		ng/kg	4.28	335-77-3		
PFTTrDA*	Not detected	43		ng/kg	4.28	72629-94-8		
FOSA*	Not detected	43		ng/kg	4.28	754-91-6		
PFTeDA*	Not detected	43		ng/kg	4.28	376-06-7		
11Cl-PF3OUdS*	Not detected	43		ng/kg	4.28	763051-92-9		
9Cl-PF3ONS*	Not detected	43		ng/kg	4.28	756426-58-1		
ADONA*	Not detected	43		ng/kg	4.28	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.05 (continued)

Sample Tag: AOC11-TP01-B

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 19:35, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	43		ng/kg	4.28	13252-13-6		
PFECHS*	Not detected	43		ng/kg	4.28	67584-42-3		
PFBSA*	Not detected	43		ng/kg	4.28	30334-69-1		
PFHxSA*	Not detected	43		ng/kg	4.28	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.06

Sample Tag: DUP-03S

Collected Date/Time: 12/13/2022 00:01

Matrix: Soil

COC Reference: 158705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.30/6.50/10	ASTM D7968-17M	01/04/23 11:11	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	90	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 19:55, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	120		ng/kg	6.17	375-22-4		
PFPeA*	Not detected	62		ng/kg	6.17	2706-90-3		
4:2 FTSA*	Not detected	62		ng/kg	6.17	757124-72-4		
PFHxA*	Not detected	62		ng/kg	6.17	307-24-4		
PFBS*	Not detected	62		ng/kg	6.17	375-73-5		
PFHpA*	Not detected	62		ng/kg	6.17	375-85-9		
PFPeS*	Not detected	62		ng/kg	6.17	2706-91-4		
6:2 FTSA*	Not detected	62		ng/kg	6.17	27619-97-2		
PFOA*	64	62		ng/kg	6.17	335-67-1		
PFHxS*	Not detected	62		ng/kg	6.17	355-46-4		
PFHxS-LN*	Not detected	62		ng/kg	6.17	355-46-4-LN		
PFHxS-BR*	Not detected	62		ng/kg	6.17	355-46-4-BR		
PFNA*	Not detected	62		ng/kg	6.17	375-95-1		
8:2 FTSA*	Not detected	62		ng/kg	6.17	39108-34-4		
PFHpS*	Not detected	62		ng/kg	6.17	375-92-8		
PFDA*	Not detected	62		ng/kg	6.17	335-76-2		
N-MeFOSAA*	Not detected	62		ng/kg	6.17	2355-31-9		
EtFOSAA*	Not detected	62		ng/kg	6.17	2991-50-6		
PFOS*	330	62		ng/kg	6.17	1763-23-1		
PFOS-LN*	230	62		ng/kg	6.17	1763-23-1-LN		
PFOS-BR*	99	62		ng/kg	6.17	1763-23-1-BR		
PFUnDA*	Not detected	62		ng/kg	6.17	2058-94-8		
PFNS*	Not detected	62		ng/kg	6.17	68259-12-1		
PFDODA*	Not detected	62		ng/kg	6.17	307-55-1		
PFDS*	Not detected	62		ng/kg	6.17	335-77-3		
PFTTrDA*	Not detected	62		ng/kg	6.17	72629-94-8		
FOSA*	Not detected	62		ng/kg	6.17	754-91-6		
PFTeDA*	Not detected	62		ng/kg	6.17	376-06-7		
11Cl-PF3OUdS*	Not detected	62		ng/kg	6.17	763051-92-9		
9Cl-PF3ONS*	Not detected	62		ng/kg	6.17	756426-58-1		
ADONA*	Not detected	62		ng/kg	6.17	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.06 (continued)

Sample Tag: DUP-03S

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 19:55, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	62		ng/kg	6.17	13252-13-6		
PFECHS*	Not detected	62		ng/kg	6.17	67584-42-3		
PFBSA*	Not detected	62		ng/kg	6.17	30334-69-1		
PFHxSA*	Not detected	62		ng/kg	6.17	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.07

Sample Tag: AOC11-TP02-N

Collected Date/Time: 12/13/2022 10:16

Matrix: Soil

COC Reference: 158705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.59/6.55/10	ASTM D7968-17M	01/04/23 11:11	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	96	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 20:14, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	100		ng/kg	5.11	375-22-4		
PFPeA*	Not detected	51		ng/kg	5.11	2706-90-3		
4:2 FTSA*	Not detected	51		ng/kg	5.11	757124-72-4		
PFHxA*	Not detected	51		ng/kg	5.11	307-24-4		
PFBS*	Not detected	51		ng/kg	5.11	375-73-5		
PFHpA*	Not detected	51		ng/kg	5.11	375-85-9		
PFPeS*	Not detected	51		ng/kg	5.11	2706-91-4		
6:2 FTSA*	Not detected	51		ng/kg	5.11	27619-97-2		
PFOA*	Not detected	51		ng/kg	5.11	335-67-1		
PFHxS*	Not detected	51		ng/kg	5.11	355-46-4		
PFHxS-LN*	Not detected	51		ng/kg	5.11	355-46-4-LN		
PFHxS-BR*	Not detected	51		ng/kg	5.11	355-46-4-BR		
PFNA*	Not detected	51		ng/kg	5.11	375-95-1		
8:2 FTSA*	Not detected	51		ng/kg	5.11	39108-34-4		
PFHpS*	Not detected	51		ng/kg	5.11	375-92-8		
PFDA*	Not detected	51		ng/kg	5.11	335-76-2		
N-MeFOSAA*	Not detected	51		ng/kg	5.11	2355-31-9		
EtFOSAA*	Not detected	51		ng/kg	5.11	2991-50-6		
PFOS*	Not detected	51		ng/kg	5.11	1763-23-1		
PFOS-LN*	Not detected	51		ng/kg	5.11	1763-23-1-LN		
PFOS-BR*	Not detected	51		ng/kg	5.11	1763-23-1-BR		
PFUnDA*	Not detected	51		ng/kg	5.11	2058-94-8		
PFNS*	Not detected	51		ng/kg	5.11	68259-12-1		
PFDODA*	Not detected	51		ng/kg	5.11	307-55-1		
PFDS*	Not detected	51		ng/kg	5.11	335-77-3		
PFTTrDA*	Not detected	51		ng/kg	5.11	72629-94-8		
FOSA*	Not detected	51		ng/kg	5.11	754-91-6		
PFTeDA*	Not detected	51		ng/kg	5.11	376-06-7		
11Cl-PF3OUdS*	Not detected	51		ng/kg	5.11	763051-92-9		
9Cl-PF3ONS*	Not detected	51		ng/kg	5.11	756426-58-1		
ADONA*	Not detected	51		ng/kg	5.11	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.07 (continued)

Sample Tag: AOC11-TP02-N

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 20:14, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	51		ng/kg	5.11	13252-13-6		
PFECHS*	Not detected	51		ng/kg	5.11	67584-42-3		
PFBSA*	Not detected	51		ng/kg	5.11	30334-69-1		
PFHxSA*	Not detected	51		ng/kg	5.11	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.08

Sample Tag: AOC11-TP02-S

Collected Date/Time: 12/13/2022 10:33

Matrix: Soil

COC Reference: 158705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.58/6.52/10	ASTM D7968-17M	01/04/23 11:11	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 20:34, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	70		ng/kg	3.48	375-22-4		
PFPeA*	Not detected	35		ng/kg	3.48	2706-90-3		
4:2 FTSA*	Not detected	35		ng/kg	3.48	757124-72-4		
PFHxA*	Not detected	35		ng/kg	3.48	307-24-4		
PFBS*	Not detected	35		ng/kg	3.48	375-73-5		
PFHpA*	Not detected	35		ng/kg	3.48	375-85-9		
PFPeS*	Not detected	35		ng/kg	3.48	2706-91-4		
6:2 FTSA*	Not detected	35		ng/kg	3.48	27619-97-2		
PFOA*	100	35		ng/kg	3.48	335-67-1		
PFHxS*	Not detected	35		ng/kg	3.48	355-46-4		
PFHxS-LN*	Not detected	35		ng/kg	3.48	355-46-4-LN		
PFHxS-BR*	Not detected	35		ng/kg	3.48	355-46-4-BR		
PFNA*	Not detected	35		ng/kg	3.48	375-95-1		
8:2 FTSA*	Not detected	35		ng/kg	3.48	39108-34-4		
PFHpS*	Not detected	35		ng/kg	3.48	375-92-8		
PFDA*	Not detected	35		ng/kg	3.48	335-76-2		
N-MeFOSAA*	Not detected	35		ng/kg	3.48	2355-31-9		
EtFOSAA*	Not detected	35		ng/kg	3.48	2991-50-6		
PFOS*	160	35		ng/kg	3.48	1763-23-1		
PFOS-LN*	93	35		ng/kg	3.48	1763-23-1-LN		
PFOS-BR*	71	35		ng/kg	3.48	1763-23-1-BR		
PFUnDA*	Not detected	35		ng/kg	3.48	2058-94-8		
PFNS*	Not detected	35		ng/kg	3.48	68259-12-1		
PFDODA*	Not detected	35		ng/kg	3.48	307-55-1		
PFDS*	Not detected	35		ng/kg	3.48	335-77-3		
PFTTrDA*	Not detected	35		ng/kg	3.48	72629-94-8		
FOSA*	Not detected	35		ng/kg	3.48	754-91-6		
PFTeDA*	Not detected	35		ng/kg	3.48	376-06-7		
11Cl-PF3OUdS*	Not detected	35		ng/kg	3.48	763051-92-9		
9Cl-PF3ONS*	Not detected	35		ng/kg	3.48	756426-58-1		
ADONA*	Not detected	35		ng/kg	3.48	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.08 (continued)

Sample Tag: AOC11-TP02-S

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 20:34, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	35		ng/kg	3.48	13252-13-6		
PFECHS*	Not detected	35		ng/kg	3.48	67584-42-3		
PFBSA*	Not detected	35		ng/kg	3.48	30334-69-1		
PFHxSA*	Not detected	35		ng/kg	3.48	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.09

Sample Tag: AOC11-TP02-E

Collected Date/Time: 12/13/2022 10:43

Matrix: Soil

COC Reference: 158705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.71/6.54/10	ASTM D7968-17M	01/04/23 11:11	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 20:53, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	98		ng/kg	4.9	375-22-4		
PFPeA*	Not detected	49		ng/kg	4.9	2706-90-3		
4:2 FTSA*	Not detected	49		ng/kg	4.9	757124-72-4		
PFHxA*	Not detected	49		ng/kg	4.9	307-24-4		
PFBS*	Not detected	49		ng/kg	4.9	375-73-5		
PFHpA*	Not detected	49		ng/kg	4.9	375-85-9		
PFPeS*	Not detected	49		ng/kg	4.9	2706-91-4		
6:2 FTSA*	Not detected	49		ng/kg	4.9	27619-97-2		
PFOA*	Not detected	49		ng/kg	4.9	335-67-1		
PFHxS*	Not detected	49		ng/kg	4.9	355-46-4		
PFHxS-LN*	Not detected	49		ng/kg	4.9	355-46-4-LN		
PFHxS-BR*	Not detected	49		ng/kg	4.9	355-46-4-BR		
PFNA*	Not detected	49		ng/kg	4.9	375-95-1		
8:2 FTSA*	Not detected	49		ng/kg	4.9	39108-34-4		
PFHpS*	Not detected	49		ng/kg	4.9	375-92-8		
PFDA*	Not detected	49		ng/kg	4.9	335-76-2		
N-MeFOSAA*	Not detected	49		ng/kg	4.9	2355-31-9		
EtFOSAA*	Not detected	49		ng/kg	4.9	2991-50-6		
PFOS*	Not detected	49		ng/kg	4.9	1763-23-1		
PFOS-LN*	Not detected	49		ng/kg	4.9	1763-23-1-LN		
PFOS-BR*	Not detected	49		ng/kg	4.9	1763-23-1-BR		
PFUnDA*	Not detected	49		ng/kg	4.9	2058-94-8		
PFNS*	Not detected	49		ng/kg	4.9	68259-12-1		
PFDODA*	Not detected	49		ng/kg	4.9	307-55-1		
PFDS*	Not detected	49		ng/kg	4.9	335-77-3		
PFTTrDA*	Not detected	49		ng/kg	4.9	72629-94-8		
FOSA*	Not detected	49		ng/kg	4.9	754-91-6		
PFTeDA*	Not detected	49		ng/kg	4.9	376-06-7		
11Cl-PF3OUdS*	Not detected	49		ng/kg	4.9	763051-92-9		
9Cl-PF3ONS*	Not detected	49		ng/kg	4.9	756426-58-1		
ADONA*	Not detected	49		ng/kg	4.9	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.09 (continued)

Sample Tag: AOC11-TP02-E

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 20:53, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	49		ng/kg	4.9	13252-13-6		
PFECHS*	Not detected	49		ng/kg	4.9	67584-42-3		
PFBSA*	Not detected	49		ng/kg	4.9	30334-69-1		
PFHxSA*	Not detected	49		ng/kg	4.9	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.10

Sample Tag: AOC11-TP02-W

Collected Date/Time: 12/13/2022 10:43

Matrix: Soil

COC Reference: 158705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.45/6.56/10	ASTM D7968-17M	01/04/23 11:11	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	96	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 21:13, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	72		ng/kg	3.6	375-22-4		
PFPeA*	Not detected	36		ng/kg	3.6	2706-90-3		
4:2 FTSA*	Not detected	36		ng/kg	3.6	757124-72-4		
PFHxA*	Not detected	36		ng/kg	3.6	307-24-4		
PFBS*	Not detected	36		ng/kg	3.6	375-73-5		
PFHpA*	Not detected	36		ng/kg	3.6	375-85-9		
PFPeS*	Not detected	36		ng/kg	3.6	2706-91-4		
6:2 FTSA*	Not detected	36		ng/kg	3.6	27619-97-2		
PFOA*	130	36		ng/kg	3.6	335-67-1		
PFHxS*	Not detected	36		ng/kg	3.6	355-46-4		
PFHxS-LN*	Not detected	36		ng/kg	3.6	355-46-4-LN		
PFHxS-BR*	Not detected	36		ng/kg	3.6	355-46-4-BR		
PFNA*	Not detected	36		ng/kg	3.6	375-95-1		
8:2 FTSA*	Not detected	36		ng/kg	3.6	39108-34-4		
PFHpS*	Not detected	36		ng/kg	3.6	375-92-8		
PFDA*	Not detected	36		ng/kg	3.6	335-76-2		
N-MeFOSAA*	Not detected	36		ng/kg	3.6	2355-31-9		
EtFOSAA*	Not detected	36		ng/kg	3.6	2991-50-6		
PFOS*	Not detected	36		ng/kg	3.6	1763-23-1		
PFOS-LN*	Not detected	36		ng/kg	3.6	1763-23-1-LN		
PFOS-BR*	Not detected	36		ng/kg	3.6	1763-23-1-BR		
PFUnDA*	Not detected	36		ng/kg	3.6	2058-94-8		
PFNS*	Not detected	36		ng/kg	3.6	68259-12-1		
PFDODA*	Not detected	36		ng/kg	3.6	307-55-1		
PFDS*	Not detected	36		ng/kg	3.6	335-77-3		
PFTTrDA*	Not detected	36		ng/kg	3.6	72629-94-8		
FOSA*	Not detected	36		ng/kg	3.6	754-91-6		
PFTeDA*	Not detected	36		ng/kg	3.6	376-06-7		
11Cl-PF3OUdS*	Not detected	36		ng/kg	3.6	763051-92-9		
9Cl-PF3ONS*	Not detected	36		ng/kg	3.6	756426-58-1		
ADONA*	Not detected	36		ng/kg	3.6	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.10 (continued)

Sample Tag: AOC11-TP02-W

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 21:13, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	36		ng/kg	3.6	13252-13-6		
PFECHS*	Not detected	36		ng/kg	3.6	67584-42-3		
PFBSA*	Not detected	36		ng/kg	3.6	30334-69-1		
PFHxSA*	Not detected	36		ng/kg	3.6	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.11

Sample Tag: AOC11-TP02-B

Collected Date/Time: 12/13/2022 11:18

Matrix: Soil

COC Reference: 158705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.94/6.57/10	ASTM D7968-17M	01/04/23 11:11	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 21:32, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	90		ng/kg	4.49	375-22-4		
PFPeA*	Not detected	45		ng/kg	4.49	2706-90-3		
4:2 FTSA*	Not detected	45		ng/kg	4.49	757124-72-4		
PFHxA*	Not detected	45		ng/kg	4.49	307-24-4		
PFBS*	Not detected	45		ng/kg	4.49	375-73-5		
PFHpA*	Not detected	45		ng/kg	4.49	375-85-9		
PFPeS*	Not detected	45		ng/kg	4.49	2706-91-4		
6:2 FTSA*	Not detected	45		ng/kg	4.49	27619-97-2		
PFOA*	61	45		ng/kg	4.49	335-67-1		
PFHxS*	Not detected	45		ng/kg	4.49	355-46-4		
PFHxS-LN*	Not detected	45		ng/kg	4.49	355-46-4-LN		
PFHxS-BR*	Not detected	45		ng/kg	4.49	355-46-4-BR		
PFNA*	Not detected	45		ng/kg	4.49	375-95-1		
8:2 FTSA*	Not detected	45		ng/kg	4.49	39108-34-4		
PFHpS*	Not detected	45		ng/kg	4.49	375-92-8		
PFDA*	Not detected	45		ng/kg	4.49	335-76-2		
N-MeFOSAA*	Not detected	45		ng/kg	4.49	2355-31-9		
EtFOSAA*	Not detected	45		ng/kg	4.49	2991-50-6		
PFOS*	140	45		ng/kg	4.49	1763-23-1		
PFOS-LN*	93	45		ng/kg	4.49	1763-23-1-LN		
PFOS-BR*	48	45		ng/kg	4.49	1763-23-1-BR		
PFUnDA*	Not detected	45		ng/kg	4.49	2058-94-8		
PFNS*	Not detected	45		ng/kg	4.49	68259-12-1		
PFDODA*	Not detected	45		ng/kg	4.49	307-55-1		
PFDS*	Not detected	45		ng/kg	4.49	335-77-3		
PFTTrDA*	Not detected	45		ng/kg	4.49	72629-94-8		
FOSA*	Not detected	45		ng/kg	4.49	754-91-6		
PFTeDA*	Not detected	45		ng/kg	4.49	376-06-7		
11Cl-PF3OUdS*	Not detected	45		ng/kg	4.49	763051-92-9		
9Cl-PF3ONS*	Not detected	45		ng/kg	4.49	756426-58-1		
ADONA*	Not detected	45		ng/kg	4.49	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.11 (continued)

Sample Tag: AOC11-TP02-B

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 21:32, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	45		ng/kg	4.49	13252-13-6		
PFECHS*	Not detected	45		ng/kg	4.49	67584-42-3		
PFBSA*	Not detected	45		ng/kg	4.49	30334-69-1		
PFHxSA*	Not detected	45		ng/kg	4.49	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.12

Sample Tag: DUP-04S

Collected Date/Time: 12/13/2022 00:01

Matrix: Soil

COC Reference: 158705

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.07/6.47/10	ASTM D7968-17M	01/04/23 11:11	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 21:52, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	81		ng/kg	4.05	375-22-4		
PFPeA*	Not detected	41		ng/kg	4.05	2706-90-3		
4:2 FTSA*	Not detected	41		ng/kg	4.05	757124-72-4		
PFHxA*	Not detected	41		ng/kg	4.05	307-24-4		
PFBS*	Not detected	41		ng/kg	4.05	375-73-5		
PFHpA*	Not detected	41		ng/kg	4.05	375-85-9		
PFPeS*	Not detected	41		ng/kg	4.05	2706-91-4		
6:2 FTSA*	Not detected	41		ng/kg	4.05	27619-97-2		
PFOA*	42	41		ng/kg	4.05	335-67-1		
PFHxS*	Not detected	41		ng/kg	4.05	355-46-4		
PFHxS-LN*	Not detected	41		ng/kg	4.05	355-46-4-LN		
PFHxS-BR*	Not detected	41		ng/kg	4.05	355-46-4-BR		
PFNA*	Not detected	41		ng/kg	4.05	375-95-1		
8:2 FTSA*	Not detected	41		ng/kg	4.05	39108-34-4		
PFHpS*	Not detected	41		ng/kg	4.05	375-92-8		
PFDA*	Not detected	41		ng/kg	4.05	335-76-2		
N-MeFOSAA*	Not detected	41		ng/kg	4.05	2355-31-9		
EtFOSAA*	Not detected	41		ng/kg	4.05	2991-50-6		
PFOS*	42	41		ng/kg	4.05	1763-23-1		
PFOS-LN*	Not detected	41		ng/kg	4.05	1763-23-1-LN		
PFOS-BR*	Not detected	41		ng/kg	4.05	1763-23-1-BR		
PFUnDA*	Not detected	41		ng/kg	4.05	2058-94-8		
PFNS*	Not detected	41		ng/kg	4.05	68259-12-1		
PFDODA*	Not detected	41		ng/kg	4.05	307-55-1		
PFDS*	Not detected	41		ng/kg	4.05	335-77-3		
PFTTrDA*	Not detected	41		ng/kg	4.05	72629-94-8		
FOSA*	Not detected	41		ng/kg	4.05	754-91-6		
PFTeDA*	Not detected	41		ng/kg	4.05	376-06-7		
11Cl-PF3OUdS*	Not detected	41		ng/kg	4.05	763051-92-9		
9Cl-PF3ONS*	Not detected	41		ng/kg	4.05	756426-58-1		
ADONA*	Not detected	41		ng/kg	4.05	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.12 (continued)

Sample Tag: DUP-04S

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 21:52, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	41		ng/kg	4.05	13252-13-6		
PFECHS*	Not detected	41		ng/kg	4.05	67584-42-3		
PFBSA*	Not detected	41		ng/kg	4.05	30334-69-1		
PFHxSA*	Not detected	41		ng/kg	4.05	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.13

Sample Tag: AOC11-TP03-N

Collected Date/Time: 12/13/2022 12:30

Matrix: Soil

COC Reference: 158706

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.10/6.47/10	ASTM D7968-17M	01/04/23 11:11	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	93	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 22:11, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	130		ng/kg	6.6	375-22-4		
PFPeA*	Not detected	66		ng/kg	6.6	2706-90-3		
4:2 FTSA*	Not detected	66		ng/kg	6.6	757124-72-4		
PFHxA*	Not detected	66		ng/kg	6.6	307-24-4		
PFBS*	Not detected	66		ng/kg	6.6	375-73-5		
PFHpA*	Not detected	66		ng/kg	6.6	375-85-9		
PFPeS*	Not detected	66		ng/kg	6.6	2706-91-4		
6:2 FTSA*	Not detected	66		ng/kg	6.6	27619-97-2		
PFOA*	Not detected	66		ng/kg	6.6	335-67-1		
PFHxS*	Not detected	66		ng/kg	6.6	355-46-4		
PFHxS-LN*	Not detected	66		ng/kg	6.6	355-46-4-LN		
PFHxS-BR*	Not detected	66		ng/kg	6.6	355-46-4-BR		
PFNA*	Not detected	66		ng/kg	6.6	375-95-1		
8:2 FTSA*	Not detected	66		ng/kg	6.6	39108-34-4		
PFHpS*	Not detected	66		ng/kg	6.6	375-92-8		
PFDA*	Not detected	66		ng/kg	6.6	335-76-2		
N-MeFOSAA*	Not detected	66		ng/kg	6.6	2355-31-9		
EtFOSAA*	Not detected	66		ng/kg	6.6	2991-50-6		
PFOS*	78	66		ng/kg	6.6	1763-23-1		
PFOS-LN*	Not detected	66		ng/kg	6.6	1763-23-1-LN		
PFOS-BR*	Not detected	66		ng/kg	6.6	1763-23-1-BR		
PFUnDA*	Not detected	66		ng/kg	6.6	2058-94-8		
PFNS*	Not detected	66		ng/kg	6.6	68259-12-1		
PFDODA*	Not detected	66		ng/kg	6.6	307-55-1		
PFDS*	Not detected	66		ng/kg	6.6	335-77-3		
PFTTrDA*	Not detected	66		ng/kg	6.6	72629-94-8		
FOSA*	Not detected	66		ng/kg	6.6	754-91-6		
PFTeDA*	Not detected	66		ng/kg	6.6	376-06-7		
11Cl-PF3OUdS*	Not detected	66		ng/kg	6.6	763051-92-9		
9Cl-PF3ONS*	Not detected	66		ng/kg	6.6	756426-58-1		
ADONA*	Not detected	66		ng/kg	6.6	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.13 (continued)

Sample Tag: AOC11-TP03-N

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 22:11, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	66		ng/kg	6.6	13252-13-6		
PFECHS*	Not detected	66		ng/kg	6.6	67584-42-3		
PFBSA*	Not detected	66		ng/kg	6.6	30334-69-1		
PFHxSA*	Not detected	66		ng/kg	6.6	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.14

Sample Tag: AOC11-TP03-S

Collected Date/Time: 12/13/2022 12:45

Matrix: Soil

COC Reference: 158706

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.05/6.54/10	ASTM D7968-17M	01/04/23 11:11	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 22:31, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	85		ng/kg	4.24	375-22-4		
PFPeA*	Not detected	42		ng/kg	4.24	2706-90-3		
4:2 FTSA*	Not detected	42		ng/kg	4.24	757124-72-4		
PFHxA*	Not detected	42		ng/kg	4.24	307-24-4		
PFBS*	Not detected	42		ng/kg	4.24	375-73-5		
PFHpA*	Not detected	42		ng/kg	4.24	375-85-9		
PFPeS*	Not detected	42		ng/kg	4.24	2706-91-4		
6:2 FTSA*	Not detected	42		ng/kg	4.24	27619-97-2		
PFOA*	Not detected	42		ng/kg	4.24	335-67-1		
PFHxS*	Not detected	42		ng/kg	4.24	355-46-4		
PFHxS-LN*	Not detected	42		ng/kg	4.24	355-46-4-LN		
PFHxS-BR*	Not detected	42		ng/kg	4.24	355-46-4-BR		
PFNA*	Not detected	42		ng/kg	4.24	375-95-1		
8:2 FTSA*	Not detected	42		ng/kg	4.24	39108-34-4		
PFHpS*	Not detected	42		ng/kg	4.24	375-92-8		
PFDA*	Not detected	42		ng/kg	4.24	335-76-2		
N-MeFOSAA*	Not detected	42		ng/kg	4.24	2355-31-9		
EtFOSAA*	Not detected	42		ng/kg	4.24	2991-50-6		
PFOS*	48	42		ng/kg	4.24	1763-23-1		
PFOS-LN*	Not detected	42		ng/kg	4.24	1763-23-1-LN		
PFOS-BR*	Not detected	42		ng/kg	4.24	1763-23-1-BR		
PFUnDA*	Not detected	42		ng/kg	4.24	2058-94-8		
PFNS*	Not detected	42		ng/kg	4.24	68259-12-1		
PFDODA*	Not detected	42		ng/kg	4.24	307-55-1		
PFDS*	Not detected	42		ng/kg	4.24	335-77-3		
PFTTrDA*	Not detected	42		ng/kg	4.24	72629-94-8		
FOSA*	Not detected	42		ng/kg	4.24	754-91-6		
PFTeDA*	Not detected	42		ng/kg	4.24	376-06-7		
11Cl-PF3OUdS*	Not detected	42		ng/kg	4.24	763051-92-9		
9Cl-PF3ONS*	Not detected	42		ng/kg	4.24	756426-58-1		
ADONA*	Not detected	42		ng/kg	4.24	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.14 (continued)

Sample Tag: AOC11-TP03-S

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 22:31, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	42		ng/kg	4.24	13252-13-6		
PFECHS*	Not detected	42		ng/kg	4.24	67584-42-3		
PFBSA*	Not detected	42		ng/kg	4.24	30334-69-1		
PFHxSA*	Not detected	42		ng/kg	4.24	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.15

Sample Tag: AOC11-TP03-E

Collected Date/Time: 12/13/2022 13:00

Matrix: Soil

COC Reference: 158706

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	7.91/6.45/10	ASTM D7968-17M	01/04/23 11:11	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 22:50, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	150		ng/kg	7.29	375-22-4		
PFPeA*	Not detected	73		ng/kg	7.29	2706-90-3		
4:2 FTSA*	Not detected	73		ng/kg	7.29	757124-72-4		
PFHxA*	Not detected	73		ng/kg	7.29	307-24-4		
PFBS*	Not detected	73		ng/kg	7.29	375-73-5		
PFHpA*	Not detected	73		ng/kg	7.29	375-85-9		
PFPeS*	Not detected	73		ng/kg	7.29	2706-91-4		
6:2 FTSA*	Not detected	73		ng/kg	7.29	27619-97-2		
PFOA*	Not detected	73		ng/kg	7.29	335-67-1		
PFHxS*	Not detected	73		ng/kg	7.29	355-46-4		
PFHxS-LN*	Not detected	73		ng/kg	7.29	355-46-4-LN		
PFHxS-BR*	Not detected	73		ng/kg	7.29	355-46-4-BR		
PFNA*	Not detected	73		ng/kg	7.29	375-95-1		
8:2 FTSA*	Not detected	73		ng/kg	7.29	39108-34-4		
PFHpS*	Not detected	73		ng/kg	7.29	375-92-8		
PFDA*	Not detected	73		ng/kg	7.29	335-76-2		
N-MeFOSAA*	Not detected	73		ng/kg	7.29	2355-31-9		
EtFOSAA*	Not detected	73		ng/kg	7.29	2991-50-6		
PFOS*	Not detected	73		ng/kg	7.29	1763-23-1		
PFOS-LN*	Not detected	73		ng/kg	7.29	1763-23-1-LN		
PFOS-BR*	Not detected	73		ng/kg	7.29	1763-23-1-BR		
PFUnDA*	Not detected	73		ng/kg	7.29	2058-94-8		
PFNS*	Not detected	73		ng/kg	7.29	68259-12-1		
PFDODA*	Not detected	73		ng/kg	7.29	307-55-1		
PFDS*	Not detected	73		ng/kg	7.29	335-77-3		
PFTTrDA*	Not detected	73		ng/kg	7.29	72629-94-8		
FOSA*	Not detected	73		ng/kg	7.29	754-91-6		
PFTeDA*	Not detected	73		ng/kg	7.29	376-06-7		
11Cl-PF3OUdS*	Not detected	73		ng/kg	7.29	763051-92-9		
9Cl-PF3ONS*	Not detected	73		ng/kg	7.29	756426-58-1		
ADONA*	Not detected	73		ng/kg	7.29	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.15 (continued)

Sample Tag: AOC11-TP03-E

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 22:50, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	73		ng/kg	7.29	13252-13-6		
PFECHS*	Not detected	73		ng/kg	7.29	67584-42-3		
PFBSA*	Not detected	73		ng/kg	7.29	30334-69-1		
PFHxSA*	Not detected	73		ng/kg	7.29	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.16

Sample Tag: AOC11-TP03-W

Collected Date/Time: 12/13/2022 13:00

Matrix: Soil

COC Reference: 158706

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.47/6.57/10	ASTM D7968-17M	01/04/23 11:11	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	93	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 23:10, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	110		ng/kg	5.66	375-22-4		
PFPeA*	Not detected	57		ng/kg	5.66	2706-90-3		
4:2 FTSA*	Not detected	57		ng/kg	5.66	757124-72-4		
PFHxA*	Not detected	57		ng/kg	5.66	307-24-4		
PFBS*	Not detected	57		ng/kg	5.66	375-73-5		
PFHpA*	Not detected	57		ng/kg	5.66	375-85-9		
PFPeS*	Not detected	57		ng/kg	5.66	2706-91-4		
6:2 FTSA*	Not detected	57		ng/kg	5.66	27619-97-2		
PFOA*	76	57		ng/kg	5.66	335-67-1		
PFHxS*	Not detected	57		ng/kg	5.66	355-46-4		
PFHxS-LN*	Not detected	57		ng/kg	5.66	355-46-4-LN		
PFHxS-BR*	Not detected	57		ng/kg	5.66	355-46-4-BR		
PFNA*	Not detected	57		ng/kg	5.66	375-95-1		
8:2 FTSA*	Not detected	57		ng/kg	5.66	39108-34-4		
PFHpS*	Not detected	57		ng/kg	5.66	375-92-8		
PFDA*	Not detected	57		ng/kg	5.66	335-76-2		
N-MeFOSAA*	Not detected	57		ng/kg	5.66	2355-31-9		
EtFOSAA*	Not detected	57		ng/kg	5.66	2991-50-6		
PFOS*	62	57		ng/kg	5.66	1763-23-1		
PFOS-LN*	Not detected	57		ng/kg	5.66	1763-23-1-LN		
PFOS-BR*	Not detected	57		ng/kg	5.66	1763-23-1-BR		
PFUnDA*	Not detected	57		ng/kg	5.66	2058-94-8		
PFNS*	Not detected	57		ng/kg	5.66	68259-12-1		
PFDODA*	Not detected	57		ng/kg	5.66	307-55-1		
PFDS*	Not detected	57		ng/kg	5.66	335-77-3		
PFTTrDA*	Not detected	57		ng/kg	5.66	72629-94-8		
FOSA*	Not detected	57		ng/kg	5.66	754-91-6		
PFTeDA*	Not detected	57		ng/kg	5.66	376-06-7		
11Cl-PF3OUdS*	Not detected	57		ng/kg	5.66	763051-92-9		
9Cl-PF3ONS*	Not detected	57		ng/kg	5.66	756426-58-1		
ADONA*	Not detected	57		ng/kg	5.66	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.16 (continued)

Sample Tag: AOC11-TP03-W

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 23:10, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	57		ng/kg	5.66	13252-13-6		
PFECHS*	Not detected	57		ng/kg	5.66	67584-42-3		
PFBSA*	Not detected	57		ng/kg	5.66	30334-69-1		
PFHxSA*	Not detected	57		ng/kg	5.66	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.17

Sample Tag: AOC11-TP03-B

Collected Date/Time: 12/13/2022 13:30

Matrix: Soil

COC Reference: 158706

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.51/6.50/10	ASTM D7968-17M	01/04/23 11:11	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	90	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 23:29, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	110		ng/kg	5.53	375-22-4		
PFPeA*	Not detected	55		ng/kg	5.53	2706-90-3		
4:2 FTSA*	Not detected	55		ng/kg	5.53	757124-72-4		
PFHxA*	Not detected	55		ng/kg	5.53	307-24-4		
PFBS*	Not detected	55		ng/kg	5.53	375-73-5		
PFHpA*	Not detected	55		ng/kg	5.53	375-85-9		
PFPeS*	Not detected	55		ng/kg	5.53	2706-91-4		
6:2 FTSA*	Not detected	55		ng/kg	5.53	27619-97-2		
PFOA*	Not detected	55		ng/kg	5.53	335-67-1		
PFHxS*	Not detected	55		ng/kg	5.53	355-46-4		
PFHxS-LN*	Not detected	55		ng/kg	5.53	355-46-4-LN		
PFHxS-BR*	Not detected	55		ng/kg	5.53	355-46-4-BR		
PFNA*	Not detected	55		ng/kg	5.53	375-95-1		
8:2 FTSA*	Not detected	55		ng/kg	5.53	39108-34-4		
PFHpS*	Not detected	55		ng/kg	5.53	375-92-8		
PFDA*	Not detected	55		ng/kg	5.53	335-76-2		
N-MeFOSAA*	Not detected	55		ng/kg	5.53	2355-31-9		
EtFOSAA*	Not detected	55		ng/kg	5.53	2991-50-6		
PFOS*	Not detected	55		ng/kg	5.53	1763-23-1		
PFOS-LN*	Not detected	55		ng/kg	5.53	1763-23-1-LN		
PFOS-BR*	Not detected	55		ng/kg	5.53	1763-23-1-BR		
PFUnDA*	Not detected	55		ng/kg	5.53	2058-94-8		
PFNS*	Not detected	55		ng/kg	5.53	68259-12-1		
PFDODA*	Not detected	55		ng/kg	5.53	307-55-1		
PFDS*	Not detected	55		ng/kg	5.53	335-77-3		
PFTTrDA*	Not detected	55		ng/kg	5.53	72629-94-8		
FOSA*	Not detected	55		ng/kg	5.53	754-91-6		
PFTeDA*	Not detected	55		ng/kg	5.53	376-06-7		
11Cl-PF3OUdS*	Not detected	55		ng/kg	5.53	763051-92-9		
9Cl-PF3ONS*	Not detected	55		ng/kg	5.53	756426-58-1		
ADONA*	Not detected	55		ng/kg	5.53	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.17 (continued)

Sample Tag: AOC11-TP03-B

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 23:29, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	55		ng/kg	5.53	13252-13-6		
PFECHS*	Not detected	55		ng/kg	5.53	67584-42-3		
PFBSA*	Not detected	55		ng/kg	5.53	30334-69-1		
PFHxSA*	Not detected	55		ng/kg	5.53	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.18

Sample Tag: DUP-05S

Collected Date/Time: 12/13/2022 00:01

Matrix: Soil

COC Reference: 158706

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.31/6.48/10	ASTM D7968-17M	01/04/23 11:11	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 23:49, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	120		ng/kg	5.81	375-22-4		
PFPeA*	Not detected	58		ng/kg	5.81	2706-90-3		
4:2 FTSA*	Not detected	58		ng/kg	5.81	757124-72-4		
PFHxA*	Not detected	58		ng/kg	5.81	307-24-4		
PFBS*	Not detected	58		ng/kg	5.81	375-73-5		
PFHpA*	Not detected	58		ng/kg	5.81	375-85-9		
PFPeS*	Not detected	58		ng/kg	5.81	2706-91-4		
6:2 FTSA*	Not detected	58		ng/kg	5.81	27619-97-2		
PFOA*	Not detected	58		ng/kg	5.81	335-67-1		
PFHxS*	Not detected	58		ng/kg	5.81	355-46-4		
PFHxS-LN*	Not detected	58		ng/kg	5.81	355-46-4-LN		
PFHxS-BR*	Not detected	58		ng/kg	5.81	355-46-4-BR		
PFNA*	Not detected	58		ng/kg	5.81	375-95-1		
8:2 FTSA*	Not detected	58		ng/kg	5.81	39108-34-4		
PFHpS*	Not detected	58		ng/kg	5.81	375-92-8		
PFDA*	Not detected	58		ng/kg	5.81	335-76-2		
N-MeFOSAA*	Not detected	58		ng/kg	5.81	2355-31-9		
EtFOSAA*	Not detected	58		ng/kg	5.81	2991-50-6		
PFOS*	Not detected	58		ng/kg	5.81	1763-23-1		
PFOS-LN*	Not detected	58		ng/kg	5.81	1763-23-1-LN		
PFOS-BR*	Not detected	58		ng/kg	5.81	1763-23-1-BR		
PFUnDA*	Not detected	58		ng/kg	5.81	2058-94-8		
PFNS*	Not detected	58		ng/kg	5.81	68259-12-1		
PFDODA*	Not detected	58		ng/kg	5.81	307-55-1		
PFDS*	Not detected	58		ng/kg	5.81	335-77-3		
PFTTrDA*	Not detected	58		ng/kg	5.81	72629-94-8		
FOSA*	Not detected	58		ng/kg	5.81	754-91-6		
PFTeDA*	Not detected	58		ng/kg	5.81	376-06-7		
11Cl-PF3OUdS*	Not detected	58		ng/kg	5.81	763051-92-9		
9Cl-PF3ONS*	Not detected	58		ng/kg	5.81	756426-58-1		
ADONA*	Not detected	58		ng/kg	5.81	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.18 (continued)

Sample Tag: DUP-05S

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 23:49, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	58		ng/kg	5.81	13252-13-6		
PFECHS*	Not detected	58		ng/kg	5.81	67584-42-3		
PFBSA*	Not detected	58		ng/kg	5.81	30334-69-1		
PFHxSA*	Not detected	58		ng/kg	5.81	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.19

Sample Tag: AOC11-TP04-N

Collected Date/Time: 12/13/2022 14:10

Matrix: Soil

COC Reference: 158706

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.20/6.58/10	ASTM D7968-17M	01/04/23 11:11	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	92	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/05/23 00:08, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	130		ng/kg	6.71	375-22-4		
PFPeA*	Not detected	67		ng/kg	6.71	2706-90-3		
4:2 FTSA*	Not detected	67		ng/kg	6.71	757124-72-4		
PFHxA*	Not detected	67		ng/kg	6.71	307-24-4		
PFBS*	Not detected	67		ng/kg	6.71	375-73-5		
PFHpA*	Not detected	67		ng/kg	6.71	375-85-9		
PFPeS*	Not detected	67		ng/kg	6.71	2706-91-4		
6:2 FTSA*	Not detected	67		ng/kg	6.71	27619-97-2		
PFOA*	120	67		ng/kg	6.71	335-67-1		
PFHxS*	Not detected	67		ng/kg	6.71	355-46-4		
PFHxS-LN*	Not detected	67		ng/kg	6.71	355-46-4-LN		
PFHxS-BR*	Not detected	67		ng/kg	6.71	355-46-4-BR		
PFNA*	Not detected	67		ng/kg	6.71	375-95-1		
8:2 FTSA*	Not detected	67		ng/kg	6.71	39108-34-4		
PFHpS*	Not detected	67		ng/kg	6.71	375-92-8		
PFDA*	Not detected	67		ng/kg	6.71	335-76-2		
N-MeFOSAA*	Not detected	67		ng/kg	6.71	2355-31-9		
EtFOSAA*	Not detected	67		ng/kg	6.71	2991-50-6		
PFOS*	570	67		ng/kg	6.71	1763-23-1		
PFOS-LN*	450	67		ng/kg	6.71	1763-23-1-LN		
PFOS-BR*	120	67		ng/kg	6.71	1763-23-1-BR		
PFUnDA*	Not detected	67		ng/kg	6.71	2058-94-8		
PFNS*	Not detected	67		ng/kg	6.71	68259-12-1		
PFDODA*	Not detected	67		ng/kg	6.71	307-55-1		
PFDS*	Not detected	67		ng/kg	6.71	335-77-3		
PFTTrDA*	Not detected	67		ng/kg	6.71	72629-94-8		
FOSA*	Not detected	67		ng/kg	6.71	754-91-6		
PFTeDA*	Not detected	67		ng/kg	6.71	376-06-7		
11Cl-PF3OUdS*	Not detected	67		ng/kg	6.71	763051-92-9		
9Cl-PF3ONS*	Not detected	67		ng/kg	6.71	756426-58-1		
ADONA*	Not detected	67		ng/kg	6.71	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.19 (continued)

Sample Tag: AOC11-TP04-N

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/05/23 00:08, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	67		ng/kg	6.71	13252-13-6		
PFECHS*	Not detected	67		ng/kg	6.71	67584-42-3		
PFBSA*	Not detected	67		ng/kg	6.71	30334-69-1		
PFHxSA*	Not detected	67		ng/kg	6.71	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.20

Sample Tag: AOC11-TP04-S

Collected Date/Time: 12/13/2022 14:15

Matrix: Soil

COC Reference: 158706

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	7.97/6.59/10	ASTM D7968-17M	01/04/23 11:11	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	93	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/05/23 00:28, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	160		ng/kg	7.79	375-22-4		
PFPeA*	Not detected	78		ng/kg	7.79	2706-90-3		
4:2 FTSA*	Not detected	78		ng/kg	7.79	757124-72-4		
PFHxA*	Not detected	78		ng/kg	7.79	307-24-4		
PFBS*	Not detected	78		ng/kg	7.79	375-73-5		
PFHpA*	Not detected	78		ng/kg	7.79	375-85-9		
PFPeS*	Not detected	78		ng/kg	7.79	2706-91-4		
6:2 FTSA*	Not detected	78		ng/kg	7.79	27619-97-2		
PFOA*	Not detected	78		ng/kg	7.79	335-67-1		
PFHxS*	Not detected	78		ng/kg	7.79	355-46-4		
PFHxS-LN*	Not detected	78		ng/kg	7.79	355-46-4-LN		
PFHxS-BR*	Not detected	78		ng/kg	7.79	355-46-4-BR		
PFNA*	Not detected	78		ng/kg	7.79	375-95-1		
8:2 FTSA*	Not detected	78		ng/kg	7.79	39108-34-4		
PFHpS*	Not detected	78		ng/kg	7.79	375-92-8		
PFDA*	Not detected	78		ng/kg	7.79	335-76-2		
N-MeFOSAA*	Not detected	78		ng/kg	7.79	2355-31-9		
EtFOSAA*	Not detected	78		ng/kg	7.79	2991-50-6		
PFOS*	470	78		ng/kg	7.79	1763-23-1		
PFOS-LN*	390	78		ng/kg	7.79	1763-23-1-LN		
PFOS-BR*	84	78		ng/kg	7.79	1763-23-1-BR		
PFUnDA*	Not detected	78		ng/kg	7.79	2058-94-8		
PFNS*	Not detected	78		ng/kg	7.79	68259-12-1		
PFDODA*	Not detected	78		ng/kg	7.79	307-55-1		
PFDS*	Not detected	78		ng/kg	7.79	335-77-3		
PFTTrDA*	Not detected	78		ng/kg	7.79	72629-94-8		
FOSA*	Not detected	78		ng/kg	7.79	754-91-6		
PFTeDA*	Not detected	78		ng/kg	7.79	376-06-7		
11Cl-PF3OUdS*	Not detected	78		ng/kg	7.79	763051-92-9		
9Cl-PF3ONS*	Not detected	78		ng/kg	7.79	756426-58-1		
ADONA*	Not detected	78		ng/kg	7.79	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.20 (continued)

Sample Tag: AOC11-TP04-S

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/05/23 00:28, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	78		ng/kg	7.79	13252-13-6		
PFECHS*	Not detected	78		ng/kg	7.79	67584-42-3		
PFBSA*	Not detected	78		ng/kg	7.79	30334-69-1		
PFHxSA*	Not detected	78		ng/kg	7.79	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.21

Sample Tag: AOC11-TP04-E

Collected Date/Time: 12/13/2022 14:35

Matrix: Soil

COC Reference: 158706

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.26/6.49/10	ASTM D7968-17M	01/04/23 11:11	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	93	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/05/23 00:47, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	120		ng/kg	6.07	375-22-4		
PFPeA*	Not detected	61		ng/kg	6.07	2706-90-3		
4:2 FTSA*	Not detected	61		ng/kg	6.07	757124-72-4		
PFHxA*	Not detected	61		ng/kg	6.07	307-24-4		
PFBS*	Not detected	61		ng/kg	6.07	375-73-5		
PFHpA*	Not detected	61		ng/kg	6.07	375-85-9		
PFPeS*	Not detected	61		ng/kg	6.07	2706-91-4		
6:2 FTSA*	Not detected	61		ng/kg	6.07	27619-97-2		
PFOA*	120	61		ng/kg	6.07	335-67-1		
PFHxS*	Not detected	61		ng/kg	6.07	355-46-4		
PFHxS-LN*	Not detected	61		ng/kg	6.07	355-46-4-LN		
PFHxS-BR*	Not detected	61		ng/kg	6.07	355-46-4-BR		
PFNA*	Not detected	61		ng/kg	6.07	375-95-1		
8:2 FTSA*	Not detected	61		ng/kg	6.07	39108-34-4		
PFHpS*	Not detected	61		ng/kg	6.07	375-92-8		
PFDA*	Not detected	61		ng/kg	6.07	335-76-2		
N-MeFOSAA*	Not detected	61		ng/kg	6.07	2355-31-9		
EtFOSAA*	Not detected	61		ng/kg	6.07	2991-50-6		
PFOS*	Not detected	61		ng/kg	6.07	1763-23-1		
PFOS-LN*	Not detected	61		ng/kg	6.07	1763-23-1-LN		
PFOS-BR*	Not detected	61		ng/kg	6.07	1763-23-1-BR		
PFUnDA*	Not detected	61		ng/kg	6.07	2058-94-8		
PFNS*	Not detected	61		ng/kg	6.07	68259-12-1		
PFDODA*	Not detected	61		ng/kg	6.07	307-55-1		
PFDS*	Not detected	61		ng/kg	6.07	335-77-3		
PFTTrDA*	Not detected	61		ng/kg	6.07	72629-94-8		
FOSA*	Not detected	61		ng/kg	6.07	754-91-6		
PFTeDA*	Not detected	61		ng/kg	6.07	376-06-7		
11Cl-PF3OUdS*	Not detected	61		ng/kg	6.07	763051-92-9		
9Cl-PF3ONS*	Not detected	61		ng/kg	6.07	756426-58-1		
ADONA*	Not detected	61		ng/kg	6.07	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.21 (continued)

Sample Tag: AOC11-TP04-E

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/05/23 00:47, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	61		ng/kg	6.07	13252-13-6		
PFECHS*	Not detected	61		ng/kg	6.07	67584-42-3		
PFBSA*	Not detected	61		ng/kg	6.07	30334-69-1		
PFHxSA*	Not detected	61		ng/kg	6.07	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.22

Sample Tag: AOC11-TP04-W

Collected Date/Time: 12/13/2022 14:35

Matrix: Soil

COC Reference: 158706

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.08/6.56/10	ASTM D7968-17M	01/04/23 13:33	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	92	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 19:22, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	140		ng/kg	7.15	375-22-4		
PFPeA*	Not detected	72		ng/kg	7.15	2706-90-3		
4:2 FTSA*	Not detected	72		ng/kg	7.15	757124-72-4		
PFHxA*	Not detected	72		ng/kg	7.15	307-24-4		
PFBS*	Not detected	72		ng/kg	7.15	375-73-5		
PFHpA*	Not detected	72		ng/kg	7.15	375-85-9		
PFPeS*	Not detected	72		ng/kg	7.15	2706-91-4		
6:2 FTSA*	Not detected	72		ng/kg	7.15	27619-97-2		
PFOA*	Not detected	72		ng/kg	7.15	335-67-1		
PFHxS*	Not detected	72		ng/kg	7.15	355-46-4		
PFHxS-LN*	Not detected	72		ng/kg	7.15	355-46-4-LN		
PFHxS-BR*	Not detected	72		ng/kg	7.15	355-46-4-BR		
PFNA*	Not detected	72		ng/kg	7.15	375-95-1		
8:2 FTSA*	Not detected	72		ng/kg	7.15	39108-34-4		
PFHpS*	Not detected	72		ng/kg	7.15	375-92-8		
PFDA*	Not detected	72		ng/kg	7.15	335-76-2		
N-MeFOSAA*	Not detected	72		ng/kg	7.15	2355-31-9		
EtFOSAA*	Not detected	72		ng/kg	7.15	2991-50-6		
PFOS*	190	72		ng/kg	7.15	1763-23-1		
PFOS-LN*	150	72		ng/kg	7.15	1763-23-1-LN		
PFOS-BR*	Not detected	72		ng/kg	7.15	1763-23-1-BR		
PFUnDA*	Not detected	72		ng/kg	7.15	2058-94-8		
PFNS*	Not detected	72		ng/kg	7.15	68259-12-1		
PFDODA*	Not detected	72		ng/kg	7.15	307-55-1		
PFDS*	79	72		ng/kg	7.15	335-77-3		
PFTTrDA*	Not detected	72		ng/kg	7.15	72629-94-8		
FOSA*	Not detected	72		ng/kg	7.15	754-91-6		
PFTeDA*	Not detected	72		ng/kg	7.15	376-06-7		
11Cl-PF3OUdS*	Not detected	72		ng/kg	7.15	763051-92-9		
9Cl-PF3ONS*	Not detected	72		ng/kg	7.15	756426-58-1		
ADONA*	Not detected	72		ng/kg	7.15	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.22 (continued)

Sample Tag: AOC11-TP04-W

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 19:22, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	72		ng/kg	7.15	13252-13-6		
PFECHS*	Not detected	72		ng/kg	7.15	67584-42-3		
PFBSA*	Not detected	72		ng/kg	7.15	30334-69-1		
PFHxSA*	Not detected	72		ng/kg	7.15	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.23

Sample Tag: AOC11-TP04-B

Collected Date/Time: 12/13/2022 15:03

Matrix: Soil

COC Reference: 158706

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.16/6.47/10	ASTM D7968-17M	01/04/23 13:33	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	85	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 20:01, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	87		ng/kg	4.37	375-22-4		
PFPeA*	Not detected	44		ng/kg	4.37	2706-90-3		
4:2 FTSA*	Not detected	44		ng/kg	4.37	757124-72-4		
PFHxA*	Not detected	44		ng/kg	4.37	307-24-4		
PFBS*	Not detected	44		ng/kg	4.37	375-73-5		
PFHpA*	Not detected	44		ng/kg	4.37	375-85-9		
PFPeS*	Not detected	44		ng/kg	4.37	2706-91-4		
6:2 FTSA*	Not detected	44		ng/kg	4.37	27619-97-2		
PFOA*	120	44		ng/kg	4.37	335-67-1		
PFHxS*	Not detected	44		ng/kg	4.37	355-46-4		
PFHxS-LN*	Not detected	44		ng/kg	4.37	355-46-4-LN		
PFHxS-BR*	Not detected	44		ng/kg	4.37	355-46-4-BR		
PFNA*	Not detected	44		ng/kg	4.37	375-95-1		
8:2 FTSA*	Not detected	44		ng/kg	4.37	39108-34-4		
PFHpS*	Not detected	44		ng/kg	4.37	375-92-8		
PFDA*	Not detected	44		ng/kg	4.37	335-76-2		
N-MeFOSAA*	Not detected	44		ng/kg	4.37	2355-31-9		
EtFOSAA*	Not detected	44		ng/kg	4.37	2991-50-6		
PFOS*	160	44		ng/kg	4.37	1763-23-1		
PFOS-LN*	100	44		ng/kg	4.37	1763-23-1-LN		
PFOS-BR*	55	44		ng/kg	4.37	1763-23-1-BR		
PFUnDA*	Not detected	44		ng/kg	4.37	2058-94-8		
PFNS*	Not detected	44		ng/kg	4.37	68259-12-1		
PFDODA*	Not detected	44		ng/kg	4.37	307-55-1		
PFDS*	Not detected	44		ng/kg	4.37	335-77-3		
PFTTrDA*	Not detected	44		ng/kg	4.37	72629-94-8		
FOSA*	Not detected	44		ng/kg	4.37	754-91-6		
PFTeDA*	Not detected	44		ng/kg	4.37	376-06-7		
11Cl-PF3OUdS*	Not detected	44		ng/kg	4.37	763051-92-9		
9Cl-PF3ONS*	Not detected	44		ng/kg	4.37	756426-58-1		
ADONA*	Not detected	44		ng/kg	4.37	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.23 (continued)

Sample Tag: AOC11-TP04-B

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 20:01, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	44		ng/kg	4.37	13252-13-6		
PFECHS*	Not detected	44		ng/kg	4.37	67584-42-3		
PFBSA*	Not detected	44		ng/kg	4.37	30334-69-1		
PFHxSA*	Not detected	44		ng/kg	4.37	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.24

Sample Tag: DUP-06S

Collected Date/Time: 12/13/2022 00:01

Matrix: Soil

COC Reference: 158706

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.10/6.50/10	ASTM D7968-17M	01/04/23 13:33	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	92	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 20:40, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	84		ng/kg	4.18	375-22-4		
PFPeA*	Not detected	42		ng/kg	4.18	2706-90-3		
4:2 FTSA*	Not detected	42		ng/kg	4.18	757124-72-4		
PFHxA*	Not detected	42		ng/kg	4.18	307-24-4		
PFBS*	Not detected	42		ng/kg	4.18	375-73-5		
PFHpA*	Not detected	42		ng/kg	4.18	375-85-9		
PFPeS*	Not detected	42		ng/kg	4.18	2706-91-4		
6:2 FTSA*	Not detected	42		ng/kg	4.18	27619-97-2		
PFOA*	Not detected	42		ng/kg	4.18	335-67-1		
PFHxS*	Not detected	42		ng/kg	4.18	355-46-4		
PFHxS-LN*	Not detected	42		ng/kg	4.18	355-46-4-LN		
PFHxS-BR*	Not detected	42		ng/kg	4.18	355-46-4-BR		
PFNA*	Not detected	42		ng/kg	4.18	375-95-1		
8:2 FTSA*	Not detected	42		ng/kg	4.18	39108-34-4		
PFHpS*	Not detected	42		ng/kg	4.18	375-92-8		
PFDA*	Not detected	42		ng/kg	4.18	335-76-2		
N-MeFOSAA*	Not detected	42		ng/kg	4.18	2355-31-9		
EtFOSAA*	Not detected	42		ng/kg	4.18	2991-50-6		
PFOS*	230	42		ng/kg	4.18	1763-23-1		
PFOS-LN*	190	42		ng/kg	4.18	1763-23-1-LN		
PFOS-BR*	46	42		ng/kg	4.18	1763-23-1-BR		
PFUnDA*	Not detected	42		ng/kg	4.18	2058-94-8		
PFNS*	Not detected	42		ng/kg	4.18	68259-12-1		
PFDODA*	Not detected	42		ng/kg	4.18	307-55-1		
PFDS*	180	42		ng/kg	4.18	335-77-3		
PFTTrDA*	Not detected	42		ng/kg	4.18	72629-94-8		
FOSA*	Not detected	42		ng/kg	4.18	754-91-6		
PFTeDA*	Not detected	42		ng/kg	4.18	376-06-7		
11Cl-PF3OUdS*	Not detected	42		ng/kg	4.18	763051-92-9		
9Cl-PF3ONS*	Not detected	42		ng/kg	4.18	756426-58-1		
ADONA*	Not detected	42		ng/kg	4.18	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.24 (continued)

Sample Tag: DUP-06S

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 20:40, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	42		ng/kg	4.18	13252-13-6		
PFECHS*	Not detected	42		ng/kg	4.18	67584-42-3		
PFBSA*	Not detected	42		ng/kg	4.18	30334-69-1		
PFHxSA*	Not detected	42		ng/kg	4.18	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.25

Sample Tag: AOC11-MW-22-07 (2-4)

Collected Date/Time: 12/13/2022 10:20

Matrix: Soil

COC Reference: 158708

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.46/6.54/10	ASTM D7968-17M	01/04/23 13:33	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	92	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 20:59, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	110		ng/kg	5.66	375-22-4		
PFPeA*	Not detected	57		ng/kg	5.66	2706-90-3		
4:2 FTSA*	Not detected	57		ng/kg	5.66	757124-72-4		
PFHxA*	Not detected	57		ng/kg	5.66	307-24-4		
PFBS*	Not detected	57		ng/kg	5.66	375-73-5		
PFHpA*	Not detected	57		ng/kg	5.66	375-85-9		
PFPeS*	Not detected	57		ng/kg	5.66	2706-91-4		
6:2 FTSA*	Not detected	57		ng/kg	5.66	27619-97-2		
PFOA*	Not detected	57		ng/kg	5.66	335-67-1		
PFHxS*	Not detected	57		ng/kg	5.66	355-46-4		
PFHxS-LN*	Not detected	57		ng/kg	5.66	355-46-4-LN		
PFHxS-BR*	Not detected	57		ng/kg	5.66	355-46-4-BR		
PFNA*	Not detected	57		ng/kg	5.66	375-95-1		
8:2 FTSA*	Not detected	57		ng/kg	5.66	39108-34-4		
PFHpS*	Not detected	57		ng/kg	5.66	375-92-8		
PFDA*	Not detected	57		ng/kg	5.66	335-76-2		
N-MeFOSAA*	Not detected	57		ng/kg	5.66	2355-31-9		
EtFOSAA*	Not detected	57		ng/kg	5.66	2991-50-6		
PFOS*	Not detected	57		ng/kg	5.66	1763-23-1		
PFOS-LN*	Not detected	57		ng/kg	5.66	1763-23-1-LN		
PFOS-BR*	Not detected	57		ng/kg	5.66	1763-23-1-BR		
PFUnDA*	Not detected	57		ng/kg	5.66	2058-94-8		
PFNS*	Not detected	57		ng/kg	5.66	68259-12-1		
PFDODA*	Not detected	57		ng/kg	5.66	307-55-1		
PFDS*	58	57		ng/kg	5.66	335-77-3		
PFTTrDA*	Not detected	57		ng/kg	5.66	72629-94-8		
FOSA*	Not detected	57		ng/kg	5.66	754-91-6		
PFTeDA*	Not detected	57		ng/kg	5.66	376-06-7		
11Cl-PF3OUdS*	Not detected	57		ng/kg	5.66	763051-92-9		
9Cl-PF3ONS*	Not detected	57		ng/kg	5.66	756426-58-1		
ADONA*	Not detected	57		ng/kg	5.66	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.25 (continued)

Sample Tag: AOC11-MW-22-07 (2-4)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 20:59, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	57		ng/kg	5.66	13252-13-6		
PFECHS*	Not detected	57		ng/kg	5.66	67584-42-3		
PFBSA*	Not detected	57		ng/kg	5.66	30334-69-1		
PFHxSA*	Not detected	57		ng/kg	5.66	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.26

Sample Tag: AOC11-MW-22-07 (8-10)

Collected Date/Time: 12/13/2022 10:40

Matrix: Soil

COC Reference: 158708

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.24/6.53/10	ASTM D7968-17M	01/04/23 13:33	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	92	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 21:19, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	130		ng/kg	6.36	375-22-4		
PFPeA*	Not detected	64		ng/kg	6.36	2706-90-3		
4:2 FTSA*	Not detected	64		ng/kg	6.36	757124-72-4		
PFHxA*	Not detected	64		ng/kg	6.36	307-24-4		
PFBS*	Not detected	64		ng/kg	6.36	375-73-5		
PFHpA*	Not detected	64		ng/kg	6.36	375-85-9		
PFPeS*	Not detected	64		ng/kg	6.36	2706-91-4		
6:2 FTSA*	Not detected	64		ng/kg	6.36	27619-97-2		
PFOA*	Not detected	64		ng/kg	6.36	335-67-1		
PFHxS*	Not detected	64		ng/kg	6.36	355-46-4		
PFHxS-LN*	Not detected	64		ng/kg	6.36	355-46-4-LN		
PFHxS-BR*	Not detected	64		ng/kg	6.36	355-46-4-BR		
PFNA*	Not detected	64		ng/kg	6.36	375-95-1		
8:2 FTSA*	Not detected	64		ng/kg	6.36	39108-34-4		
PFHpS*	Not detected	64		ng/kg	6.36	375-92-8		
PFDA*	78	64		ng/kg	6.36	335-76-2		
N-MeFOSAA*	Not detected	64		ng/kg	6.36	2355-31-9		
EtFOSAA*	Not detected	64		ng/kg	6.36	2991-50-6		
PFOS*	570	64		ng/kg	6.36	1763-23-1		
PFOS-LN*	450	64		ng/kg	6.36	1763-23-1-LN		
PFOS-BR*	120	64		ng/kg	6.36	1763-23-1-BR		
PFUnDA*	Not detected	64		ng/kg	6.36	2058-94-8		
PFNS*	Not detected	64		ng/kg	6.36	68259-12-1		
PFDODA*	Not detected	64		ng/kg	6.36	307-55-1		
PFDS*	Not detected	64		ng/kg	6.36	335-77-3		
PFTTrDA*	Not detected	64		ng/kg	6.36	72629-94-8		
FOSA*	Not detected	64		ng/kg	6.36	754-91-6		
PFTeDA*	Not detected	64		ng/kg	6.36	376-06-7		
11Cl-PF3OUdS*	Not detected	64		ng/kg	6.36	763051-92-9		
9Cl-PF3ONS*	Not detected	64		ng/kg	6.36	756426-58-1		
ADONA*	Not detected	64		ng/kg	6.36	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.26 (continued)

Sample Tag: AOC11-MW-22-07 (8-10)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 21:19, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	64		ng/kg	6.36	13252-13-6		
PFECHS*	Not detected	64		ng/kg	6.36	67584-42-3		
PFBSA*	Not detected	64		ng/kg	6.36	30334-69-1		
PFHxSA*	Not detected	64		ng/kg	6.36	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.27

Sample Tag: AOC7-MW-22-08 (8-10)

Collected Date/Time: 12/13/2022 08:50

Matrix: Soil

COC Reference: 158708

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.46/6.58/10	ASTM D7968-17M	01/04/23 13:33	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	93	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 21:38, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	110		ng/kg	5.72	375-22-4		
PFPeA*	Not detected	57		ng/kg	5.72	2706-90-3		
4:2 FTSA*	Not detected	57		ng/kg	5.72	757124-72-4		
PFHxA*	Not detected	57		ng/kg	5.72	307-24-4		
PFBS*	Not detected	57		ng/kg	5.72	375-73-5		
PFHpA*	Not detected	57		ng/kg	5.72	375-85-9		
PFPeS*	Not detected	57		ng/kg	5.72	2706-91-4		
6:2 FTSA*	Not detected	57		ng/kg	5.72	27619-97-2		
PFOA*	Not detected	57		ng/kg	5.72	335-67-1		
PFHxS*	Not detected	57		ng/kg	5.72	355-46-4		
PFHxS-LN*	Not detected	57		ng/kg	5.72	355-46-4-LN		
PFHxS-BR*	Not detected	57		ng/kg	5.72	355-46-4-BR		
PFNA*	Not detected	57		ng/kg	5.72	375-95-1		
8:2 FTSA*	Not detected	57		ng/kg	5.72	39108-34-4		
PFHpS*	Not detected	57		ng/kg	5.72	375-92-8		
PFDA*	Not detected	57		ng/kg	5.72	335-76-2		
N-MeFOSAA*	Not detected	57		ng/kg	5.72	2355-31-9		
EtFOSAA*	Not detected	57		ng/kg	5.72	2991-50-6		
PFOS*	Not detected	57		ng/kg	5.72	1763-23-1		
PFOS-LN*	Not detected	57		ng/kg	5.72	1763-23-1-LN		
PFOS-BR*	Not detected	57		ng/kg	5.72	1763-23-1-BR		
PFUnDA*	Not detected	57		ng/kg	5.72	2058-94-8		
PFNS*	Not detected	57		ng/kg	5.72	68259-12-1		
PFDODA*	Not detected	57		ng/kg	5.72	307-55-1		
PFDS*	Not detected	57		ng/kg	5.72	335-77-3		
PFTTrDA*	Not detected	57		ng/kg	5.72	72629-94-8		
FOSA*	Not detected	57		ng/kg	5.72	754-91-6		
PFTeDA*	Not detected	57		ng/kg	5.72	376-06-7		
11Cl-PF3OUdS*	Not detected	57		ng/kg	5.72	763051-92-9		
9Cl-PF3ONS*	Not detected	57		ng/kg	5.72	756426-58-1		
ADONA*	Not detected	57		ng/kg	5.72	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.27 (continued)

Sample Tag: AOC7-MW-22-08 (8-10)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 21:38, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	57		ng/kg	5.72	13252-13-6		
PFECHS*	Not detected	57		ng/kg	5.72	67584-42-3		
PFBSA*	Not detected	57		ng/kg	5.72	30334-69-1		
PFHxSA*	Not detected	57		ng/kg	5.72	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.28

Sample Tag: AOC11-MW-22-10 (2-4)

Collected Date/Time: 12/13/2022 12:45

Matrix: Soil

COC Reference: 158708

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	7.58/6.50/10	ASTM D7968-17M	01/04/23 13:33	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	92	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/05/23 11:14, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	200		ng/kg	10.1	375-22-4		
PFPeA*	Not detected	100		ng/kg	10.1	2706-90-3		
4:2 FTSA*	Not detected	100		ng/kg	10.1	757124-72-4		
PFHxA*	Not detected	100		ng/kg	10.1	307-24-4		
PFBS*	Not detected	100		ng/kg	10.1	375-73-5		
PFHpA*	Not detected	100		ng/kg	10.1	375-85-9		
PFPeS*	Not detected	100		ng/kg	10.1	2706-91-4		
6:2 FTSA*	Not detected	100		ng/kg	10.1	27619-97-2		
PFOA*	Not detected	100		ng/kg	10.1	335-67-1		
PFHxS*	Not detected	100		ng/kg	10.1	355-46-4		
PFHxS-LN*	Not detected	100		ng/kg	10.1	355-46-4-LN		
PFHxS-BR*	Not detected	100		ng/kg	10.1	355-46-4-BR		
PFNA*	Not detected	100		ng/kg	10.1	375-95-1		
8:2 FTSA*	Not detected	100		ng/kg	10.1	39108-34-4		
PFHpS*	Not detected	100		ng/kg	10.1	375-92-8		
PFDA*	Not detected	100		ng/kg	10.1	335-76-2		
N-MeFOSAA*	Not detected	100		ng/kg	10.1	2355-31-9		
EtFOSAA*	Not detected	100		ng/kg	10.1	2991-50-6		
PFOS*	160	100		ng/kg	10.1	1763-23-1		
PFOS-LN*	140	100		ng/kg	10.1	1763-23-1-LN		
PFOS-BR*	Not detected	100		ng/kg	10.1	1763-23-1-BR		
PFUnDA*	Not detected	100		ng/kg	10.1	2058-94-8		
PFNS*	Not detected	100		ng/kg	10.1	68259-12-1		
PFDODA*	Not detected	100		ng/kg	10.1	307-55-1		
PFDS*	Not detected	100		ng/kg	10.1	335-77-3		
PFTTrDA*	Not detected	100		ng/kg	10.1	72629-94-8		
FOSA*	Not detected	100		ng/kg	10.1	754-91-6		
PFTeDA*	Not detected	100		ng/kg	10.1	376-06-7		
11Cl-PF3OUdS*	Not detected	100		ng/kg	10.1	763051-92-9		
9Cl-PF3ONS*	Not detected	100		ng/kg	10.1	756426-58-1		
ADONA*	Not detected	100		ng/kg	10.1	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.28 (continued)

Sample Tag: AOC11-MW-22-10 (2-4)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/05/23 11:14, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	100		ng/kg	10.1	13252-13-6		
PFECHS*	Not detected	100		ng/kg	10.1	67584-42-3		
PFBSA*	Not detected	100		ng/kg	10.1	30334-69-1		
PFHxSA*	Not detected	100		ng/kg	10.1	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.29

Sample Tag: AOC11-MW-22-10 (8-10)

Collected Date/Time: 12/13/2022 13:00

Matrix: Soil

COC Reference: 158708

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.57/6.48/10	ASTM D7968-17M	01/04/23 13:33	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	93	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 22:17, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	100		ng/kg	5.14	375-22-4		
PFPeA*	Not detected	51		ng/kg	5.14	2706-90-3		
4:2 FTSA*	Not detected	51		ng/kg	5.14	757124-72-4		
PFHxA*	Not detected	51		ng/kg	5.14	307-24-4		
PFBS*	Not detected	51		ng/kg	5.14	375-73-5		
PFHpA*	Not detected	51		ng/kg	5.14	375-85-9		
PFPeS*	Not detected	51		ng/kg	5.14	2706-91-4		
6:2 FTSA*	Not detected	51		ng/kg	5.14	27619-97-2		
PFOA*	120	51		ng/kg	5.14	335-67-1		
PFHxS*	Not detected	51		ng/kg	5.14	355-46-4		
PFHxS-LN*	Not detected	51		ng/kg	5.14	355-46-4-LN		
PFHxS-BR*	Not detected	51		ng/kg	5.14	355-46-4-BR		
PFNA*	Not detected	51		ng/kg	5.14	375-95-1		
8:2 FTSA*	Not detected	51		ng/kg	5.14	39108-34-4		
PFHpS*	Not detected	51		ng/kg	5.14	375-92-8		
PFDA*	Not detected	51		ng/kg	5.14	335-76-2		
N-MeFOSAA*	Not detected	51		ng/kg	5.14	2355-31-9		
EtFOSAA*	Not detected	51		ng/kg	5.14	2991-50-6		
PFOS*	120	51		ng/kg	5.14	1763-23-1		
PFOS-LN*	71	51		ng/kg	5.14	1763-23-1-LN		
PFOS-BR*	Not detected	51		ng/kg	5.14	1763-23-1-BR		
PFUnDA*	Not detected	51		ng/kg	5.14	2058-94-8		
PFNS*	Not detected	51		ng/kg	5.14	68259-12-1		
PFDODA*	Not detected	51		ng/kg	5.14	307-55-1		
PFDS*	Not detected	51		ng/kg	5.14	335-77-3		
PFTTrDA*	Not detected	51		ng/kg	5.14	72629-94-8		
FOSA*	Not detected	51		ng/kg	5.14	754-91-6		
PFTeDA*	Not detected	51		ng/kg	5.14	376-06-7		
11Cl-PF3OUdS*	Not detected	51		ng/kg	5.14	763051-92-9		
9Cl-PF3ONS*	Not detected	51		ng/kg	5.14	756426-58-1		
ADONA*	Not detected	51		ng/kg	5.14	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.29 (continued)

Sample Tag: AOC11-MW-22-10 (8-10)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 22:17, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	51		ng/kg	5.14	13252-13-6		
PFECHS*	Not detected	51		ng/kg	5.14	67584-42-3		
PFBSA*	Not detected	51		ng/kg	5.14	30334-69-1		
PFHxSA*	Not detected	51		ng/kg	5.14	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.30

Sample Tag: AOC3-MW-22-11 (2-4)

Collected Date/Time: 12/13/2022 13:50

Matrix: Soil

COC Reference: 158708

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.03/6.54/10	ASTM D7968-17M	01/04/23 13:33	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 22:37, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	140		ng/kg	7.06	375-22-4		
PFPeA*	Not detected	71		ng/kg	7.06	2706-90-3		
4:2 FTSA*	Not detected	71		ng/kg	7.06	757124-72-4		
PFHxA*	Not detected	71		ng/kg	7.06	307-24-4		
PFBS*	Not detected	71		ng/kg	7.06	375-73-5		
PFHpA*	Not detected	71		ng/kg	7.06	375-85-9		
PFPeS*	Not detected	71		ng/kg	7.06	2706-91-4		
6:2 FTSA*	Not detected	71		ng/kg	7.06	27619-97-2		
PFOA*	Not detected	71		ng/kg	7.06	335-67-1		
PFHxS*	Not detected	71		ng/kg	7.06	355-46-4		
PFHxS-LN*	Not detected	71		ng/kg	7.06	355-46-4-LN		
PFHxS-BR*	Not detected	71		ng/kg	7.06	355-46-4-BR		
PFNA*	Not detected	71		ng/kg	7.06	375-95-1		
8:2 FTSA*	Not detected	71		ng/kg	7.06	39108-34-4		
PFHpS*	Not detected	71		ng/kg	7.06	375-92-8		
PFDA*	Not detected	71		ng/kg	7.06	335-76-2		
N-MeFOSAA*	Not detected	71		ng/kg	7.06	2355-31-9		
EtFOSAA*	Not detected	71		ng/kg	7.06	2991-50-6		
PFOS*	77	71		ng/kg	7.06	1763-23-1		
PFOS-LN*	Not detected	71		ng/kg	7.06	1763-23-1-LN		
PFOS-BR*	Not detected	71		ng/kg	7.06	1763-23-1-BR		
PFUnDA*	Not detected	71		ng/kg	7.06	2058-94-8		
PFNS*	Not detected	71		ng/kg	7.06	68259-12-1		
PFDaDA*	Not detected	71		ng/kg	7.06	307-55-1		
PFDS*	Not detected	71		ng/kg	7.06	335-77-3		
PFTTrDA*	Not detected	71		ng/kg	7.06	72629-94-8		
FOSA*	Not detected	71		ng/kg	7.06	754-91-6		
PFTeDA*	Not detected	71		ng/kg	7.06	376-06-7		
11Cl-PF3OUdS*	Not detected	71		ng/kg	7.06	763051-92-9		
9Cl-PF3ONS*	Not detected	71		ng/kg	7.06	756426-58-1		
ADONA*	Not detected	71		ng/kg	7.06	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.30 (continued)

Sample Tag: AOC3-MW-22-11 (2-4)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 22:37, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	71		ng/kg	7.06	13252-13-6		
PFECHS*	Not detected	71		ng/kg	7.06	67584-42-3		
PFBSA*	Not detected	71		ng/kg	7.06	30334-69-1		
PFHxSA*	Not detected	71		ng/kg	7.06	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.31

Sample Tag: AOC3-MW-22-11 (8-10)

Collected Date/Time: 12/13/2022 14:00

Matrix: Soil

COC Reference: 158708

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.69/6.50/10	ASTM D7968-17M	01/04/23 13:33	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 22:56, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	96		ng/kg	4.81	375-22-4		
PFPeA*	Not detected	48		ng/kg	4.81	2706-90-3		
4:2 FTSA*	Not detected	48		ng/kg	4.81	757124-72-4		
PFHxA*	Not detected	48		ng/kg	4.81	307-24-4		
PFBS*	Not detected	48		ng/kg	4.81	375-73-5		
PFHpA*	Not detected	48		ng/kg	4.81	375-85-9		
PFPeS*	Not detected	48		ng/kg	4.81	2706-91-4		
6:2 FTSA*	Not detected	48		ng/kg	4.81	27619-97-2		
PFOA*	53	48		ng/kg	4.81	335-67-1		
PFHxS*	150	48		ng/kg	4.81	355-46-4		
PFHxS-LN*	140	48		ng/kg	4.81	355-46-4-LN		
PFHxS-BR*	Not detected	48		ng/kg	4.81	355-46-4-BR		
PFNA*	Not detected	48		ng/kg	4.81	375-95-1		
8:2 FTSA*	Not detected	48		ng/kg	4.81	39108-34-4		
PFHpS*	Not detected	48		ng/kg	4.81	375-92-8		
PFDA*	Not detected	48		ng/kg	4.81	335-76-2		
N-MeFOSAA*	Not detected	48		ng/kg	4.81	2355-31-9		
EtFOSAA*	Not detected	48		ng/kg	4.81	2991-50-6		
PFOS*	Not detected	48		ng/kg	4.81	1763-23-1		
PFOS-LN*	Not detected	48		ng/kg	4.81	1763-23-1-LN		
PFOS-BR*	Not detected	48		ng/kg	4.81	1763-23-1-BR		
PFUnDA*	Not detected	48		ng/kg	4.81	2058-94-8		
PFNS*	Not detected	48		ng/kg	4.81	68259-12-1		
PFDODA*	Not detected	48		ng/kg	4.81	307-55-1		
PFDS*	Not detected	48		ng/kg	4.81	335-77-3		
PFTTrDA*	Not detected	48		ng/kg	4.81	72629-94-8		
FOSA*	Not detected	48		ng/kg	4.81	754-91-6		
PFTeDA*	Not detected	48		ng/kg	4.81	376-06-7		
11Cl-PF3OUdS*	Not detected	48		ng/kg	4.81	763051-92-9		
9Cl-PF3ONS*	Not detected	48		ng/kg	4.81	756426-58-1		
ADONA*	Not detected	48		ng/kg	4.81	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.31 (continued)

Sample Tag: AOC3-MW-22-11 (8-10)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 22:56, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	48		ng/kg	4.81	13252-13-6		
PFECHS*	Not detected	48		ng/kg	4.81	67584-42-3		
PFBSA*	Not detected	48		ng/kg	4.81	30334-69-1		
PFHxSA*	Not detected	48		ng/kg	4.81	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.32

Sample Tag: AOC3-MW-22-12 (2-4)

Collected Date/Time: 12/13/2022 16:00

Matrix: Soil

COC Reference: 158708

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	7.96/6.52/10	ASTM D7968-17M	01/04/23 13:33	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	96	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/05/23 11:33, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	140		ng/kg	7.23	375-22-4		
PFPeA*	Not detected	72		ng/kg	7.23	2706-90-3		
4:2 FTSA*	Not detected	72		ng/kg	7.23	757124-72-4		
PFHxA*	Not detected	72		ng/kg	7.23	307-24-4		
PFBS*	Not detected	72		ng/kg	7.23	375-73-5		
PFHpA*	Not detected	72		ng/kg	7.23	375-85-9		
PFPeS*	Not detected	72		ng/kg	7.23	2706-91-4		
6:2 FTSA*	Not detected	72		ng/kg	7.23	27619-97-2	I	
PFOA*	Not detected	72		ng/kg	7.23	335-67-1		
PFHxS*	Not detected	72		ng/kg	7.23	355-46-4		
PFHxS-LN*	Not detected	72		ng/kg	7.23	355-46-4-LN		
PFHxS-BR*	Not detected	72		ng/kg	7.23	355-46-4-BR		
PFNA*	Not detected	72		ng/kg	7.23	375-95-1		
8:2 FTSA*	Not detected	72		ng/kg	7.23	39108-34-4		
PFHpS*	Not detected	72		ng/kg	7.23	375-92-8		
PFDA*	Not detected	72		ng/kg	7.23	335-76-2		
N-MeFOSAA*	Not detected	72		ng/kg	7.23	2355-31-9		
EtFOSAA*	Not detected	72		ng/kg	7.23	2991-50-6		
PFOS*	84	72		ng/kg	7.23	1763-23-1		
PFOS-LN*	Not detected	72		ng/kg	7.23	1763-23-1-LN		
PFOS-BR*	Not detected	72		ng/kg	7.23	1763-23-1-BR		
PFUnDA*	Not detected	72		ng/kg	7.23	2058-94-8		
PFNS*	Not detected	72		ng/kg	7.23	68259-12-1		
PFDODA*	Not detected	72		ng/kg	7.23	307-55-1		
PFDS*	Not detected	72		ng/kg	7.23	335-77-3		
PFTTrDA*	Not detected	72		ng/kg	7.23	72629-94-8		
FOSA*	Not detected	72		ng/kg	7.23	754-91-6		
PFTeDA*	Not detected	72		ng/kg	7.23	376-06-7		
11Cl-PF3OUdS*	Not detected	72		ng/kg	7.23	763051-92-9		
9Cl-PF3ONS*	Not detected	72		ng/kg	7.23	756426-58-1		

I-Matrix interference with internal standard



Analytical Laboratory Report

Lab Sample ID: S43472.32 (continued)

Sample Tag: AOC3-MW-22-12 (2-4)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/05/23 11:33, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
ADONA*	Not detected	72		ng/kg	7.23	919005-14-4		
HFPO-DA*	Not detected	72		ng/kg	7.23	13252-13-6		
PFECHS*	Not detected	72		ng/kg	7.23	67584-42-3		
PFBSA*	Not detected	72		ng/kg	7.23	30334-69-1		
PFHxSA*	Not detected	72		ng/kg	7.23	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.33

Sample Tag: AOC3-MW-22-12 (8-10)

Collected Date/Time: 12/13/2022 16:10

Matrix: Soil

COC Reference: 158708

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.31/6.55/10	ASTM D7968-17M	01/04/23 13:33	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	96	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 23:35, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	120		ng/kg	5.92	375-22-4		
PFPeA*	Not detected	59		ng/kg	5.92	2706-90-3		
4:2 FTSA*	Not detected	59		ng/kg	5.92	757124-72-4		
PFHxA*	Not detected	59		ng/kg	5.92	307-24-4		
PFBS*	Not detected	59		ng/kg	5.92	375-73-5		
PFHpA*	Not detected	59		ng/kg	5.92	375-85-9		
PFPeS*	Not detected	59		ng/kg	5.92	2706-91-4		
6:2 FTSA*	Not detected	59		ng/kg	5.92	27619-97-2		
PFOA*	Not detected	59		ng/kg	5.92	335-67-1		
PFHxS*	Not detected	59		ng/kg	5.92	355-46-4		
PFHxS-LN*	Not detected	59		ng/kg	5.92	355-46-4-LN		
PFHxS-BR*	Not detected	59		ng/kg	5.92	355-46-4-BR		
PFNA*	Not detected	59		ng/kg	5.92	375-95-1		
8:2 FTSA*	Not detected	59		ng/kg	5.92	39108-34-4		
PFHpS*	Not detected	59		ng/kg	5.92	375-92-8		
PFDA*	Not detected	59		ng/kg	5.92	335-76-2		
N-MeFOSAA*	Not detected	59		ng/kg	5.92	2355-31-9		
EtFOSAA*	Not detected	59		ng/kg	5.92	2991-50-6		
PFOS*	Not detected	59		ng/kg	5.92	1763-23-1		
PFOS-LN*	Not detected	59		ng/kg	5.92	1763-23-1-LN		
PFOS-BR*	Not detected	59		ng/kg	5.92	1763-23-1-BR		
PFUnDA*	Not detected	59		ng/kg	5.92	2058-94-8		
PFNS*	Not detected	59		ng/kg	5.92	68259-12-1		
PFDODA*	Not detected	59		ng/kg	5.92	307-55-1		
PFDS*	Not detected	59		ng/kg	5.92	335-77-3		
PFTTrDA*	Not detected	59		ng/kg	5.92	72629-94-8		
FOSA*	Not detected	59		ng/kg	5.92	754-91-6		
PFTeDA*	Not detected	59		ng/kg	5.92	376-06-7		
11Cl-PF3OUdS*	Not detected	59		ng/kg	5.92	763051-92-9		
9Cl-PF3ONS*	Not detected	59		ng/kg	5.92	756426-58-1		
ADONA*	Not detected	59		ng/kg	5.92	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.33 (continued)

Sample Tag: AOC3-MW-22-12 (8-10)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 23:35, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	59		ng/kg	5.92	13252-13-6		
PFECHS*	Not detected	59		ng/kg	5.92	67584-42-3		
PFBSA*	Not detected	59		ng/kg	5.92	30334-69-1		
PFHxSA*	Not detected	59		ng/kg	5.92	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.34

Sample Tag: AOC9-MW-22-13 (2-4)

Collected Date/Time: 12/14/2022 09:30

Matrix: Soil

COC Reference: 158708

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.69/6.55/10	ASTM D7968-17M	01/04/23 13:33	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 23:55, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	98		ng/kg	4.92	375-22-4		
PFPeA*	Not detected	49		ng/kg	4.92	2706-90-3		
4:2 FTSA*	Not detected	49		ng/kg	4.92	757124-72-4		
PFHxA*	Not detected	49		ng/kg	4.92	307-24-4		
PFBS*	Not detected	49		ng/kg	4.92	375-73-5		
PFHpA*	Not detected	49		ng/kg	4.92	375-85-9		
PFPeS*	Not detected	49		ng/kg	4.92	2706-91-4		
6:2 FTSA*	Not detected	49		ng/kg	4.92	27619-97-2		
PFOA*	Not detected	49		ng/kg	4.92	335-67-1		
PFHxS*	Not detected	49		ng/kg	4.92	355-46-4		
PFHxS-LN*	Not detected	49		ng/kg	4.92	355-46-4-LN		
PFHxS-BR*	Not detected	49		ng/kg	4.92	355-46-4-BR		
PFNA*	Not detected	49		ng/kg	4.92	375-95-1		
8:2 FTSA*	Not detected	49		ng/kg	4.92	39108-34-4		
PFHpS*	Not detected	49		ng/kg	4.92	375-92-8		
PFDA*	Not detected	49		ng/kg	4.92	335-76-2		
N-MeFOSAA*	Not detected	49		ng/kg	4.92	2355-31-9		
EtFOSAA*	Not detected	49		ng/kg	4.92	2991-50-6		
PFOS*	Not detected	49		ng/kg	4.92	1763-23-1		
PFOS-LN*	Not detected	49		ng/kg	4.92	1763-23-1-LN		
PFOS-BR*	Not detected	49		ng/kg	4.92	1763-23-1-BR		
PFUnDA*	Not detected	49		ng/kg	4.92	2058-94-8		
PFNS*	Not detected	49		ng/kg	4.92	68259-12-1		
PFDODA*	Not detected	49		ng/kg	4.92	307-55-1		
PFDS*	Not detected	49		ng/kg	4.92	335-77-3		
PFTDA*	Not detected	49		ng/kg	4.92	72629-94-8		
FOSA*	Not detected	49		ng/kg	4.92	754-91-6		
PFTeDA*	Not detected	49		ng/kg	4.92	376-06-7		
11Cl-PF3OUdS*	Not detected	49		ng/kg	4.92	763051-92-9		
9Cl-PF3ONS*	Not detected	49		ng/kg	4.92	756426-58-1		
ADONA*	Not detected	49		ng/kg	4.92	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.34 (continued)

Sample Tag: AOC9-MW-22-13 (2-4)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/04/23 23:55, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	49		ng/kg	4.92	13252-13-6		
PFECHS*	Not detected	49		ng/kg	4.92	67584-42-3		
PFBSA*	Not detected	49		ng/kg	4.92	30334-69-1		
PFHxSA*	Not detected	49		ng/kg	4.92	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43472.35

Sample Tag: AOC9-MW-22-13 (8-10)

Collected Date/Time: 12/14/2022 09:40

Matrix: Soil

COC Reference: 158708

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR
1	250ml Plastic	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.24/6.45/10	ASTM D7968-17M	01/04/23 13:33	PTW	

Inorganics

Method: SM2540B, Run Date: 12/15/22 15:12, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/05/23 00:14, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	75		ng/kg	3.77	375-22-4		
PFPeA*	Not detected	38		ng/kg	3.77	2706-90-3		
4:2 FTSA*	Not detected	38		ng/kg	3.77	757124-72-4		
PFHxA*	Not detected	38		ng/kg	3.77	307-24-4		
PFBS*	Not detected	38		ng/kg	3.77	375-73-5		
PFHpA*	Not detected	38		ng/kg	3.77	375-85-9		
PFPeS*	Not detected	38		ng/kg	3.77	2706-91-4		
6:2 FTSA*	Not detected	38		ng/kg	3.77	27619-97-2		
PFOA*	Not detected	38		ng/kg	3.77	335-67-1		
PFHxS*	Not detected	38		ng/kg	3.77	355-46-4		
PFHxS-LN*	Not detected	38		ng/kg	3.77	355-46-4-LN		
PFHxS-BR*	Not detected	38		ng/kg	3.77	355-46-4-BR		
PFNA*	Not detected	38		ng/kg	3.77	375-95-1		
8:2 FTSA*	Not detected	38		ng/kg	3.77	39108-34-4		
PFHpS*	Not detected	38		ng/kg	3.77	375-92-8		
PFDA*	Not detected	38		ng/kg	3.77	335-76-2		
N-MeFOSAA*	Not detected	38		ng/kg	3.77	2355-31-9		
EtFOSAA*	Not detected	38		ng/kg	3.77	2991-50-6		
PFOS*	46	38		ng/kg	3.77	1763-23-1		
PFOS-LN*	Not detected	38		ng/kg	3.77	1763-23-1-LN		
PFOS-BR*	39	38		ng/kg	3.77	1763-23-1-BR		
PFUnDA*	Not detected	38		ng/kg	3.77	2058-94-8		
PFNS*	Not detected	38		ng/kg	3.77	68259-12-1		
PFDODA*	Not detected	38		ng/kg	3.77	307-55-1		
PFDS*	Not detected	38		ng/kg	3.77	335-77-3		
PFTTrDA*	Not detected	38		ng/kg	3.77	72629-94-8		
FOSA*	Not detected	38		ng/kg	3.77	754-91-6		
PFTeDA*	Not detected	38		ng/kg	3.77	376-06-7		
11Cl-PF3OUdS*	Not detected	38		ng/kg	3.77	763051-92-9		
9Cl-PF3ONS*	Not detected	38		ng/kg	3.77	756426-58-1		
ADONA*	Not detected	38		ng/kg	3.77	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43472.35 (continued)

Sample Tag: AOC9-MW-22-13 (8-10)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/05/23 00:14, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	38		ng/kg	3.77	13252-13-6		
PFECHS*	Not detected	38		ng/kg	3.77	67584-42-3		
PFBSA*	Not detected	38		ng/kg	3.77	30334-69-1		
PFHxSA*	Not detected	38		ng/kg	3.77	41997-13-1		

Merit Laboratories Login Checklist

Lab Set ID:S43472

Client:TRC (TRC)

Project: Detroit Axle Southern Invest. 495430.0001

Submitted: 12/14/2022 16:50 Login User: MMC

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place

Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Selection	Description	Note
Sample Receiving		
01.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples are received at 4C +/- 2C Thermometer # IR 4.2
02.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Received on ice/ cooling process begun
03.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples shipped
04.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples left in 24 hr. drop box
05.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Are there custody seals/tape or is the drop box locked
Chain of Custody		
06.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC adequately filled out
07.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC signed and relinquished to the lab
08.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sample tag on bottles match COC
09.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Subcontracting needed? Subcontracted to:
Preservation		
10.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Do sample have correct chemical preservation
11.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Completed pH checks on preserved samples? (no VOAs)
12.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Did any samples need to be preserved in the lab?
Bottle Conditions		
13.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	All bottles intact
14.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Appropriate analytical bottles are used
15.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Merit bottles used
16.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sufficient sample volume received
17.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples require laboratory filtration
18.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples submitted within holding time
19.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Do water VOC or TOX bottles contain headspace

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____



REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME: K. Kratzonburg
 COMPANY: TAL
 ADDRESS: 1540 Eisenhower place
 CITY: Ann Arbor STATE: MI ZIP CODE: 48108
 PHONE NO.: _____ CELL NO.: _____ P.O. NO.: 193431
 E-MAIL ADDRESS: Kkratzonburg@talcompanies.com QUOTE NO.: _____

CONTACT NAME: _____ SAME
 COMPANY: _____
 ADDRESS: _____
 CITY: _____ STATE: _____ ZIP CODE: _____
 PHONE NO.: _____ E-MAIL ADDRESS: _____

PROJECT NO./NAME: Detroit, Arle Southern Trust, 495430000 SAMPLER(S) - PLEASE PRINT/SIGN NAME: J. Schwabert
 TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____
 DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER PRE EDD

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

MATRIX W=WATER GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 CODE: SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR WS=WASTE

Containers & Preservatives

Certifications
 OHIO VAP Drinking Water
 DoD NPDES

Project Locations
 Detroit New York
 Other _____

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	COLLECTION		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	ANALYSIS	CERTIFICATIONS	PROJECT LOCATIONS	SPECIAL INSTRUCTIONS
	DATE	TIME														
43471	.01	12/13/22	825 AOC II - TPO1 - N	S	10								X			* Southern Brown Project Scope 1 Soil
43472	.02		836 AOC II - TPO1 - S										X			
	.03		856 AOC II - TPO1 - E										X			
	.04		856 AOC II - TPO1 - W										X			
	.05		935 AOC II - TPO1 - B										X			
	.06		Dup - 03s										X			
	.07	1016	AOC II TPO2 - N										X			
	.08	1033	AOC II - TPO2 - S										X			
	.09	1043	AOC II - TPO2 - E										X			
	.10	1043	AOC II - TPO2 - W										X			
	.11	1118	AOC II - TPO2 - B										X			
	.12		Dup - 04s										X			

Handwritten notes in analysis column:
 VOLCS + TICs + 154 dioxin + furans
 SWOLCS + TICs
 Metals *
 Phthalates
 Alcohols
 31 PFAS
 Heavy metal/lead
 PCBs

RELINQUISHED BY: Henry Schwabert Sampler DATE: 12/13/22 TIME: 1600
 RECEIVED BY: Sample dropoff pt DATE: 12/13/22 TIME: 1600
 RELINQUISHED BY: Byaen DATE: 12.14.22 TIME: 1450
 RECEIVED BY: Mer DATE: 12-14-22 TIME: 1450

RELINQUISHED BY: _____ DATE: 12-14 TIME: 1650
 RECEIVED BY: M Chilcote DATE: 12/14/22 TIME: 1650
 SEAL NO. SEAL INTACT YES NO INITIALS _____
 SEAL NO. SEAL INTACT YES NO INITIALS _____
 NOTES: TEMP. ON ARRIVAL: 4.2



2680 East Lansing Dr., East Lansing, MI 48823
 Phone (517) 332-0167 Fax (517) 332-4034
 www.meritlabs.com

C.O.C. PAGE # _____ OF _____ 158708

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME **K CRATSENBURG**
 COMPANY **TRC**
 ADDRESS **1540 EISENHOWER**
 CITY **ANN ARBOR** STATE **MI** ZIP CODE **48108**
 PHONE NO. _____ CELL NO. _____ P.O. NO. **193431**
 E-MAIL ADDRESS **Kcratsenburge@trccompanies** QUOTE NO. _____

CONTACT NAME _____ SAME
 COMPANY _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP CODE _____
 PHONE NO. _____ E-MAIL ADDRESS _____

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME: **DETROIT AXLE SB** SAMPLER(S) - PLEASE PRINT/SIGN NAME **B. YELEN**
 TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____
 DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER **TRC EDD**
 MATRIX W=WATER GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 CODE: SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR WS=WASTE

VOC/TICS 1,4-D	SVOC + TICS	METALS *	31 PFAS	PCB	TETRAETHYL Pb	THORIUM	3 ALCOHOLS
----------------	-------------	----------	---------	-----	---------------	---------	------------

Certifications
 OHIO VAP Drinking Water
 DoD NPDES
Project Locations
 Detroit New York
 Other _____
Special Instructions

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	COLLECTION		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives													
	DATE	TIME				NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER							
43471/43472	12.13.22	1020	MW AOC 11 - MW - 22-07 (2-4)		9														
26		1040	AOC 11 - MW - 22-07 (8-10)																
27		0850	AOC 7 - MW - 22-08 (8-10)																
28		1245	AOC 11 - MW - 22-10 (2-4)																
29		1300	AOC 11 - MW - 22-10 (8-10)																
30		1350	AOC 3 - MW - 22-11 (2-4)		8														
31		1400	AOC 3 - MW - 22-11 (8-10)																
32		1600	AOC 3 - MW - 22-12 (2-4)																
33		1610	AOC 3 - MW - 22-12 (8-10)																
34	12.14.22	0930	AOC 9 - MW - 22-13 (2-4)		9														
35	12.14.22	0946	AOC 9 - MW - 22-13 (8-10)		9														

* SEE SOUTHERN BOUNDARY SOIL PROJECT SCOPE

RELINQUISHED BY: **B. Yelen** (Signature) Sampler DATE **12.14.22** TIME **1450**
 RECEIVED BY: _____ DATE _____ TIME _____
 RELINQUISHED BY: _____ DATE _____ TIME _____
 RECEIVED BY: **M. Dilcol** (Signature) DATE **12-14-22** TIME **1650**

RELINQUISHED BY: _____ DATE _____ TIME _____
 RECEIVED BY: _____ DATE _____ TIME _____
 SEAL NO. _____ SEAL INTACT YES NO INITIALS _____
 SEAL NO. _____ SEAL INTACT YES NO INITIALS _____
 NOTES: _____ TEMP. ON ARRIVAL **4.2**



Analytical Laboratory Report

Report ID: S43533.01(01)
Generated on 01/13/2023

Report to
Attention: Kelly Cratsenburg
TRC
1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: 734-412-5424 FAX:
Email: KCratsenburg@trccompanies.com

Report produced by
Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Additional Contacts: Vince Buening

Report Summary
Lab Sample ID(s): S43533.01-S43533.38
Project: Det. Axle South. Bound.
Collected Date(s): 12/14/2022 - 12/15/2022
Submitted Date/Time: 12/15/2022 16:00
Sampled by: B. Yelen / H. Schnaidt
P.O. #: 193431

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Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

There is no additional narrative for this analytical report



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Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



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Method Summary

Method	Version
SM2540B	Standard Method 2540 B 2015
SW3050B	SW 846 Method 3050B Revision 2 December 1996
SW3546	SW 846 Method 3546 Revision 0 February 2007
SW5035A	SW 846 Method 5035A Revision 1 July 2002
SW5035A/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5035A Revision 1 July 2002
SW6020A	SW 846 Method 6020A Revision 1 February 2007
SW7471B	SW 846 Method 7471B Revision 2 February 2007
SW8082A	SW 846 Method 8082A Revision 1 February 2007
SW8260B - SIM	SW 846 Method 8260B Revision 2 December 1996 SIMs
SW8270D	SW 846 Method 8270D Revision 4 February 2007



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Sample Summary (38 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S43533.01	AOC9-MW-22-13 (2-4)	Soil	12/14/22 09:30
S43533.02	AOC9-MW-22-13 (8-10)	Soil	12/14/22 09:40
S43533.03	AOC9-SB-01 (2-4)	Soil	12/14/22 10:40
S43533.04	AOC9-SB-01 (8-10)	Soil	12/14/22 11:00
S43533.05	AOC9-MW-22-14 (2-4)	Soil	12/14/22 11:30
S43533.06	AOC9-MW-22-14 (8-10)	Soil	12/14/22 11:50
S43533.07	AOC9-SB-02 (2-4)	Soil	12/14/22 12:50
S43533.08	AOC9-SB-02 (8-10)	Soil	12/14/22 13:00
S43533.09	AOC9-MW-22-15 (2-4)	Soil	12/14/22 13:30
S43533.10	AOC9-MW-22-15 (8-10)	Soil	12/14/22 13:40
S43533.11	AOC9-MW-22-16 (2-4)	Soil	12/14/22 15:50
S43533.12	AOC9-MW-22-16 (8-10)	Soil	12/14/22 16:00
S43533.13	AOC3-TP01-W	Soil	12/14/22 09:37
S43533.14	AOC3-TP01-E	Soil	12/14/22 09:47
S43533.15	AOC3-TP01-N	Soil	12/14/22 09:55
S43533.16	AOC3-TP01-S	Soil	12/14/22 09:55
S43533.17	AOC3-TP01-B	Soil	12/14/22 10:12
S43533.18	Dup-07s	Soil	12/14/22 00:01
S43533.19	AOC3-TP02-N	Soil	12/14/22 10:55
S43533.20	AOC3-TP02-S	Soil	12/14/22 11:08
S43533.21	AOC3-TP02-E	Soil	12/14/22 11:15
S43533.22	AOC3-TP02-W	Soil	12/14/22 11:15
S43533.23	AOC3-TP02-B	Soil	12/14/22 11:36
S43533.24	Dup-08s	Soil	12/14/22 00:01
S43533.25	AOC3-TP03-N	Soil	12/14/22 12:46
S43533.26	AOC3-TP03-S	Soil	12/14/22 12:55
S43533.27	AOC3-TP03-E	Soil	12/14/22 13:02
S43533.28	AOC3-TP03-W	Soil	12/14/22 13:02
S43533.29	AOC3-TP03-B	Soil	12/14/22 13:27
S43533.30	Dup-09s	Soil	12/14/22 00:01
S43533.31	AOC3-TP04-W	Soil	12/14/22 14:22
S43533.32	AOC3-TP04-E	Soil	12/14/22 14:35
S43533.33	AOC3-TP04-N	Soil	12/14/22 14:40
S43533.34	AOC3-TP04-S	Soil	12/14/22 14:40
S43533.35	AOC3-TP04-B	Soil	12/14/22 14:52
S43533.36	Dup-10s	Soil	12/14/22 00:01
S43533.37	Trip Blank - MW	Methanol	12/15/22 08:00
S43533.38	Trip Blank - TP	Methanol	12/15/22 08:10



Analytical Laboratory Report

Lab Sample ID: S43533.01

Sample Tag: AOC9-MW-22-13 (2-4)

Collected Date/Time: 12/14/2022 09:30

Matrix: Soil

COC Reference: 158678

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	n/a	n/a	No	n/a	n/a

Other / Misc.

Method: , Run Date: 12/16/22 15:35, Analyst: JRM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
No Analyses*	Completed				1		



Analytical Laboratory Report

Lab Sample ID: S43533.02

Sample Tag: AOC9-MW-22-13 (8-10)

Collected Date/Time: 12/14/2022 09:40

Matrix: Soil

COC Reference: 158678

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	n/a	n/a	No	n/a	n/a

Other / Misc.

Method: , Run Date: 12/16/22 15:35, Analyst: JRM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
No Analyses*	Completed				1		



Analytical Laboratory Report

Lab Sample ID: S43533.03

Sample Tag: AOC9-SB-01 (2-4)

Collected Date/Time: 12/14/2022 10:40

Matrix: Soil

COC Reference: 158678

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
4	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/20/22 13:15	JRH	
BNA Extraction*	Completed	SW3546	12/20/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/20/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	10.971/10	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:05	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	96	1		%	1		

Metals

Method: SW6020A, Run Date: 12/20/22 14:11, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	1,100	1.0		mg/kg	301	7429-90-5	
Antimony	Not detected	0.50		mg/kg	301	7440-36-0	
Arsenic	0.38	0.20		mg/kg	301	7440-38-2	
Barium	5.17	1.0		mg/kg	301	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	301	7440-41-7	
Boron	Not detected	2.0		mg/kg	301	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	301	7440-43-9	
Chromium	1.53	0.50		mg/kg	301	7440-47-3	
Cobalt	0.54	0.50		mg/kg	301	7440-48-4	
Copper	0.91	0.50		mg/kg	301	7440-50-8	
Iron	1,130	1.0		mg/kg	301	7439-89-6	
Lead	0.99	0.30		mg/kg	301	7439-92-1	
Manganese	24.8	0.50		mg/kg	301	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	301	7439-98-7	
Nickel	1.23	0.50		mg/kg	301	7440-02-0	
Selenium	Not detected	0.40		mg/kg	301	7782-49-2	
Silver	Not detected	0.20		mg/kg	301	7440-22-4	
Strontium	0.82	0.50		mg/kg	301	7440-24-6	
Thallium	Not detected	0.20		mg/kg	301	7440-28-0	
Tin	Not detected	2.0		mg/kg	301	7440-31-5	
Titanium	30.5	1.0		mg/kg	301	7440-32-6	
Vanadium	2.16	0.50		mg/kg	301	7440-62-2	
Zinc	2.34	0.50		mg/kg	301	7440-66-6	



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Lab Sample ID: S43533.03 (continued)

Sample Tag: AOC9-SB-01 (2-4)

Method: SW6020A, Run Date: 12/28/22 14:45, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	254	30		mg/kg	301	7440-70-2	
Magnesium	278	15		mg/kg	301	7439-95-4	
Potassium	89.1	15		mg/kg	301	7440-09-7	
Sodium	52.0	15		mg/kg	301	7440-23-5	

Method: SW7471B, Run Date: 12/20/22 13:01, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	87	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/21/22 14:11, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	10	12674-11-2	
PCB-1242	Not detected	330		ug/kg	10	53469-21-9	
PCB-1221	Not detected	330		ug/kg	10	11104-28-2	
PCB-1232	Not detected	330		ug/kg	10	11141-16-5	
PCB-1248	Not detected	330		ug/kg	10	12672-29-6	
PCB-1254	Not detected	330		ug/kg	10	11097-69-1	
PCB-1260	Not detected	330		ug/kg	10	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 12/28/22 23:33, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	6		

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 23:33, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	330		ug/kg	6	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8	
Anthracene	Not detected	330		ug/kg	6	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3	
Chrysene	Not detected	330		ug/kg	6	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2	



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Lab Sample ID: S43533.03 (continued)

Sample Tag: AOC9-SB-01 (2-4)

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 23:33, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1	
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0	
Fluoranthene	Not detected	330		ug/kg	6	206-44-0	
Fluorene	Not detected	330		ug/kg	6	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5	
Isophorone	Not detected	330		ug/kg	6	78-59-1	
Naphthalene	Not detected	330		ug/kg	6	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5	
Phenanthrene	Not detected	330		ug/kg	6	85-01-8	
Phenol	Not detected	330		ug/kg	6	108-95-2	
Pyrene	Not detected	330		ug/kg	6	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2	
Benzidine	Not detected	330		ug/kg	6	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/28/22 02:28, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	200		ug/kg	49.6	108-20-3	
TICs*	None Found			ug/kg	49.6		

Method: SW8260B - SIM, Run Date: 12/23/22 04:15, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	2		ug/kg	49.6	96-12-8	
1,4-Dioxane*	Not detected	50		ug/kg	49.6	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 02:28, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	1,000	1,000		ug/kg	49.6	67-64-1	B
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	49.6	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	49.6	107-13-1	
2-Butanone (MEK)	Not detected	740		ug/kg	49.6	78-93-3	
Dichlorodifluoromethane	Not detected	200		ug/kg	49.6	75-71-8	

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43533.03 (continued)

Sample Tag: AOC9-SB-01 (2-4)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 02:28, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloromethane	Not detected	200		ug/kg	49.6	74-87-3	
Vinyl chloride	Not detected	50		ug/kg	49.6	75-01-4	
Bromomethane	Not detected	200		ug/kg	49.6	74-83-9	
Chloroethane	Not detected	200		ug/kg	49.6	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	49.6	75-69-4	
1,1-Dichloroethene	Not detected	50		ug/kg	49.6	75-35-4	
Methylene chloride	Not detected	100		ug/kg	49.6	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	49.6	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	49.6	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	49.6	156-59-2	
Chloroform	Not detected	50		ug/kg	49.6	67-66-3	
1,1,1-Trichloroethane	Not detected	50		ug/kg	49.6	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	2,000		ug/kg	49.6	108-10-1	
Carbon tetrachloride	Not detected	50		ug/kg	49.6	56-23-5	
Benzene	Not detected	50		ug/kg	49.6	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	49.6	107-06-2	
Trichloroethene	Not detected	50		ug/kg	49.6	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	49.6	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	49.6	75-27-4	
Dibromomethane	Not detected	200		ug/kg	49.6	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	49.6	10061-01-5	
Toluene	Not detected	50		ug/kg	49.6	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	49.6	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	49.6	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	49.6	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	49.6	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	49.6	106-93-4	M
Chlorobenzene	Not detected	50		ug/kg	49.6	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	49.6	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	49.6	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	49.6		
o-Xylene	Not detected	50		ug/kg	49.6	95-47-6	
Styrene	Not detected	50		ug/kg	49.6	100-42-5	
Isopropylbenzene	Not detected	200		ug/kg	49.6	98-82-8	
Bromoform	Not detected	100		ug/kg	49.6	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	49.6	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	49.6	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	49.6	103-65-1	
Bromobenzene	Not detected	100		ug/kg	49.6	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	49.6	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	49.6	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	49.6	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	49.6	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	49.6	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	49.6	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	49.6	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	49.6	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	49.6	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	49.6	104-51-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.03 (continued)

Sample Tag: AOC9-SB-01 (2-4)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 02:28, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	49.6	120-82-1	
1,2,3-Trichlorobenzene	Not detected	330		ug/kg	49.6	87-61-6	
Naphthalene	Not detected	200		ug/kg	49.6	91-20-3	
Acrolein	Not detected	50		ug/kg	49.6	107-02-8	
2-Chlorotoluene	Not detected	50		ug/kg	49.6	95-49-8	
4-Chlorotoluene	Not detected	50		ug/kg	49.6	106-43-4	
1,3-Dichloropropane	Not detected	50		ug/kg	49.6	142-28-9	
1,1-Dichloropropene	Not detected	50		ug/kg	49.6	563-58-6	
2,2-Dichloropropane	Not detected	50		ug/kg	49.6	594-20-7	
Hexachlorobutadiene	Not detected	50		ug/kg	49.6	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	49.6	76-13-1	

Other / Misc.

Method: , Run Date: 12/19/22 21:03, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:03, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

Method: , Run Date: 12/21/22 08:15, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project (Replicate 01)*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.04

Sample Tag: AOC9-SB-01 (8-10)

Collected Date/Time: 12/14/2022 11:00

Matrix: Soil

COC Reference: 158678

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
4	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/20/22 13:15	JRH	
BNA Extraction*	Completed	SW3546	12/20/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/20/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	11.993/11	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:05	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	95	1		%	1		

Metals

Method: SW6020A, Run Date: 12/20/22 14:13, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	532	1.0		mg/kg	301	7429-90-5	
Antimony	Not detected	0.50		mg/kg	301	7440-36-0	
Arsenic	Not detected	0.20		mg/kg	301	7440-38-2	
Barium	2.93	1.0		mg/kg	301	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	301	7440-41-7	
Boron	Not detected	2.0		mg/kg	301	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	301	7440-43-9	
Chromium	1.04	0.50		mg/kg	301	7440-47-3	
Cobalt	Not detected	0.50		mg/kg	301	7440-48-4	
Copper	0.88	0.50		mg/kg	301	7440-50-8	
Iron	593	1.0		mg/kg	301	7439-89-6	
Lead	1.07	0.30		mg/kg	301	7439-92-1	
Manganese	6.11	0.50		mg/kg	301	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	301	7439-98-7	
Nickel	1.02	0.50		mg/kg	301	7440-02-0	
Selenium	Not detected	0.40		mg/kg	301	7782-49-2	
Silver	Not detected	0.20		mg/kg	301	7440-22-4	
Strontium	0.96	0.50		mg/kg	301	7440-24-6	
Thallium	Not detected	0.20		mg/kg	301	7440-28-0	
Tin	Not detected	2.0		mg/kg	301	7440-31-5	
Titanium	2.04	1.0		mg/kg	301	7440-32-6	
Vanadium	1.14	0.50		mg/kg	301	7440-62-2	
Zinc	3.95	0.50		mg/kg	301	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S43533.04 (continued)

Sample Tag: AOC9-SB-01 (8-10)

Method: SW6020A, Run Date: 12/28/22 14:47, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	386	30		mg/kg	301	7440-70-2	
Magnesium	216	15		mg/kg	301	7439-95-4	
Potassium	107	15		mg/kg	301	7440-09-7	
Sodium	36.8	15		mg/kg	301	7440-23-5	

Method: SW7471B, Run Date: 12/20/22 13:04, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	80	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/21/22 14:23, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	10	12674-11-2	
PCB-1242	Not detected	330		ug/kg	10	53469-21-9	
PCB-1221	Not detected	330		ug/kg	10	11104-28-2	
PCB-1232	Not detected	330		ug/kg	10	11141-16-5	
PCB-1248	Not detected	330		ug/kg	10	12672-29-6	
PCB-1254	Not detected	330		ug/kg	10	11097-69-1	
PCB-1260	Not detected	330		ug/kg	10	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 12/29/22 01:36, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	6		

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 01:36, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	330		ug/kg	6	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8	
Anthracene	Not detected	330		ug/kg	6	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3	
Chrysene	Not detected	330		ug/kg	6	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2	



Analytical Laboratory Report

Lab Sample ID: S43533.04 (continued)

Sample Tag: AOC9-SB-01 (8-10)

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 01:36, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1	
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0	
Fluoranthene	Not detected	330		ug/kg	6	206-44-0	
Fluorene	Not detected	330		ug/kg	6	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5	
Isophorone	Not detected	330		ug/kg	6	78-59-1	
Naphthalene	Not detected	330		ug/kg	6	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5	
Phenanthrene	Not detected	330		ug/kg	6	85-01-8	
Phenol	Not detected	330		ug/kg	6	108-95-2	
Pyrene	Not detected	330		ug/kg	6	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2	
Benzidine	Not detected	330		ug/kg	6	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/28/22 02:52, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	50.9	108-20-3	
TICs*	None Found			ug/kg	50.9		

Method: SW8260B - SIM, Run Date: 12/23/22 04:36, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	50.9	96-12-8	
1,4-Dioxane*	60	50		ug/kg	50.9	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 02:52, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	1,000	1,000		ug/kg	50.9	67-64-1	B
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	50.9	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	50.9	107-13-1	
2-Butanone (MEK)	Not detected	760		ug/kg	50.9	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	50.9	75-71-8	

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43533.04 (continued)

Sample Tag: AOC9-SB-01 (8-10)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 02:52, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloromethane	Not detected	300		ug/kg	50.9	74-87-3	
Vinyl chloride	Not detected	50		ug/kg	50.9	75-01-4	
Bromomethane	Not detected	200		ug/kg	50.9	74-83-9	
Chloroethane	Not detected	300		ug/kg	50.9	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	50.9	75-69-4	
1,1-Dichloroethene	Not detected	50		ug/kg	50.9	75-35-4	
Methylene chloride	Not detected	100		ug/kg	50.9	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	50.9	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	50.9	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	50.9	156-59-2	
Chloroform	Not detected	50		ug/kg	50.9	67-66-3	
1,1,1-Trichloroethane	Not detected	50		ug/kg	50.9	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	50.9	108-10-1	
Carbon tetrachloride	Not detected	50		ug/kg	50.9	56-23-5	
Benzene	Not detected	50		ug/kg	50.9	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	50.9	107-06-2	
Trichloroethene	Not detected	50		ug/kg	50.9	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	50.9	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	50.9	75-27-4	
Dibromomethane	Not detected	300		ug/kg	50.9	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	50.9	10061-01-5	
Toluene	Not detected	50		ug/kg	50.9	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	50.9	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	50.9	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	50.9	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	50.9	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	50.9	106-93-4	M
Chlorobenzene	Not detected	50		ug/kg	50.9	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	50.9	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	50.9	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	50.9		
o-Xylene	Not detected	50		ug/kg	50.9	95-47-6	
Styrene	Not detected	50		ug/kg	50.9	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	50.9	98-82-8	
Bromoform	Not detected	100		ug/kg	50.9	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	50.9	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	50.9	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	50.9	103-65-1	
Bromobenzene	Not detected	100		ug/kg	50.9	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	50.9	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	50.9	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	50.9	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	50.9	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	50.9	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	50.9	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	50.9	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	50.9	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	50.9	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	50.9	104-51-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.04 (continued)

Sample Tag: AOC9-SB-01 (8-10)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 02:52, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2,4-Trichlorobenzene	Not detected	340		ug/kg	50.9	120-82-1	
1,2,3-Trichlorobenzene	Not detected	340		ug/kg	50.9	87-61-6	
Naphthalene	Not detected	300		ug/kg	50.9	91-20-3	
Acrolein	Not detected	50		ug/kg	50.9	107-02-8	
2-Chlorotoluene	Not detected	50		ug/kg	50.9	95-49-8	
4-Chlorotoluene	Not detected	50		ug/kg	50.9	106-43-4	
1,3-Dichloropropane	Not detected	50		ug/kg	50.9	142-28-9	
1,1-Dichloropropene	Not detected	50		ug/kg	50.9	563-58-6	
2,2-Dichloropropane	Not detected	50		ug/kg	50.9	594-20-7	
Hexachlorobutadiene	Not detected	50		ug/kg	50.9	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	50.9	76-13-1	

Other / Misc.

Method: , Run Date: 12/19/22 21:24, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:03, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

Method: , Run Date: 12/21/22 08:15, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project (Replicate 01)*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.05

Sample Tag: AOC9-MW-22-14 (2-4)

Collected Date/Time: 12/14/2022 11:30

Matrix: Soil

COC Reference: 158678

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
4	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/20/22 13:15	JRH	
BNA Extraction*	Completed	SW3546	12/20/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/20/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	11.952/11	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:05	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	94	1		%	1		

Metals

Method: SW6020A, Run Date: 12/20/22 14:18, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	774	1.0		mg/kg	302	7429-90-5	
Antimony	Not detected	0.50		mg/kg	302	7440-36-0	
Arsenic	Not detected	0.20		mg/kg	302	7440-38-2	
Barium	4.84	1.0		mg/kg	302	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	302	7440-41-7	
Boron	Not detected	2.0		mg/kg	302	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	302	7440-43-9	
Chromium	0.79	0.50		mg/kg	302	7440-47-3	
Cobalt	Not detected	0.50		mg/kg	302	7440-48-4	
Copper	Not detected	0.50		mg/kg	302	7440-50-8	
Iron	257	1.0		mg/kg	302	7439-89-6	
Lead	0.47	0.30		mg/kg	302	7439-92-1	
Manganese	1.66	0.50		mg/kg	302	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	302	7439-98-7	
Nickel	0.65	0.50		mg/kg	302	7440-02-0	
Selenium	Not detected	0.40		mg/kg	302	7782-49-2	
Silver	Not detected	0.20		mg/kg	302	7440-22-4	
Strontium	1.47	0.50		mg/kg	302	7440-24-6	
Thallium	Not detected	0.20		mg/kg	302	7440-28-0	
Tin	Not detected	2.0		mg/kg	302	7440-31-5	
Titanium	5.86	1.0		mg/kg	302	7440-32-6	
Vanadium	0.53	0.50		mg/kg	302	7440-62-2	
Zinc	2.91	0.50		mg/kg	302	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S43533.05 (continued)

Sample Tag: AOC9-MW-22-14 (2-4)

Method: SW6020A, Run Date: 12/28/22 14:48, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	352	30		mg/kg	302	7440-70-2	
Magnesium	115	15		mg/kg	302	7439-95-4	
Potassium	63.3	15		mg/kg	302	7440-09-7	
Sodium	24.1	15		mg/kg	302	7440-23-5	

Method: SW7471B, Run Date: 12/20/22 13:08, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	79	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/21/22 14:35, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	10	12674-11-2	
PCB-1242	Not detected	330		ug/kg	10	53469-21-9	
PCB-1221	Not detected	330		ug/kg	10	11104-28-2	
PCB-1232	Not detected	330		ug/kg	10	11141-16-5	
PCB-1248	Not detected	330		ug/kg	10	12672-29-6	
PCB-1254	Not detected	330		ug/kg	10	11097-69-1	
PCB-1260	Not detected	330		ug/kg	10	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 12/29/22 00:04, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	6		

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 00:04, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	330		ug/kg	6	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8	
Anthracene	Not detected	330		ug/kg	6	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3	
Chrysene	Not detected	330		ug/kg	6	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2	



Analytical Laboratory Report

Lab Sample ID: S43533.05 (continued)

Sample Tag: AOC9-MW-22-14 (2-4)

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 00:04, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1	
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0	
Fluoranthene	Not detected	330		ug/kg	6	206-44-0	
Fluorene	Not detected	330		ug/kg	6	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5	
Isophorone	Not detected	330		ug/kg	6	78-59-1	
Naphthalene	Not detected	330		ug/kg	6	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5	
Phenanthrene	Not detected	330		ug/kg	6	85-01-8	
Phenol	Not detected	330		ug/kg	6	108-95-2	
Pyrene	Not detected	330		ug/kg	6	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2	
Benzidine	Not detected	330		ug/kg	6	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/28/22 03:17, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	52.1	108-20-3	
TICs*	None Found			ug/kg	52.1		

Method: SW8260B - SIM, Run Date: 12/23/22 04:57, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	52.1	96-12-8	
1,4-Dioxane*	90	50		ug/kg	52.1	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 03:17, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	1,000	1,000		ug/kg	52.1	67-64-1	B
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	52.1	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	52.1	107-13-1	
2-Butanone (MEK)	Not detected	780		ug/kg	52.1	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	52.1	75-71-8	

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43533.05 (continued)

Sample Tag: AOC9-MW-22-14 (2-4)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 03:17, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloromethane	Not detected	300		ug/kg	52.1	74-87-3	
Vinyl chloride	Not detected	50		ug/kg	52.1	75-01-4	
Bromomethane	Not detected	200		ug/kg	52.1	74-83-9	
Chloroethane	Not detected	300		ug/kg	52.1	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	52.1	75-69-4	
1,1-Dichloroethene	Not detected	50		ug/kg	52.1	75-35-4	
Methylene chloride	Not detected	100		ug/kg	52.1	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	52.1	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	52.1	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	52.1	156-59-2	
Chloroform	Not detected	50		ug/kg	52.1	67-66-3	
1,1,1-Trichloroethane	Not detected	50		ug/kg	52.1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	52.1	108-10-1	
Carbon tetrachloride	Not detected	50		ug/kg	52.1	56-23-5	
Benzene	Not detected	50		ug/kg	52.1	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	52.1	107-06-2	
Trichloroethene	Not detected	50		ug/kg	52.1	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	52.1	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	52.1	75-27-4	
Dibromomethane	Not detected	300		ug/kg	52.1	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	52.1	10061-01-5	
Toluene	Not detected	50		ug/kg	52.1	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	52.1	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	52.1	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	52.1	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	52.1	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	52.1	106-93-4	M
Chlorobenzene	Not detected	50		ug/kg	52.1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	52.1	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	52.1	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	52.1		
o-Xylene	Not detected	50		ug/kg	52.1	95-47-6	
Styrene	Not detected	50		ug/kg	52.1	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	52.1	98-82-8	
Bromoform	Not detected	100		ug/kg	52.1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	52.1	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	52.1	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	52.1	103-65-1	
Bromobenzene	Not detected	100		ug/kg	52.1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	52.1	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	52.1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	52.1	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	52.1	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	52.1	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	52.1	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	52.1	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	52.1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	52.1	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	52.1	104-51-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.05 (continued)

Sample Tag: AOC9-MW-22-14 (2-4)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 03:17, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2,4-Trichlorobenzene	Not detected	340		ug/kg	52.1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	340		ug/kg	52.1	87-61-6	
Naphthalene	Not detected	300		ug/kg	52.1	91-20-3	
Acrolein	Not detected	50		ug/kg	52.1	107-02-8	
2-Chlorotoluene	Not detected	50		ug/kg	52.1	95-49-8	
4-Chlorotoluene	Not detected	50		ug/kg	52.1	106-43-4	
1,3-Dichloropropane	Not detected	50		ug/kg	52.1	142-28-9	
1,1-Dichloropropene	Not detected	50		ug/kg	52.1	563-58-6	
2,2-Dichloropropane	Not detected	50		ug/kg	52.1	594-20-7	
Hexachlorobutadiene	Not detected	50		ug/kg	52.1	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	52.1	76-13-1	

Other / Misc.

Method: , Run Date: 12/19/22 21:45, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:03, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

Method: , Run Date: 12/21/22 08:15, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project (Replicate 01)*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.06

Sample Tag: AOC9-MW-22-14 (8-10)

Collected Date/Time: 12/14/2022 11:50

Matrix: Soil

COC Reference: 158678

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
4	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/20/22 13:15	JRH	
BNA Extraction*	Completed	SW3546	12/20/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/20/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	11.542/11	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:05	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	94	1		%	1		

Metals

Method: SW6020A, Run Date: 12/20/22 14:20, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	837	1.0		mg/kg	317	7429-90-5	
Antimony	Not detected	0.50		mg/kg	317	7440-36-0	
Arsenic	0.77	0.20		mg/kg	317	7440-38-2	
Barium	8.93	1.0		mg/kg	317	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	317	7440-41-7	
Boron	Not detected	2.0		mg/kg	317	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	317	7440-43-9	
Chromium	1.74	0.50		mg/kg	317	7440-47-3	
Cobalt	0.97	0.50		mg/kg	317	7440-48-4	
Copper	4.43	0.50		mg/kg	317	7440-50-8	
Iron	701	1.0		mg/kg	317	7439-89-6	
Lead	1.26	0.30		mg/kg	317	7439-92-1	
Manganese	3.82	0.50		mg/kg	317	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	317	7439-98-7	
Nickel	1.56	0.50		mg/kg	317	7440-02-0	
Selenium	Not detected	0.40		mg/kg	317	7782-49-2	
Silver	Not detected	0.20		mg/kg	317	7440-22-4	
Strontium	1.68	0.50		mg/kg	317	7440-24-6	
Thallium	Not detected	0.20		mg/kg	317	7440-28-0	
Tin	Not detected	2.0		mg/kg	317	7440-31-5	
Titanium	6.12	1.0		mg/kg	317	7440-32-6	
Vanadium	1.89	0.50		mg/kg	317	7440-62-2	
Zinc	3.89	0.50		mg/kg	317	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S43533.06 (continued)

Sample Tag: AOC9-MW-22-14 (8-10)

Method: SW6020A, Run Date: 12/28/22 14:51, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	430	30		mg/kg	317	7440-70-2	
Magnesium	238	15		mg/kg	317	7439-95-4	
Potassium	100	15		mg/kg	317	7440-09-7	
Sodium	32.1	15		mg/kg	317	7440-23-5	

Method: SW7471B, Run Date: 12/20/22 13:11, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	78	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/21/22 14:47, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	10	12674-11-2	
PCB-1242	Not detected	330		ug/kg	10	53469-21-9	
PCB-1221	Not detected	330		ug/kg	10	11104-28-2	
PCB-1232	Not detected	330		ug/kg	10	11141-16-5	
PCB-1248	Not detected	330		ug/kg	10	12672-29-6	
PCB-1254	Not detected	330		ug/kg	10	11097-69-1	
PCB-1260	Not detected	330		ug/kg	10	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 12/29/22 02:06, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	6		

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 02:06, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	330		ug/kg	6	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8	
Anthracene	Not detected	330		ug/kg	6	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3	
Chrysene	Not detected	330		ug/kg	6	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2	



Analytical Laboratory Report

Lab Sample ID: S43533.06 (continued)

Sample Tag: AOC9-MW-22-14 (8-10)

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 02:06, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1	
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0	
Fluoranthene	Not detected	330		ug/kg	6	206-44-0	
Fluorene	Not detected	330		ug/kg	6	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5	
Isophorone	Not detected	330		ug/kg	6	78-59-1	
Naphthalene	Not detected	330		ug/kg	6	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5	
Phenanthrene	Not detected	330		ug/kg	6	85-01-8	
Phenol	Not detected	330		ug/kg	6	108-95-2	
Pyrene	Not detected	330		ug/kg	6	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2	
Benzidine	Not detected	330		ug/kg	6	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/28/22 03:41, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	53.9	108-20-3	
TICs*	None Found			ug/kg	53.9		

Method: SW8260B - SIM, Run Date: 12/23/22 05:18, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	53.9	96-12-8	
1,4-Dioxane*	Not detected	50		ug/kg	53.9	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 03:41, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	1,000	1,000		ug/kg	53.9	67-64-1	B
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	53.9	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	53.9	107-13-1	
2-Butanone (MEK)	Not detected	810		ug/kg	53.9	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	53.9	75-71-8	

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43533.06 (continued)

Sample Tag: AOC9-MW-22-14 (8-10)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 03:41, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloromethane	Not detected	300		ug/kg	53.9	74-87-3	
Vinyl chloride	Not detected	50		ug/kg	53.9	75-01-4	
Bromomethane	Not detected	200		ug/kg	53.9	74-83-9	
Chloroethane	Not detected	300		ug/kg	53.9	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	53.9	75-69-4	
1,1-Dichloroethene	Not detected	50		ug/kg	53.9	75-35-4	
Methylene chloride	Not detected	100		ug/kg	53.9	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	53.9	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	53.9	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	53.9	156-59-2	
Chloroform	Not detected	50		ug/kg	53.9	67-66-3	
1,1,1-Trichloroethane	Not detected	50		ug/kg	53.9	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	53.9	108-10-1	
Carbon tetrachloride	Not detected	50		ug/kg	53.9	56-23-5	
Benzene	Not detected	50		ug/kg	53.9	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	53.9	107-06-2	
Trichloroethene	Not detected	50		ug/kg	53.9	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	53.9	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	53.9	75-27-4	
Dibromomethane	Not detected	300		ug/kg	53.9	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	53.9	10061-01-5	
Toluene	Not detected	50		ug/kg	53.9	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	53.9	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	53.9	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	53.9	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	53.9	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	53.9	106-93-4	M
Chlorobenzene	Not detected	50		ug/kg	53.9	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	53.9	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	53.9	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	53.9		
o-Xylene	Not detected	50		ug/kg	53.9	95-47-6	
Styrene	Not detected	50		ug/kg	53.9	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	53.9	98-82-8	
Bromoform	Not detected	100		ug/kg	53.9	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	53.9	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	53.9	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	53.9	103-65-1	
Bromobenzene	Not detected	100		ug/kg	53.9	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	53.9	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	53.9	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	53.9	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	53.9	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	53.9	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	53.9	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	53.9	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	53.9	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	53.9	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	53.9	104-51-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.06 (continued)

Sample Tag: AOC9-MW-22-14 (8-10)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 03:41, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2,4-Trichlorobenzene	Not detected	360		ug/kg	53.9	120-82-1	
1,2,3-Trichlorobenzene	Not detected	360		ug/kg	53.9	87-61-6	
Naphthalene	Not detected	300		ug/kg	53.9	91-20-3	
Acrolein	Not detected	50		ug/kg	53.9	107-02-8	
2-Chlorotoluene	Not detected	50		ug/kg	53.9	95-49-8	
4-Chlorotoluene	Not detected	50		ug/kg	53.9	106-43-4	
1,3-Dichloropropane	Not detected	50		ug/kg	53.9	142-28-9	
1,1-Dichloropropene	Not detected	50		ug/kg	53.9	563-58-6	
2,2-Dichloropropane	Not detected	50		ug/kg	53.9	594-20-7	
Hexachlorobutadiene	Not detected	50		ug/kg	53.9	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	53.9	76-13-1	

Other / Misc.

Method: , Run Date: 12/19/22 22:06, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:03, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

Method: , Run Date: 12/21/22 08:15, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project (Replicate 01)*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.07

Sample Tag: AOC9-SB-02 (2-4)

Collected Date/Time: 12/14/2022 12:50

Matrix: Soil

COC Reference: 158678

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
4	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/20/22 13:15	JRH	
BNA Extraction*	Completed	SW3546	12/20/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/20/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	13.441/13	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:05	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	91	1		%	1		

Metals

Method: SW6020A, Run Date: 12/20/22 14:22, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	2,340	1.0		mg/kg	305	7429-90-5	
Antimony	Not detected	0.50		mg/kg	305	7440-36-0	
Arsenic	0.66	0.20		mg/kg	305	7440-38-2	
Barium	12.9	1.0		mg/kg	305	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	305	7440-41-7	
Boron	Not detected	2.0		mg/kg	305	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	305	7440-43-9	
Chromium	4.08	0.50		mg/kg	305	7440-47-3	
Cobalt	0.58	0.50		mg/kg	305	7440-48-4	
Copper	2.68	0.50		mg/kg	305	7440-50-8	
Iron	1,490	1.0		mg/kg	305	7439-89-6	
Lead	6.98	0.30		mg/kg	305	7439-92-1	
Manganese	56.9	0.50		mg/kg	305	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	305	7439-98-7	
Nickel	1.66	0.50		mg/kg	305	7440-02-0	
Selenium	Not detected	0.40		mg/kg	305	7782-49-2	
Silver	Not detected	0.20		mg/kg	305	7440-22-4	
Strontium	5.24	0.50		mg/kg	305	7440-24-6	
Thallium	Not detected	0.20		mg/kg	305	7440-28-0	
Tin	Not detected	2.0		mg/kg	305	7440-31-5	
Titanium	15.5	1.0		mg/kg	305	7440-32-6	
Vanadium	2.80	0.50		mg/kg	305	7440-62-2	
Zinc	10.9	0.50		mg/kg	305	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S43533.07 (continued)

Sample Tag: AOC9-SB-02 (2-4)

Method: SW6020A, Run Date: 12/28/22 14:52, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	2,780	30		mg/kg	305	7440-70-2	
Magnesium	579	15		mg/kg	305	7439-95-4	
Potassium	92.6	15		mg/kg	305	7440-09-7	
Sodium	24.5	15		mg/kg	305	7440-23-5	

Method: SW7471B, Run Date: 12/20/22 13:14, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	1.476	0.050		mg/kg	87	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/21/22 14:59, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	10	12674-11-2	
PCB-1242	Not detected	330		ug/kg	10	53469-21-9	
PCB-1221	Not detected	330		ug/kg	10	11104-28-2	
PCB-1232	Not detected	330		ug/kg	10	11141-16-5	
PCB-1248	Not detected	330		ug/kg	10	12672-29-6	
PCB-1254	Not detected	330		ug/kg	10	11097-69-1	
PCB-1260	Not detected	330		ug/kg	10	11096-82-5	

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 12:09, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	330		ug/kg	6	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8	
Anthracene	Not detected	330		ug/kg	6	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3	
Chrysene	Not detected	330		ug/kg	6	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2	
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1	



Analytical Laboratory Report

Lab Sample ID: S43533.07 (continued)

Sample Tag: AOC9-SB-02 (2-4)

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 12:09, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0	
Fluoranthene	530	330		ug/kg	6	206-44-0	
Fluorene	Not detected	330		ug/kg	6	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5	
Isophorone	Not detected	330		ug/kg	6	78-59-1	
Naphthalene	Not detected	330		ug/kg	6	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5	
Phenanthrene	Not detected	330		ug/kg	6	85-01-8	
Phenol	Not detected	330		ug/kg	6	108-95-2	
Pyrene	440	330		ug/kg	6	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2	
Benzidine	Not detected	330		ug/kg	6	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9	

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/29/22 12:09, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	Found			ug/kg	6		
Fluoranthene	Found			ug/kg	6	206-44-0	
Pyrene	Found			ug/kg	6	129-00-0	
Chrysene	Found			ug/kg	6	218-01-9	
Benzo(a)anthracene	Found			ug/kg	6	56-55-3	
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2	
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9	
Benzo(a)pyrene	Found			ug/kg	6	50-32-8	
Benzo(e)pyrene	Found			ug/kg	6	192-97-2	
Phenanthrene	Found			ug/kg	6	85-01-8	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/28/22 04:06, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	58.1	108-20-3	
TICs*	None Found			ug/kg	58.1		

Method: SW8260B - SIM, Run Date: 12/23/22 05:39, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	58.1	96-12-8	
1,4-Dioxane*	Not detected	60		ug/kg	58.1	123-91-1	



Analytical Laboratory Report

Lab Sample ID: S43533.07 (continued)

Sample Tag: AOC9-SB-02 (2-4)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 04:06, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	2,000	1,000		ug/kg	58.1	67-64-1	B
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	58.1	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	58.1	107-13-1	
2-Butanone (MEK)	Not detected	870		ug/kg	58.1	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	58.1	75-71-8	
Chloromethane	Not detected	300		ug/kg	58.1	74-87-3	
Vinyl chloride	Not detected	60		ug/kg	58.1	75-01-4	
Bromomethane	Not detected	200		ug/kg	58.1	74-83-9	
Chloroethane	Not detected	300		ug/kg	58.1	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	58.1	75-69-4	
1,1-Dichloroethene	Not detected	60		ug/kg	58.1	75-35-4	
Methylene chloride	Not detected	100		ug/kg	58.1	75-09-2	
trans-1,2-Dichloroethene	Not detected	60		ug/kg	58.1	156-60-5	
1,1-Dichloroethane	Not detected	60		ug/kg	58.1	75-34-3	
cis-1,2-Dichloroethene	Not detected	60		ug/kg	58.1	156-59-2	
Chloroform	Not detected	60		ug/kg	58.1	67-66-3	
1,1,1-Trichloroethane	Not detected	60		ug/kg	58.1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	58.1	108-10-1	
Carbon tetrachloride	Not detected	60		ug/kg	58.1	56-23-5	
Benzene	Not detected	60		ug/kg	58.1	71-43-2	
1,2-Dichloroethane	Not detected	60		ug/kg	58.1	107-06-2	
Trichloroethene	Not detected	60		ug/kg	58.1	79-01-6	
1,2-Dichloropropane	Not detected	60		ug/kg	58.1	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	58.1	75-27-4	
Dibromomethane	Not detected	300		ug/kg	58.1	74-95-3	
cis-1,3-Dichloropropene	Not detected	60		ug/kg	58.1	10061-01-5	
Toluene	Not detected	60		ug/kg	58.1	108-88-3	
trans-1,3-Dichloropropene	Not detected	60		ug/kg	58.1	10061-02-6	
1,1,2-Trichloroethane	Not detected	60		ug/kg	58.1	79-00-5	
Tetrachloroethene	Not detected	60		ug/kg	58.1	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	58.1	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	58.1	106-93-4	M
Chlorobenzene	Not detected	60		ug/kg	58.1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	58.1	630-20-6	
Ethylbenzene	Not detected	60		ug/kg	58.1	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	58.1		
o-Xylene	Not detected	60		ug/kg	58.1	95-47-6	
Styrene	Not detected	60		ug/kg	58.1	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	58.1	98-82-8	
Bromoform	Not detected	100		ug/kg	58.1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	58.1	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	58.1	96-18-4	
n-Propylbenzene	Not detected	60		ug/kg	58.1	103-65-1	
Bromobenzene	Not detected	100		ug/kg	58.1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	58.1	108-67-8	
tert-Butylbenzene	Not detected	60		ug/kg	58.1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	58.1	95-63-6	
sec-Butylbenzene	Not detected	60		ug/kg	58.1	135-98-8	

B-Compound also found in associated method blank

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.07 (continued)

Sample Tag: AOC9-SB-02 (2-4)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 04:06, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
p-Isopropyltoluene	Not detected	100		ug/kg	58.1	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	58.1	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	58.1	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	58.1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	58.1	526-73-8	
n-Butylbenzene	Not detected	60		ug/kg	58.1	104-51-8	
1,2,4-Trichlorobenzene	Not detected	380		ug/kg	58.1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	380		ug/kg	58.1	87-61-6	
Naphthalene	Not detected	300		ug/kg	58.1	91-20-3	
Acrolein	Not detected	60		ug/kg	58.1	107-02-8	
2-Chlorotoluene	Not detected	60		ug/kg	58.1	95-49-8	
4-Chlorotoluene	Not detected	60		ug/kg	58.1	106-43-4	
1,3-Dichloropropane	Not detected	60		ug/kg	58.1	142-28-9	
1,1-Dichloropropene	Not detected	60		ug/kg	58.1	563-58-6	
2,2-Dichloropropane	Not detected	60		ug/kg	58.1	594-20-7	
Hexachlorobutadiene	Not detected	60		ug/kg	58.1	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	58.1	76-13-1	

Other / Misc.

Method: , Run Date: 12/20/22 14:50, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:03, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

Method: , Run Date: 12/21/22 08:15, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project (Replicate 01)*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.08

Sample Tag: AOC9-SB-02 (8-10)

Collected Date/Time: 12/14/2022 13:00

Matrix: Soil

COC Reference: 158678

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
4	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/20/22 13:15	JRH	
BNA Extraction*	Completed	SW3546	12/20/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/20/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	12.175/12	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:05	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	96	1		%	1		

Metals

Method: SW6020A, Run Date: 12/20/22 14:25, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	717	1.0		mg/kg	291	7429-90-5	
Antimony	Not detected	0.50		mg/kg	291	7440-36-0	
Arsenic	0.38	0.20		mg/kg	291	7440-38-2	
Barium	7.91	1.0		mg/kg	291	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	291	7440-41-7	
Boron	Not detected	2.0		mg/kg	291	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	291	7440-43-9	
Chromium	2.05	0.50		mg/kg	291	7440-47-3	
Cobalt	0.54	0.50		mg/kg	291	7440-48-4	
Copper	2.44	0.50		mg/kg	291	7440-50-8	
Iron	720	1.0		mg/kg	291	7439-89-6	
Lead	1.23	0.30		mg/kg	291	7439-92-1	
Manganese	5.56	0.50		mg/kg	291	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	291	7439-98-7	
Nickel	1.66	0.50		mg/kg	291	7440-02-0	
Selenium	Not detected	0.40		mg/kg	291	7782-49-2	
Silver	Not detected	0.20		mg/kg	291	7440-22-4	
Strontium	1.49	0.50		mg/kg	291	7440-24-6	
Thallium	Not detected	0.20		mg/kg	291	7440-28-0	
Tin	Not detected	2.0		mg/kg	291	7440-31-5	
Titanium	2.53	1.0		mg/kg	291	7440-32-6	
Vanadium	2.68	0.50		mg/kg	291	7440-62-2	
Zinc	3.69	0.50		mg/kg	291	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S43533.08 (continued)

Sample Tag: AOC9-SB-02 (8-10)

Method: SW6020A, Run Date: 12/28/22 14:53, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	451	30		mg/kg	291	7440-70-2	
Magnesium	242	15		mg/kg	291	7439-95-4	
Potassium	100	15		mg/kg	291	7440-09-7	
Sodium	24.8	15		mg/kg	291	7440-23-5	

Method: SW7471B, Run Date: 12/20/22 13:18, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	78	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/21/22 15:11, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	10	12674-11-2	
PCB-1242	Not detected	330		ug/kg	10	53469-21-9	
PCB-1221	Not detected	330		ug/kg	10	11104-28-2	
PCB-1232	Not detected	330		ug/kg	10	11141-16-5	
PCB-1248	Not detected	330		ug/kg	10	12672-29-6	
PCB-1254	Not detected	330		ug/kg	10	11097-69-1	
PCB-1260	Not detected	330		ug/kg	10	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 12/29/22 03:38, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	6		

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 03:38, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	330		ug/kg	6	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8	
Anthracene	Not detected	330		ug/kg	6	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3	
Chrysene	Not detected	330		ug/kg	6	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2	



Analytical Laboratory Report

Lab Sample ID: S43533.08 (continued)

Sample Tag: AOC9-SB-02 (8-10)

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 03:38, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1	
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0	
Fluoranthene	Not detected	330		ug/kg	6	206-44-0	
Fluorene	Not detected	330		ug/kg	6	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5	
Isophorone	Not detected	330		ug/kg	6	78-59-1	
Naphthalene	Not detected	330		ug/kg	6	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5	
Phenanthrene	Not detected	330		ug/kg	6	85-01-8	
Phenol	Not detected	330		ug/kg	6	108-95-2	
Pyrene	Not detected	330		ug/kg	6	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2	
Benzidine	Not detected	330		ug/kg	6	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/28/22 04:30, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	53.4	108-20-3	
TICs*	None Found			ug/kg	53.4		

Method: SW8260B - SIM, Run Date: 12/23/22 05:59, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	53.4	96-12-8	
1,4-Dioxane*	Not detected	50		ug/kg	53.4	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 04:30, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	1,000	1,000		ug/kg	53.4	67-64-1	B
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	53.4	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	53.4	107-13-1	
2-Butanone (MEK)	Not detected	800		ug/kg	53.4	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	53.4	75-71-8	

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43533.08 (continued)

Sample Tag: AOC9-SB-02 (8-10)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 04:30, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloromethane	Not detected	300		ug/kg	53.4	74-87-3	
Vinyl chloride	Not detected	50		ug/kg	53.4	75-01-4	
Bromomethane	Not detected	200		ug/kg	53.4	74-83-9	
Chloroethane	Not detected	300		ug/kg	53.4	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	53.4	75-69-4	
1,1-Dichloroethene	Not detected	50		ug/kg	53.4	75-35-4	
Methylene chloride	Not detected	100		ug/kg	53.4	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	53.4	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	53.4	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	53.4	156-59-2	
Chloroform	Not detected	50		ug/kg	53.4	67-66-3	
1,1,1-Trichloroethane	Not detected	50		ug/kg	53.4	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	53.4	108-10-1	
Carbon tetrachloride	Not detected	50		ug/kg	53.4	56-23-5	
Benzene	Not detected	50		ug/kg	53.4	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	53.4	107-06-2	
Trichloroethene	Not detected	50		ug/kg	53.4	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	53.4	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	53.4	75-27-4	
Dibromomethane	Not detected	300		ug/kg	53.4	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	53.4	10061-01-5	
Toluene	Not detected	50		ug/kg	53.4	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	53.4	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	53.4	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	53.4	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	53.4	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	53.4	106-93-4	M
Chlorobenzene	Not detected	50		ug/kg	53.4	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	53.4	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	53.4	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	53.4		
o-Xylene	Not detected	50		ug/kg	53.4	95-47-6	
Styrene	Not detected	50		ug/kg	53.4	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	53.4	98-82-8	
Bromoform	Not detected	100		ug/kg	53.4	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	53.4	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	53.4	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	53.4	103-65-1	
Bromobenzene	Not detected	100		ug/kg	53.4	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	53.4	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	53.4	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	53.4	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	53.4	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	53.4	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	53.4	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	53.4	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	53.4	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	53.4	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	53.4	104-51-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.08 (continued)

Sample Tag: AOC9-SB-02 (8-10)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 04:30, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2,4-Trichlorobenzene	Not detected	350		ug/kg	53.4	120-82-1	
1,2,3-Trichlorobenzene	Not detected	350		ug/kg	53.4	87-61-6	
Naphthalene	Not detected	300		ug/kg	53.4	91-20-3	
Acrolein	Not detected	50		ug/kg	53.4	107-02-8	
2-Chlorotoluene	Not detected	50		ug/kg	53.4	95-49-8	
4-Chlorotoluene	Not detected	50		ug/kg	53.4	106-43-4	
1,3-Dichloropropane	Not detected	50		ug/kg	53.4	142-28-9	
1,1-Dichloropropene	Not detected	50		ug/kg	53.4	563-58-6	
2,2-Dichloropropane	Not detected	50		ug/kg	53.4	594-20-7	
Hexachlorobutadiene	Not detected	50		ug/kg	53.4	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	53.4	76-13-1	

Other / Misc.

Method: , Run Date: 12/20/22 15:11, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:03, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

Method: , Run Date: 12/21/22 08:15, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project (Replicate 01)*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.09

Sample Tag: AOC9-MW-22-15 (2-4)

Collected Date/Time: 12/14/2022 13:30

Matrix: Soil

COC Reference: 158678

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
4	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/20/22 13:15	JRH	
BNA Extraction*	Completed	SW3546	12/20/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/20/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	11.647/11	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:05	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	92	1		%	1		

Metals

Method: SW6020A, Run Date: 12/20/22 14:27, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	2,560	1.0		mg/kg	338	7429-90-5	
Antimony	Not detected	0.50		mg/kg	338	7440-36-0	
Arsenic	0.24	0.20		mg/kg	338	7440-38-2	
Barium	10.4	1.0		mg/kg	338	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	338	7440-41-7	
Boron	Not detected	2.0		mg/kg	338	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	338	7440-43-9	
Chromium	1.69	0.50		mg/kg	338	7440-47-3	
Cobalt	Not detected	0.50		mg/kg	338	7440-48-4	
Copper	Not detected	0.50		mg/kg	338	7440-50-8	
Iron	1,050	1.0		mg/kg	338	7439-89-6	
Lead	1.08	0.30		mg/kg	338	7439-92-1	
Manganese	4.20	0.50		mg/kg	338	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	338	7439-98-7	
Nickel	1.01	0.50		mg/kg	338	7440-02-0	
Selenium	Not detected	0.40		mg/kg	338	7782-49-2	
Silver	Not detected	0.20		mg/kg	338	7440-22-4	
Strontium	1.69	0.50		mg/kg	338	7440-24-6	
Thallium	Not detected	0.20		mg/kg	338	7440-28-0	
Tin	Not detected	2.0		mg/kg	338	7440-31-5	
Titanium	11.8	1.0		mg/kg	338	7440-32-6	
Vanadium	3.23	0.50		mg/kg	338	7440-62-2	
Zinc	2.27	0.50		mg/kg	338	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S43533.09 (continued)

Sample Tag: AOC9-MW-22-15 (2-4)

Method: SW6020A, Run Date: 12/28/22 14:54, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	530	30		mg/kg	338	7440-70-2	
Magnesium	125	15		mg/kg	338	7439-95-4	
Potassium	67.3	15		mg/kg	338	7440-09-7	
Sodium	33.3	15		mg/kg	338	7440-23-5	

Method: SW7471B, Run Date: 12/20/22 13:21, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	81	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/21/22 15:23, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	10	12674-11-2	
PCB-1242	Not detected	330		ug/kg	10	53469-21-9	
PCB-1221	Not detected	330		ug/kg	10	11104-28-2	
PCB-1232	Not detected	330		ug/kg	10	11141-16-5	
PCB-1248	Not detected	330		ug/kg	10	12672-29-6	
PCB-1254	Not detected	330		ug/kg	10	11097-69-1	
PCB-1260	Not detected	330		ug/kg	10	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 12/29/22 01:05, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	6		

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 01:05, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	330		ug/kg	6	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8	
Anthracene	Not detected	330		ug/kg	6	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3	
Chrysene	Not detected	330		ug/kg	6	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2	



Analytical Laboratory Report

Lab Sample ID: S43533.09 (continued)

Sample Tag: AOC9-MW-22-15 (2-4)

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 01:05, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1	
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0	
Fluoranthene	Not detected	330		ug/kg	6	206-44-0	
Fluorene	Not detected	330		ug/kg	6	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5	
Isophorone	Not detected	330		ug/kg	6	78-59-1	
Naphthalene	Not detected	330		ug/kg	6	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5	
Phenanthrene	Not detected	330		ug/kg	6	85-01-8	
Phenol	Not detected	330		ug/kg	6	108-95-2	
Pyrene	Not detected	330		ug/kg	6	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2	
Benzidine	Not detected	330		ug/kg	6	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/28/22 04:54, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	55.7	108-20-3	
TICs*	None Found			ug/kg	55.7		

Method: SW8260B - SIM, Run Date: 12/23/22 06:20, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	55.7	96-12-8	
1,4-Dioxane*	Not detected	60		ug/kg	55.7	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 04:54, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	1,000	1,000		ug/kg	55.7	67-64-1	B
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	55.7	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	55.7	107-13-1	
2-Butanone (MEK)	Not detected	840		ug/kg	55.7	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	55.7	75-71-8	

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43533.09 (continued)

Sample Tag: AOC9-MW-22-15 (2-4)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 04:54, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloromethane	Not detected	300		ug/kg	55.7	74-87-3	
Vinyl chloride	Not detected	60		ug/kg	55.7	75-01-4	
Bromomethane	Not detected	200		ug/kg	55.7	74-83-9	
Chloroethane	Not detected	300		ug/kg	55.7	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	55.7	75-69-4	
1,1-Dichloroethene	Not detected	60		ug/kg	55.7	75-35-4	
Methylene chloride	Not detected	100		ug/kg	55.7	75-09-2	
trans-1,2-Dichloroethene	Not detected	60		ug/kg	55.7	156-60-5	
1,1-Dichloroethane	Not detected	60		ug/kg	55.7	75-34-3	
cis-1,2-Dichloroethene	Not detected	60		ug/kg	55.7	156-59-2	
Chloroform	Not detected	60		ug/kg	55.7	67-66-3	
1,1,1-Trichloroethane	Not detected	60		ug/kg	55.7	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	55.7	108-10-1	
Carbon tetrachloride	Not detected	60		ug/kg	55.7	56-23-5	
Benzene	Not detected	60		ug/kg	55.7	71-43-2	
1,2-Dichloroethane	Not detected	60		ug/kg	55.7	107-06-2	
Trichloroethene	Not detected	60		ug/kg	55.7	79-01-6	
1,2-Dichloropropane	Not detected	60		ug/kg	55.7	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	55.7	75-27-4	
Dibromomethane	Not detected	300		ug/kg	55.7	74-95-3	
cis-1,3-Dichloropropene	Not detected	60		ug/kg	55.7	10061-01-5	
Toluene	Not detected	60		ug/kg	55.7	108-88-3	
trans-1,3-Dichloropropene	Not detected	60		ug/kg	55.7	10061-02-6	
1,1,2-Trichloroethane	Not detected	60		ug/kg	55.7	79-00-5	
Tetrachloroethene	Not detected	60		ug/kg	55.7	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	55.7	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	55.7	106-93-4	M
Chlorobenzene	Not detected	60		ug/kg	55.7	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	55.7	630-20-6	
Ethylbenzene	Not detected	60		ug/kg	55.7	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	55.7		
o-Xylene	Not detected	60		ug/kg	55.7	95-47-6	
Styrene	Not detected	60		ug/kg	55.7	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	55.7	98-82-8	
Bromoform	Not detected	100		ug/kg	55.7	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	55.7	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	55.7	96-18-4	
n-Propylbenzene	Not detected	60		ug/kg	55.7	103-65-1	
Bromobenzene	Not detected	100		ug/kg	55.7	108-86-1	
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	55.7	108-67-8	
tert-Butylbenzene	Not detected	60		ug/kg	55.7	98-06-6	
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	55.7	95-63-6	
sec-Butylbenzene	Not detected	60		ug/kg	55.7	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	55.7	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	55.7	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	55.7	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	55.7	95-50-1	
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	55.7	526-73-8	
n-Butylbenzene	Not detected	60		ug/kg	55.7	104-51-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.09 (continued)

Sample Tag: AOC9-MW-22-15 (2-4)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 04:54, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2,4-Trichlorobenzene	Not detected	370		ug/kg	55.7	120-82-1	
1,2,3-Trichlorobenzene	Not detected	370		ug/kg	55.7	87-61-6	
Naphthalene	Not detected	300		ug/kg	55.7	91-20-3	
Acrolein	Not detected	60		ug/kg	55.7	107-02-8	
2-Chlorotoluene	Not detected	60		ug/kg	55.7	95-49-8	
4-Chlorotoluene	Not detected	60		ug/kg	55.7	106-43-4	
1,3-Dichloropropane	Not detected	60		ug/kg	55.7	142-28-9	
1,1-Dichloropropene	Not detected	60		ug/kg	55.7	563-58-6	
2,2-Dichloropropane	Not detected	60		ug/kg	55.7	594-20-7	
Hexachlorobutadiene	Not detected	60		ug/kg	55.7	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	55.7	76-13-1	

Other / Misc.

Method: , Run Date: 12/20/22 15:32, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:03, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

Method: , Run Date: 12/21/22 08:15, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project (Replicate 01)*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.10

Sample Tag: AOC9-MW-22-15 (8-10)

Collected Date/Time: 12/14/2022 13:40

Matrix: Soil

COC Reference: 158678

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
4	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/20/22 13:15	JRH	
BNA Extraction*	Completed	SW3546	12/20/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/20/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	15.392/15	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:05	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	94	1		%	1		

Metals

Method: SW6020A, Run Date: 12/20/22 14:29, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	857	1.0		mg/kg	302	7429-90-5	
Antimony	Not detected	0.50		mg/kg	302	7440-36-0	
Arsenic	Not detected	0.20		mg/kg	302	7440-38-2	
Barium	6.69	1.0		mg/kg	302	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	302	7440-41-7	
Boron	Not detected	2.0		mg/kg	302	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	302	7440-43-9	
Chromium	2.75	0.50		mg/kg	302	7440-47-3	
Cobalt	0.55	0.50		mg/kg	302	7440-48-4	
Copper	1.80	0.50		mg/kg	302	7440-50-8	
Iron	875	1.0		mg/kg	302	7439-89-6	
Lead	1.20	0.30		mg/kg	302	7439-92-1	
Manganese	7.37	0.50		mg/kg	302	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	302	7439-98-7	
Nickel	1.89	0.50		mg/kg	302	7440-02-0	
Selenium	Not detected	0.40		mg/kg	302	7782-49-2	
Silver	Not detected	0.20		mg/kg	302	7440-22-4	
Strontium	1.59	0.50		mg/kg	302	7440-24-6	
Thallium	Not detected	0.20		mg/kg	302	7440-28-0	
Tin	Not detected	2.0		mg/kg	302	7440-31-5	
Titanium	4.29	1.0		mg/kg	302	7440-32-6	
Vanadium	4.02	0.50		mg/kg	302	7440-62-2	
Zinc	6.01	0.50		mg/kg	302	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S43533.10 (continued)

Sample Tag: AOC9-MW-22-15 (8-10)

Method: SW6020A, Run Date: 12/28/22 15:10, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	457	30		mg/kg	302	7440-70-2	
Magnesium	163	15		mg/kg	302	7439-95-4	
Potassium	36.6	15		mg/kg	302	7440-09-7	
Sodium	Not detected	15		mg/kg	302	7440-23-5	

Method: SW7471B, Run Date: 12/20/22 13:24, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	79	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/21/22 15:35, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	10	12674-11-2	
PCB-1242	Not detected	330		ug/kg	10	53469-21-9	
PCB-1221	Not detected	330		ug/kg	10	11104-28-2	
PCB-1232	Not detected	330		ug/kg	10	11141-16-5	
PCB-1248	Not detected	330		ug/kg	10	12672-29-6	
PCB-1254	Not detected	330		ug/kg	10	11097-69-1	
PCB-1260	Not detected	330		ug/kg	10	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 12/29/22 00:35, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	6		

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 00:35, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	330		ug/kg	6	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8	
Anthracene	Not detected	330		ug/kg	6	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3	
Chrysene	Not detected	330		ug/kg	6	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2	



Analytical Laboratory Report

Lab Sample ID: S43533.10 (continued)

Sample Tag: AOC9-MW-22-15 (8-10)

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 00:35, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1	
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0	
Fluoranthene	Not detected	330		ug/kg	6	206-44-0	
Fluorene	Not detected	330		ug/kg	6	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5	
Isophorone	Not detected	330		ug/kg	6	78-59-1	
Naphthalene	Not detected	330		ug/kg	6	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5	
Phenanthrene	Not detected	330		ug/kg	6	85-01-8	
Phenol	Not detected	330		ug/kg	6	108-95-2	
Pyrene	Not detected	330		ug/kg	6	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2	
Benzidine	Not detected	330		ug/kg	6	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/28/22 05:18, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	55	108-20-3	
TICs*	None Found			ug/kg	55		

Method: SW8260B - SIM, Run Date: 12/23/22 06:41, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	55	96-12-8	
1,4-Dioxane*	Not detected	60		ug/kg	55	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 05:18, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	2,000	1,000		ug/kg	55	67-64-1	B
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	55	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	55	107-13-1	
2-Butanone (MEK)	Not detected	830		ug/kg	55	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	55	75-71-8	

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43533.10 (continued)

Sample Tag: AOC9-MW-22-15 (8-10)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 05:18, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloromethane	Not detected	300		ug/kg	55	74-87-3	
Vinyl chloride	Not detected	60		ug/kg	55	75-01-4	
Bromomethane	Not detected	200		ug/kg	55	74-83-9	
Chloroethane	Not detected	300		ug/kg	55	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	55	75-69-4	
1,1-Dichloroethene	Not detected	60		ug/kg	55	75-35-4	
Methylene chloride	Not detected	100		ug/kg	55	75-09-2	
trans-1,2-Dichloroethene	Not detected	60		ug/kg	55	156-60-5	
1,1-Dichloroethane	Not detected	60		ug/kg	55	75-34-3	
cis-1,2-Dichloroethene	Not detected	60		ug/kg	55	156-59-2	
Chloroform	Not detected	60		ug/kg	55	67-66-3	
1,1,1-Trichloroethane	Not detected	60		ug/kg	55	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	55	108-10-1	
Carbon tetrachloride	Not detected	60		ug/kg	55	56-23-5	
Benzene	Not detected	60		ug/kg	55	71-43-2	
1,2-Dichloroethane	Not detected	60		ug/kg	55	107-06-2	
Trichloroethene	Not detected	60		ug/kg	55	79-01-6	
1,2-Dichloropropane	Not detected	60		ug/kg	55	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	55	75-27-4	
Dibromomethane	Not detected	300		ug/kg	55	74-95-3	
cis-1,3-Dichloropropene	Not detected	60		ug/kg	55	10061-01-5	
Toluene	Not detected	60		ug/kg	55	108-88-3	
trans-1,3-Dichloropropene	Not detected	60		ug/kg	55	10061-02-6	
1,1,2-Trichloroethane	Not detected	60		ug/kg	55	79-00-5	
Tetrachloroethene	Not detected	60		ug/kg	55	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	55	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	55	106-93-4	M
Chlorobenzene	Not detected	60		ug/kg	55	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	55	630-20-6	
Ethylbenzene	Not detected	60		ug/kg	55	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	55		
o-Xylene	Not detected	60		ug/kg	55	95-47-6	
Styrene	Not detected	60		ug/kg	55	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	55	98-82-8	
Bromoform	Not detected	100		ug/kg	55	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	55	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	55	96-18-4	
n-Propylbenzene	Not detected	60		ug/kg	55	103-65-1	
Bromobenzene	Not detected	100		ug/kg	55	108-86-1	
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	55	108-67-8	
tert-Butylbenzene	Not detected	60		ug/kg	55	98-06-6	
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	55	95-63-6	
sec-Butylbenzene	Not detected	60		ug/kg	55	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	55	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	55	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	55	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	55	95-50-1	
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	55	526-73-8	
n-Butylbenzene	Not detected	60		ug/kg	55	104-51-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.10 (continued)

Sample Tag: AOC9-MW-22-15 (8-10)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 05:18, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2,4-Trichlorobenzene	Not detected	360		ug/kg	55	120-82-1	
1,2,3-Trichlorobenzene	Not detected	360		ug/kg	55	87-61-6	
Naphthalene	Not detected	300		ug/kg	55	91-20-3	
Acrolein	Not detected	60		ug/kg	55	107-02-8	
2-Chlorotoluene	Not detected	60		ug/kg	55	95-49-8	
4-Chlorotoluene	Not detected	60		ug/kg	55	106-43-4	
1,3-Dichloropropane	Not detected	60		ug/kg	55	142-28-9	
1,1-Dichloropropene	Not detected	60		ug/kg	55	563-58-6	
2,2-Dichloropropane	Not detected	60		ug/kg	55	594-20-7	
Hexachlorobutadiene	Not detected	60		ug/kg	55	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	55	76-13-1	

Other / Misc.

Method: , Run Date: 12/20/22 15:53, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:03, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

Method: , Run Date: 12/21/22 08:15, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project (Replicate 01)*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.11

Sample Tag: AOC9-MW-22-16 (2-4)

Collected Date/Time: 12/14/2022 15:50

Matrix: Soil

COC Reference: 158678

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
3	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/20/22 13:15	JRH	
BNA Extraction*	Completed	SW3546	12/20/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/20/22 14:00	TAW	
Sample wt. (g) / Methanol (ml)*	12.075/12	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:05	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	93	1		%	1		

Metals

Method: SW6020A, Run Date: 12/20/22 14:31, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	2,840	1.0		mg/kg	312	7429-90-5	
Antimony	Not detected	0.50		mg/kg	312	7440-36-0	
Arsenic	0.53	0.20		mg/kg	312	7440-38-2	
Barium	16.7	1.0		mg/kg	312	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	312	7440-41-7	
Boron	Not detected	2.0		mg/kg	312	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	312	7440-43-9	
Chromium	3.33	0.50		mg/kg	312	7440-47-3	
Cobalt	0.59	0.50		mg/kg	312	7440-48-4	
Copper	3.29	0.50		mg/kg	312	7440-50-8	
Iron	1,530	1.0		mg/kg	312	7439-89-6	
Lead	3.77	0.30		mg/kg	312	7439-92-1	
Manganese	43.3	0.50		mg/kg	312	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	312	7439-98-7	
Nickel	1.84	0.50		mg/kg	312	7440-02-0	
Selenium	Not detected	0.40		mg/kg	312	7782-49-2	
Silver	Not detected	0.20		mg/kg	312	7440-22-4	
Strontium	6.07	0.50		mg/kg	312	7440-24-6	
Thallium	Not detected	0.20		mg/kg	312	7440-28-0	
Tin	Not detected	2.0		mg/kg	312	7440-31-5	
Titanium	23.1	1.0		mg/kg	312	7440-32-6	
Vanadium	3.30	0.50		mg/kg	312	7440-62-2	
Zinc	5.55	0.50		mg/kg	312	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S43533.11 (continued)

Sample Tag: AOC9-MW-22-16 (2-4)

Method: SW6020A, Run Date: 12/28/22 14:56, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	2,630	30		mg/kg	312	7440-70-2	
Magnesium	505	15		mg/kg	312	7439-95-4	
Potassium	90.0	15		mg/kg	312	7440-09-7	
Sodium	23.0	15		mg/kg	312	7440-23-5	

Method: SW7471B, Run Date: 12/20/22 13:34, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	77	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/21/22 15:47, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	10	12674-11-2	
PCB-1242	Not detected	330		ug/kg	10	53469-21-9	
PCB-1221	Not detected	330		ug/kg	10	11104-28-2	
PCB-1232	Not detected	330		ug/kg	10	11141-16-5	
PCB-1248	Not detected	330		ug/kg	10	12672-29-6	
PCB-1254	Not detected	330		ug/kg	10	11097-69-1	
PCB-1260	Not detected	330		ug/kg	10	11096-82-5	

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 12:39, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	330		ug/kg	6	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8	
Anthracene	Not detected	330		ug/kg	6	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3	
Chrysene	Not detected	330		ug/kg	6	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2	
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1	



Analytical Laboratory Report

Lab Sample ID: S43533.11 (continued)

Sample Tag: AOC9-MW-22-16 (2-4)

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/29/22 12:39, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0	
Fluoranthene	Not detected	330		ug/kg	6	206-44-0	
Fluorene	Not detected	330		ug/kg	6	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5	
Isophorone	Not detected	330		ug/kg	6	78-59-1	
Naphthalene	Not detected	330		ug/kg	6	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5	
Phenanthrene	Not detected	330		ug/kg	6	85-01-8	
Phenol	Not detected	330		ug/kg	6	108-95-2	
Pyrene	Not detected	330		ug/kg	6	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2	
Benzidine	Not detected	330		ug/kg	6	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9	

TICs Semi-Volatiles, Method: SW8270D, Run Date: 12/29/22 12:39, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	Found			ug/kg	6		
Fluoranthene	Found			ug/kg	6	206-44-0	
Pyrene	Found			ug/kg	6	129-00-0	
Chrysene	Found			ug/kg	6	218-01-9	
Benzo(a)anthracene	Found			ug/kg	6	56-55-3	
Benzo(a)pyrene	Found			ug/kg	6	50-32-8	
Benzo(e)pyrene	Found			ug/kg	6	192-97-2	
Benzo(b)fluoranthene	Found			ug/kg	6	205-99-2	
Benzo(k)fluoranthene	Found			ug/kg	6	207-08-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/28/22 05:43, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	57.2	108-20-3	
TICs*	None Found			ug/kg	57.2		

Method: SW8260B - SIM, Run Date: 12/23/22 07:01, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	57.2	96-12-8	
1,4-Dioxane*	Not detected	60		ug/kg	57.2	123-91-1	



Analytical Laboratory Report

Lab Sample ID: S43533.11 (continued)

Sample Tag: AOC9-MW-22-16 (2-4)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 05:43, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	2,000	1,000		ug/kg	57.2	67-64-1	B
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	57.2	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	57.2	107-13-1	
2-Butanone (MEK)	Not detected	860		ug/kg	57.2	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	57.2	75-71-8	
Chloromethane	Not detected	300		ug/kg	57.2	74-87-3	
Vinyl chloride	Not detected	60		ug/kg	57.2	75-01-4	
Bromomethane	Not detected	200		ug/kg	57.2	74-83-9	
Chloroethane	Not detected	300		ug/kg	57.2	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	57.2	75-69-4	
1,1-Dichloroethene	Not detected	60		ug/kg	57.2	75-35-4	
Methylene chloride	Not detected	100		ug/kg	57.2	75-09-2	
trans-1,2-Dichloroethene	Not detected	60		ug/kg	57.2	156-60-5	
1,1-Dichloroethane	Not detected	60		ug/kg	57.2	75-34-3	
cis-1,2-Dichloroethene	Not detected	60		ug/kg	57.2	156-59-2	
Chloroform	Not detected	60		ug/kg	57.2	67-66-3	
1,1,1-Trichloroethane	Not detected	60		ug/kg	57.2	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	57.2	108-10-1	
Carbon tetrachloride	Not detected	60		ug/kg	57.2	56-23-5	
Benzene	Not detected	60		ug/kg	57.2	71-43-2	
1,2-Dichloroethane	Not detected	60		ug/kg	57.2	107-06-2	
Trichloroethene	Not detected	60		ug/kg	57.2	79-01-6	
1,2-Dichloropropane	Not detected	60		ug/kg	57.2	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	57.2	75-27-4	
Dibromomethane	Not detected	300		ug/kg	57.2	74-95-3	
cis-1,3-Dichloropropene	Not detected	60		ug/kg	57.2	10061-01-5	
Toluene	Not detected	60		ug/kg	57.2	108-88-3	
trans-1,3-Dichloropropene	Not detected	60		ug/kg	57.2	10061-02-6	
1,1,2-Trichloroethane	Not detected	60		ug/kg	57.2	79-00-5	
Tetrachloroethene	Not detected	60		ug/kg	57.2	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	57.2	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	57.2	106-93-4	M
Chlorobenzene	Not detected	60		ug/kg	57.2	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	57.2	630-20-6	
Ethylbenzene	Not detected	60		ug/kg	57.2	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	57.2		
o-Xylene	Not detected	60		ug/kg	57.2	95-47-6	
Styrene	Not detected	60		ug/kg	57.2	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	57.2	98-82-8	
Bromoform	Not detected	100		ug/kg	57.2	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	57.2	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	57.2	96-18-4	
n-Propylbenzene	Not detected	60		ug/kg	57.2	103-65-1	
Bromobenzene	Not detected	100		ug/kg	57.2	108-86-1	
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	57.2	108-67-8	
tert-Butylbenzene	Not detected	60		ug/kg	57.2	98-06-6	
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	57.2	95-63-6	
sec-Butylbenzene	Not detected	60		ug/kg	57.2	135-98-8	

B-Compound also found in associated method blank

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.11 (continued)

Sample Tag: AOC9-MW-22-16 (2-4)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 05:43, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
p-Isopropyltoluene	Not detected	100		ug/kg	57.2	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	57.2	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	57.2	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	57.2	95-50-1	
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	57.2	526-73-8	
n-Butylbenzene	Not detected	60		ug/kg	57.2	104-51-8	
1,2,4-Trichlorobenzene	Not detected	380		ug/kg	57.2	120-82-1	
1,2,3-Trichlorobenzene	Not detected	380		ug/kg	57.2	87-61-6	
Naphthalene	Not detected	300		ug/kg	57.2	91-20-3	
Acrolein	Not detected	60		ug/kg	57.2	107-02-8	
2-Chlorotoluene	Not detected	60		ug/kg	57.2	95-49-8	
4-Chlorotoluene	Not detected	60		ug/kg	57.2	106-43-4	
1,3-Dichloropropane	Not detected	60		ug/kg	57.2	142-28-9	
1,1-Dichloropropene	Not detected	60		ug/kg	57.2	563-58-6	
2,2-Dichloropropane	Not detected	60		ug/kg	57.2	594-20-7	
Hexachlorobutadiene	Not detected	60		ug/kg	57.2	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	57.2	76-13-1	

Other / Misc.

Method: , Run Date: 12/20/22 16:14, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:03, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.12

Sample Tag: AOC9-MW-22-16 (8-10)

Collected Date/Time: 12/14/2022 16:00

Matrix: Soil

COC Reference: 158678

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
3	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/20/22 13:15	JRH	
BNA Extraction*	Completed	SW3546	12/20/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/27/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	10.897/10	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:05	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	95	1		%	1		

Metals

Method: SW6020A, Run Date: 12/20/22 14:33, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	546	1.0		mg/kg	304	7429-90-5	
Antimony	Not detected	0.50		mg/kg	304	7440-36-0	
Arsenic	0.24	0.20		mg/kg	304	7440-38-2	
Barium	2.69	1.0		mg/kg	304	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	304	7440-41-7	
Boron	Not detected	2.0		mg/kg	304	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	304	7440-43-9	
Chromium	1.38	0.50		mg/kg	304	7440-47-3	
Cobalt	0.62	0.50		mg/kg	304	7440-48-4	
Copper	2.11	0.50		mg/kg	304	7440-50-8	
Iron	1,140	1.0		mg/kg	304	7439-89-6	
Lead	1.14	0.30		mg/kg	304	7439-92-1	
Manganese	61.1	0.50		mg/kg	304	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	304	7439-98-7	
Nickel	1.87	0.50		mg/kg	304	7440-02-0	
Selenium	Not detected	0.40		mg/kg	304	7782-49-2	
Silver	Not detected	0.20		mg/kg	304	7440-22-4	
Strontium	27.2	0.50		mg/kg	304	7440-24-6	
Thallium	Not detected	0.20		mg/kg	304	7440-28-0	
Tin	Not detected	2.0		mg/kg	304	7440-31-5	
Titanium	3.90	1.0		mg/kg	304	7440-32-6	
Vanadium	2.33	0.50		mg/kg	304	7440-62-2	
Zinc	4.95	0.50		mg/kg	304	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S43533.12 (continued)

Sample Tag: AOC9-MW-22-16 (8-10)

Method: SW6020A, Run Date: 12/28/22 15:31, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	30,500	30		mg/kg	304	7440-70-2	
Magnesium	6,370	15		mg/kg	304	7439-95-4	
Potassium	91.4	15		mg/kg	304	7440-09-7	
Sodium	43.3	15		mg/kg	304	7440-23-5	

Method: SW7471B, Run Date: 12/20/22 13:38, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	78	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 16:02, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	1	12674-11-2	
PCB-1242	Not detected	330		ug/kg	1	53469-21-9	
PCB-1221	Not detected	330		ug/kg	1	11104-28-2	
PCB-1232	Not detected	330		ug/kg	1	11141-16-5	
PCB-1248	Not detected	330		ug/kg	1	12672-29-6	
PCB-1254	Not detected	330		ug/kg	1	11097-69-1	
PCB-1260	Not detected	330		ug/kg	1	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 12/28/22 19:58, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	6		

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 19:58, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	330		ug/kg	6	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	6	208-96-8	
Anthracene	Not detected	330		ug/kg	6	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	6	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	6	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	6	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	6	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	6	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	6	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	6	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	6	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	6	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	6	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	6	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	6	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	6	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	6	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	6	7005-72-3	
Chrysene	Not detected	330		ug/kg	6	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	6	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	6	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	6	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	6	120-83-2	



Analytical Laboratory Report

Lab Sample ID: S43533.12 (continued)

Sample Tag: AOC9-MW-22-16 (8-10)

Semi-Volatile Organics, Method: SW8270D, Run Date: 12/28/22 19:58, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diethyl phthalate	Not detected	330		ug/kg	6	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	6	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	6	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	6	534-52-1	
2,4-Dinitrophenol	Not detected	830		ug/kg	6	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	6	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	6	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	6	117-84-0	
Fluoranthene	Not detected	330		ug/kg	6	206-44-0	
Fluorene	Not detected	330		ug/kg	6	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	6	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	6	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	6	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	6	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	6	193-39-5	
Isophorone	Not detected	330		ug/kg	6	78-59-1	
Naphthalene	Not detected	330		ug/kg	6	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	6	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	6	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	6	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	6	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	6	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	6	87-86-5	
Phenanthrene	Not detected	330		ug/kg	6	85-01-8	
Phenol	Not detected	330		ug/kg	6	108-95-2	
Pyrene	Not detected	330		ug/kg	6	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	6	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	6	88-06-2	
Benzidine	Not detected	330		ug/kg	6	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	6	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/28/22 06:07, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	50.9	108-20-3	
TICs*	None Found			ug/kg	50.9		

Method: SW8260B - SIM, Run Date: 12/23/22 09:44, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	50.9	96-12-8	
1,4-Dioxane*	Not detected	50		ug/kg	50.9	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 06:07, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	2,000	1,000		ug/kg	50.9	67-64-1	B
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	50.9	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	50.9	107-13-1	
2-Butanone (MEK)	Not detected	760		ug/kg	50.9	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	50.9	75-71-8	

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43533.12 (continued)

Sample Tag: AOC9-MW-22-16 (8-10)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 06:07, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chloromethane	Not detected	300		ug/kg	50.9	74-87-3	
Vinyl chloride	Not detected	50		ug/kg	50.9	75-01-4	
Bromomethane	Not detected	200		ug/kg	50.9	74-83-9	
Chloroethane	Not detected	300		ug/kg	50.9	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	50.9	75-69-4	
1,1-Dichloroethene	Not detected	50		ug/kg	50.9	75-35-4	
Methylene chloride	Not detected	100		ug/kg	50.9	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	50.9	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	50.9	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	50.9	156-59-2	
Chloroform	Not detected	50		ug/kg	50.9	67-66-3	
1,1,1-Trichloroethane	Not detected	50		ug/kg	50.9	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	50.9	108-10-1	
Carbon tetrachloride	Not detected	50		ug/kg	50.9	56-23-5	
Benzene	Not detected	50		ug/kg	50.9	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	50.9	107-06-2	
Trichloroethene	Not detected	50		ug/kg	50.9	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	50.9	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	50.9	75-27-4	
Dibromomethane	Not detected	300		ug/kg	50.9	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	50.9	10061-01-5	
Toluene	Not detected	50		ug/kg	50.9	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	50.9	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	50.9	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	50.9	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	50.9	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	50.9	106-93-4	M
Chlorobenzene	Not detected	50		ug/kg	50.9	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	50.9	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	50.9	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	50.9		
o-Xylene	Not detected	50		ug/kg	50.9	95-47-6	
Styrene	Not detected	50		ug/kg	50.9	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	50.9	98-82-8	
Bromoform	Not detected	100		ug/kg	50.9	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	50.9	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	50.9	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	50.9	103-65-1	
Bromobenzene	Not detected	100		ug/kg	50.9	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	50.9	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	50.9	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	50.9	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	50.9	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	50.9	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	50.9	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	50.9	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	50.9	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	50.9	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	50.9	104-51-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.12 (continued)

Sample Tag: AOC9-MW-22-16 (8-10)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 06:07, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2,4-Trichlorobenzene	Not detected	340		ug/kg	50.9	120-82-1	
1,2,3-Trichlorobenzene	Not detected	340		ug/kg	50.9	87-61-6	
Naphthalene	Not detected	300		ug/kg	50.9	91-20-3	
Acrolein	Not detected	50		ug/kg	50.9	107-02-8	
2-Chlorotoluene	Not detected	50		ug/kg	50.9	95-49-8	
4-Chlorotoluene	Not detected	50		ug/kg	50.9	106-43-4	
1,3-Dichloropropane	Not detected	50		ug/kg	50.9	142-28-9	
1,1-Dichloropropene	Not detected	50		ug/kg	50.9	563-58-6	
2,2-Dichloropropane	Not detected	50		ug/kg	50.9	594-20-7	
Hexachlorobutadiene	Not detected	50		ug/kg	50.9	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	50.9	76-13-1	

Other / Misc.

Method: , Run Date: 12/20/22 16:35, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:03, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.13

Sample Tag: AOC3-TP01-W

Collected Date/Time: 12/14/2022 09:37

Matrix: Soil

COC Reference: 158676

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
3	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/20/22 13:15	JRH	
BNA Extraction*	Completed	SW3546	12/21/22 14:00	TTV	
Extraction, PCB*	Completed	SW3546	12/27/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	14.120/14	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:05	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	98	1		%	1		

Metals

Method: SW6020A, Run Date: 12/20/22 15:03, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	962	1.0		mg/kg	293	7429-90-5	
Antimony	Not detected	0.50		mg/kg	293	7440-36-0	
Arsenic	0.42	0.20		mg/kg	293	7440-38-2	
Barium	6.45	1.0		mg/kg	293	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	293	7440-41-7	
Boron	Not detected	2.0		mg/kg	293	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	293	7440-43-9	
Chromium	1.29	0.50		mg/kg	293	7440-47-3	
Cobalt	0.68	0.50		mg/kg	293	7440-48-4	
Copper	0.50	0.50		mg/kg	293	7440-50-8	
Iron	1,320	1.0		mg/kg	293	7439-89-6	
Lead	0.71	0.30		mg/kg	293	7439-92-1	
Manganese	116	0.50		mg/kg	293	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	293	7439-98-7	
Nickel	0.80	0.50		mg/kg	293	7440-02-0	
Selenium	Not detected	0.40		mg/kg	293	7782-49-2	
Silver	Not detected	0.20		mg/kg	293	7440-22-4	
Strontium	0.53	0.50		mg/kg	293	7440-24-6	
Thallium	Not detected	0.20		mg/kg	293	7440-28-0	
Tin	Not detected	2.0		mg/kg	293	7440-31-5	
Titanium	10.0	1.0		mg/kg	293	7440-32-6	
Vanadium	2.63	0.50		mg/kg	293	7440-62-2	
Zinc	1.95	0.50		mg/kg	293	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S43533.13 (continued)

Sample Tag: AOC3-TP01-W

Method: SW6020A, Run Date: 12/28/22 15:33, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	210	30		mg/kg	293	7440-70-2	
Magnesium	192	15		mg/kg	293	7439-95-4	
Potassium	84.6	15		mg/kg	293	7440-09-7	
Sodium	29.8	15		mg/kg	293	7440-23-5	

Method: SW7471B, Run Date: 12/20/22 13:47, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	75	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 16:14, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	1	12674-11-2	
PCB-1242	Not detected	330		ug/kg	1	53469-21-9	
PCB-1221	Not detected	330		ug/kg	1	11104-28-2	
PCB-1232	Not detected	330		ug/kg	1	11141-16-5	
PCB-1248	Not detected	330		ug/kg	1	12672-29-6	
PCB-1254	Not detected	330		ug/kg	1	11097-69-1	
PCB-1260	Not detected	330		ug/kg	1	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/03/23 15:02, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	7.5		
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8	
Anthracene	Not detected	330		ug/kg	7.5	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3	
Chrysene	Not detected	330		ug/kg	7.5	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2	
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3	



Analytical Laboratory Report

Lab Sample ID: S43533.13 (continued)

Sample Tag: AOC3-TP01-W

Method: SW8270D, Run Date: 01/03/23 15:02, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1	
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0	
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0	
Fluorene	Not detected	330		ug/kg	7.5	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5	
Isophorone	Not detected	330		ug/kg	7.5	78-59-1	
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5	
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8	
Phenol	Not detected	330		ug/kg	7.5	108-95-2	
Pyrene	Not detected	330		ug/kg	7.5	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2	
Benzidine	Not detected	330		ug/kg	7.5	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/19/22 18:51, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	51.6	108-20-3	
TICs*	None Found			ug/kg	51.6		

Method: SW8260B - SIM, Run Date: 12/23/22 10:05, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	51.6	96-12-8	
1,4-Dioxane*	Not detected	50		ug/kg	51.6	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 18:51, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	1,000		ug/kg	51.6	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	51.6	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	51.6	107-13-1	
2-Butanone (MEK)	Not detected	770		ug/kg	51.6	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	51.6	75-71-8	
Chloromethane	Not detected	300		ug/kg	51.6	74-87-3	
Vinyl chloride	Not detected	50		ug/kg	51.6	75-01-4	
Bromomethane	Not detected	200		ug/kg	51.6	74-83-9	
Chloroethane	Not detected	300		ug/kg	51.6	75-00-3	



Analytical Laboratory Report

Lab Sample ID: S43533.13 (continued)

Sample Tag: AOC3-TP01-W

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 18:51, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichlorofluoromethane	Not detected	100		ug/kg	51.6	75-69-4	
1,1-Dichloroethene	Not detected	50		ug/kg	51.6	75-35-4	
Methylene chloride	Not detected	100		ug/kg	51.6	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	51.6	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	51.6	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	51.6	156-59-2	
Chloroform	Not detected	50		ug/kg	51.6	67-66-3	
1,1,1-Trichloroethane	Not detected	50		ug/kg	51.6	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	51.6	108-10-1	
Carbon tetrachloride	Not detected	50		ug/kg	51.6	56-23-5	
Benzene	Not detected	50		ug/kg	51.6	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	51.6	107-06-2	
Trichloroethene	Not detected	50		ug/kg	51.6	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	51.6	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	51.6	75-27-4	
Dibromomethane	Not detected	300		ug/kg	51.6	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	51.6	10061-01-5	
Toluene	Not detected	50		ug/kg	51.6	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	51.6	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	51.6	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	51.6	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	51.6	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	51.6	106-93-4	M
Chlorobenzene	Not detected	50		ug/kg	51.6	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	51.6	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	51.6	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	51.6		
o-Xylene	Not detected	50		ug/kg	51.6	95-47-6	
Styrene	Not detected	50		ug/kg	51.6	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	51.6	98-82-8	
Bromoform	Not detected	100		ug/kg	51.6	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	51.6	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	51.6	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	51.6	103-65-1	
Bromobenzene	Not detected	100		ug/kg	51.6	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	51.6	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	51.6	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	51.6	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	51.6	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	51.6	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	51.6	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	51.6	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	51.6	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	51.6	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	51.6	104-51-8	
1,2,4-Trichlorobenzene	Not detected	340		ug/kg	51.6	120-82-1	
1,2,3-Trichlorobenzene	Not detected	340		ug/kg	51.6	87-61-6	
Naphthalene	Not detected	300		ug/kg	51.6	91-20-3	
Acrolein	Not detected	50		ug/kg	51.6	107-02-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.13 (continued)

Sample Tag: AOC3-TP01-W

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 18:51, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2-Chlorotoluene	Not detected	50		ug/kg	51.6	95-49-8	
4-Chlorotoluene	Not detected	50		ug/kg	51.6	106-43-4	
1,3-Dichloropropane	Not detected	50		ug/kg	51.6	142-28-9	
1,1-Dichloropropene	Not detected	50		ug/kg	51.6	563-58-6	
2,2-Dichloropropane	Not detected	50		ug/kg	51.6	594-20-7	
Hexachlorobutadiene	Not detected	50		ug/kg	51.6	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	51.6	76-13-1	

Other / Misc.

Method: , Run Date: 12/20/22 16:56, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:03, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.14

Sample Tag: AOC3-TP01-E

Collected Date/Time: 12/14/2022 09:47

Matrix: Soil

COC Reference: 158676

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
3	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/20/22 13:15	JRH	
BNA Extraction*	Completed	SW3546	12/21/22 14:00	TTV	
Extraction, PCB*	Completed	SW3546	12/27/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	13.502/13	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:05	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	97	1		%	1		

Metals

Method: SW6020A, Run Date: 12/20/22 15:05, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	1,150	1.0		mg/kg	290	7429-90-5	
Antimony	Not detected	0.50		mg/kg	290	7440-36-0	
Arsenic	0.75	0.20		mg/kg	290	7440-38-2	
Barium	10.4	1.0		mg/kg	290	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	290	7440-41-7	
Boron	Not detected	2.0		mg/kg	290	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	290	7440-43-9	
Chromium	1.91	0.50		mg/kg	290	7440-47-3	
Cobalt	0.72	0.50		mg/kg	290	7440-48-4	
Copper	0.72	0.50		mg/kg	290	7440-50-8	
Iron	2,290	1.0		mg/kg	290	7439-89-6	
Lead	1.48	0.30		mg/kg	290	7439-92-1	
Manganese	187	0.50		mg/kg	290	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	290	7439-98-7	
Nickel	0.87	0.50		mg/kg	290	7440-02-0	
Selenium	Not detected	0.40		mg/kg	290	7782-49-2	
Silver	Not detected	0.20		mg/kg	290	7440-22-4	
Strontium	0.60	0.50		mg/kg	290	7440-24-6	
Thallium	Not detected	0.20		mg/kg	290	7440-28-0	
Tin	Not detected	2.0		mg/kg	290	7440-31-5	
Titanium	17.3	1.0		mg/kg	290	7440-32-6	
Vanadium	5.11	0.50		mg/kg	290	7440-62-2	
Zinc	1.77	0.50		mg/kg	290	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S43533.14 (continued)

Sample Tag: AOC3-TP01-E

Method: SW6020A, Run Date: 12/28/22 15:34, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	256	30		mg/kg	290	7440-70-2	
Magnesium	202	15		mg/kg	290	7439-95-4	
Potassium	76.6	15		mg/kg	290	7440-09-7	
Sodium	43.7	15		mg/kg	290	7440-23-5	

Method: SW7471B, Run Date: 12/20/22 13:51, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	78	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 16:26, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	1	12674-11-2	
PCB-1242	Not detected	330		ug/kg	1	53469-21-9	
PCB-1221	Not detected	330		ug/kg	1	11104-28-2	
PCB-1232	Not detected	330		ug/kg	1	11141-16-5	
PCB-1248	Not detected	330		ug/kg	1	12672-29-6	
PCB-1254	Not detected	330		ug/kg	1	11097-69-1	
PCB-1260	Not detected	330		ug/kg	1	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/03/23 15:33, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	7.5		
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8	
Anthracene	Not detected	330		ug/kg	7.5	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3	
Chrysene	Not detected	330		ug/kg	7.5	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2	
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3	



Analytical Laboratory Report

Lab Sample ID: S43533.14 (continued)

Sample Tag: AOC3-TP01-E

Method: SW8270D, Run Date: 01/03/23 15:33, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1	
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0	
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0	
Fluorene	Not detected	330		ug/kg	7.5	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5	
Isophorone	Not detected	330		ug/kg	7.5	78-59-1	
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5	
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8	
Phenol	Not detected	330		ug/kg	7.5	108-95-2	
Pyrene	Not detected	330		ug/kg	7.5	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2	
Benzidine	Not detected	330		ug/kg	7.5	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/19/22 19:15, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	51.2	108-20-3	
TICs*	None Found			ug/kg	51.2		

Method: SW8260B - SIM, Run Date: 12/23/22 10:25, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	51.2	96-12-8	
1,4-Dioxane*	Not detected	50		ug/kg	51.2	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 19:15, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	1,000		ug/kg	51.2	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	51.2	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	51.2	107-13-1	
2-Butanone (MEK)	Not detected	770		ug/kg	51.2	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	51.2	75-71-8	
Chloromethane	Not detected	300		ug/kg	51.2	74-87-3	
Vinyl chloride	Not detected	50		ug/kg	51.2	75-01-4	
Bromomethane	Not detected	200		ug/kg	51.2	74-83-9	
Chloroethane	Not detected	300		ug/kg	51.2	75-00-3	



Analytical Laboratory Report

Lab Sample ID: S43533.14 (continued)

Sample Tag: AOC3-TP01-E

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 19:15, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichlorofluoromethane	Not detected	100		ug/kg	51.2	75-69-4	
1,1-Dichloroethene	Not detected	50		ug/kg	51.2	75-35-4	
Methylene chloride	Not detected	100		ug/kg	51.2	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	51.2	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	51.2	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	51.2	156-59-2	
Chloroform	Not detected	50		ug/kg	51.2	67-66-3	
1,1,1-Trichloroethane	Not detected	50		ug/kg	51.2	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	51.2	108-10-1	
Carbon tetrachloride	Not detected	50		ug/kg	51.2	56-23-5	
Benzene	Not detected	50		ug/kg	51.2	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	51.2	107-06-2	
Trichloroethene	Not detected	50		ug/kg	51.2	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	51.2	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	51.2	75-27-4	
Dibromomethane	Not detected	300		ug/kg	51.2	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	51.2	10061-01-5	
Toluene	Not detected	50		ug/kg	51.2	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	51.2	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	51.2	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	51.2	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	51.2	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	51.2	106-93-4	M
Chlorobenzene	Not detected	50		ug/kg	51.2	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	51.2	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	51.2	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	51.2		
o-Xylene	Not detected	50		ug/kg	51.2	95-47-6	
Styrene	Not detected	50		ug/kg	51.2	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	51.2	98-82-8	
Bromoform	Not detected	100		ug/kg	51.2	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	51.2	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	51.2	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	51.2	103-65-1	
Bromobenzene	Not detected	100		ug/kg	51.2	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	51.2	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	51.2	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	51.2	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	51.2	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	51.2	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	51.2	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	51.2	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	51.2	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	51.2	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	51.2	104-51-8	
1,2,4-Trichlorobenzene	Not detected	340		ug/kg	51.2	120-82-1	
1,2,3-Trichlorobenzene	Not detected	340		ug/kg	51.2	87-61-6	
Naphthalene	Not detected	300		ug/kg	51.2	91-20-3	
Acrolein	Not detected	50		ug/kg	51.2	107-02-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.14 (continued)

Sample Tag: AOC3-TP01-E

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 19:15, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2-Chlorotoluene	Not detected	50		ug/kg	51.2	95-49-8	
4-Chlorotoluene	Not detected	50		ug/kg	51.2	106-43-4	
1,3-Dichloropropane	Not detected	50		ug/kg	51.2	142-28-9	
1,1-Dichloropropene	Not detected	50		ug/kg	51.2	563-58-6	
2,2-Dichloropropane	Not detected	50		ug/kg	51.2	594-20-7	
Hexachlorobutadiene	Not detected	50		ug/kg	51.2	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	51.2	76-13-1	

Other / Misc.

Method: , Run Date: 12/20/22 17:17, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:03, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.15

Sample Tag: AOC3-TP01-N

Collected Date/Time: 12/14/2022 09:55

Matrix: Soil

COC Reference: 158676

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
3	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/20/22 13:15	JRH	
BNA Extraction*	Completed	SW3546	12/21/22 14:00	TTV	
Extraction, PCB*	Completed	SW3546	12/27/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	11.488/11	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:05	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	96	1		%	1		

Metals

Method: SW6020A, Run Date: 12/20/22 15:07, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	1,280	1.0		mg/kg	289	7429-90-5	
Antimony	Not detected	0.50		mg/kg	289	7440-36-0	
Arsenic	0.41	0.20		mg/kg	289	7440-38-2	
Barium	8.47	1.0		mg/kg	289	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	289	7440-41-7	
Boron	Not detected	2.0		mg/kg	289	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	289	7440-43-9	
Chromium	2.07	0.50		mg/kg	289	7440-47-3	
Cobalt	0.50	0.50		mg/kg	289	7440-48-4	
Copper	0.54	0.50		mg/kg	289	7440-50-8	
Iron	1,420	1.0		mg/kg	289	7439-89-6	
Lead	1.11	0.30		mg/kg	289	7439-92-1	
Manganese	66.7	0.50		mg/kg	289	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	289	7439-98-7	
Nickel	0.96	0.50		mg/kg	289	7440-02-0	
Selenium	Not detected	0.40		mg/kg	289	7782-49-2	
Silver	Not detected	0.20		mg/kg	289	7440-22-4	
Strontium	0.60	0.50		mg/kg	289	7440-24-6	
Thallium	Not detected	0.20		mg/kg	289	7440-28-0	
Tin	Not detected	2.0		mg/kg	289	7440-31-5	
Titanium	11.3	1.0		mg/kg	289	7440-32-6	
Vanadium	2.91	0.50		mg/kg	289	7440-62-2	
Zinc	2.43	0.50		mg/kg	289	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S43533.15 (continued)

Sample Tag: AOC3-TP01-N

Method: SW6020A, Run Date: 12/28/22 15:35, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	259	30		mg/kg	289	7440-70-2	
Magnesium	248	15		mg/kg	289	7439-95-4	
Potassium	91.4	15		mg/kg	289	7440-09-7	
Sodium	64.5	15		mg/kg	289	7440-23-5	

Method: SW7471B, Run Date: 12/20/22 13:54, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	83	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 16:38, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	1	12674-11-2	
PCB-1242	Not detected	330		ug/kg	1	53469-21-9	
PCB-1221	Not detected	330		ug/kg	1	11104-28-2	
PCB-1232	Not detected	330		ug/kg	1	11141-16-5	
PCB-1248	Not detected	330		ug/kg	1	12672-29-6	
PCB-1254	Not detected	330		ug/kg	1	11097-69-1	
PCB-1260	Not detected	330		ug/kg	1	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/03/23 16:04, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	7.5		
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8	
Anthracene	Not detected	330		ug/kg	7.5	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3	
Chrysene	Not detected	330		ug/kg	7.5	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2	
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3	



Analytical Laboratory Report

Lab Sample ID: S43533.15 (continued)

Sample Tag: AOC3-TP01-N

Method: SW8270D, Run Date: 01/03/23 16:04, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1	
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0	
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0	
Fluorene	Not detected	330		ug/kg	7.5	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5	
Isophorone	Not detected	330		ug/kg	7.5	78-59-1	
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5	
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8	
Phenol	Not detected	330		ug/kg	7.5	108-95-2	
Pyrene	Not detected	330		ug/kg	7.5	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2	
Benzidine	Not detected	330		ug/kg	7.5	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/19/22 19:39, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	52	108-20-3	
TICs*	None Found			ug/kg	52		

Method: SW8260B - SIM, Run Date: 12/23/22 10:46, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	52	96-12-8	
1,4-Dioxane*	Not detected	50		ug/kg	52	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 19:39, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	1,000		ug/kg	52	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	52	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	52	107-13-1	
2-Butanone (MEK)	Not detected	780		ug/kg	52	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	52	75-71-8	
Chloromethane	Not detected	300		ug/kg	52	74-87-3	
Vinyl chloride	Not detected	50		ug/kg	52	75-01-4	
Bromomethane	Not detected	200		ug/kg	52	74-83-9	
Chloroethane	Not detected	300		ug/kg	52	75-00-3	



Analytical Laboratory Report

Lab Sample ID: S43533.15 (continued)

Sample Tag: AOC3-TP01-N

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 19:39, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichlorofluoromethane	Not detected	100		ug/kg	52	75-69-4	
1,1-Dichloroethene	Not detected	50		ug/kg	52	75-35-4	
Methylene chloride	Not detected	100		ug/kg	52	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	52	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	52	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	52	156-59-2	
Chloroform	Not detected	50		ug/kg	52	67-66-3	
1,1,1-Trichloroethane	Not detected	50		ug/kg	52	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	52	108-10-1	
Carbon tetrachloride	Not detected	50		ug/kg	52	56-23-5	
Benzene	Not detected	50		ug/kg	52	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	52	107-06-2	
Trichloroethene	Not detected	50		ug/kg	52	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	52	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	52	75-27-4	
Dibromomethane	Not detected	300		ug/kg	52	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	52	10061-01-5	
Toluene	Not detected	50		ug/kg	52	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	52	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	52	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	52	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	52	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	52	106-93-4	M
Chlorobenzene	Not detected	50		ug/kg	52	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	52	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	52	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	52		
o-Xylene	Not detected	50		ug/kg	52	95-47-6	
Styrene	Not detected	50		ug/kg	52	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	52	98-82-8	
Bromoform	Not detected	100		ug/kg	52	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	52	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	52	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	52	103-65-1	
Bromobenzene	Not detected	100		ug/kg	52	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	52	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	52	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	52	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	52	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	52	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	52	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	52	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	52	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	52	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	52	104-51-8	
1,2,4-Trichlorobenzene	Not detected	340		ug/kg	52	120-82-1	
1,2,3-Trichlorobenzene	Not detected	340		ug/kg	52	87-61-6	
Naphthalene	Not detected	300		ug/kg	52	91-20-3	
Acrolein	Not detected	50		ug/kg	52	107-02-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.15 (continued)

Sample Tag: AOC3-TP01-N

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 19:39, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2-Chlorotoluene	Not detected	50		ug/kg	52	95-49-8	
4-Chlorotoluene	Not detected	50		ug/kg	52	106-43-4	
1,3-Dichloropropane	Not detected	50		ug/kg	52	142-28-9	
1,1-Dichloropropene	Not detected	50		ug/kg	52	563-58-6	
2,2-Dichloropropane	Not detected	50		ug/kg	52	594-20-7	
Hexachlorobutadiene	Not detected	50		ug/kg	52	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	52	76-13-1	

Other / Misc.

Method: , Run Date: 12/20/22 17:38, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:03, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.16

Sample Tag: AOC3-TP01-S

Collected Date/Time: 12/14/2022 09:55

Matrix: Soil

COC Reference: 158676

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
3	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/20/22 13:15	JRH	
BNA Extraction*	Completed	SW3546	12/21/22 14:00	TTV	
Extraction, PCB*	Completed	SW3546	12/27/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	13.325/13	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:05	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	97	1		%	1		

Metals

Method: SW6020A, Run Date: 12/20/22 15:10, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	958	1.0		mg/kg	322	7429-90-5	
Antimony	Not detected	0.50		mg/kg	322	7440-36-0	
Arsenic	0.39	0.20		mg/kg	322	7440-38-2	
Barium	7.27	1.0		mg/kg	322	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	322	7440-41-7	
Boron	Not detected	2.0		mg/kg	322	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	322	7440-43-9	
Chromium	1.48	0.50		mg/kg	322	7440-47-3	
Cobalt	Not detected	0.50		mg/kg	322	7440-48-4	
Copper	0.51	0.50		mg/kg	322	7440-50-8	
Iron	1,220	1.0		mg/kg	322	7439-89-6	
Lead	0.81	0.30		mg/kg	322	7439-92-1	
Manganese	76.6	0.50		mg/kg	322	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	322	7439-98-7	
Nickel	0.73	0.50		mg/kg	322	7440-02-0	
Selenium	Not detected	0.40		mg/kg	322	7782-49-2	
Silver	Not detected	0.20		mg/kg	322	7440-22-4	
Strontium	0.67	0.50		mg/kg	322	7440-24-6	
Thallium	Not detected	0.20		mg/kg	322	7440-28-0	
Tin	Not detected	2.0		mg/kg	322	7440-31-5	
Titanium	13.9	1.0		mg/kg	322	7440-32-6	
Vanadium	2.44	0.50		mg/kg	322	7440-62-2	
Zinc	1.83	0.50		mg/kg	322	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S43533.16 (continued)

Sample Tag: AOC3-TP01-S

Method: SW6020A, Run Date: 12/28/22 15:36, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	225	30		mg/kg	322	7440-70-2	
Magnesium	177	15		mg/kg	322	7439-95-4	
Potassium	90.0	15		mg/kg	322	7440-09-7	
Sodium	64.7	15		mg/kg	322	7440-23-5	

Method: SW7471B, Run Date: 12/20/22 13:57, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	81	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 16:50, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	1	12674-11-2	
PCB-1242	Not detected	330		ug/kg	1	53469-21-9	
PCB-1221	Not detected	330		ug/kg	1	11104-28-2	
PCB-1232	Not detected	330		ug/kg	1	11141-16-5	
PCB-1248	Not detected	330		ug/kg	1	12672-29-6	
PCB-1254	Not detected	330		ug/kg	1	11097-69-1	
PCB-1260	Not detected	330		ug/kg	1	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/03/23 16:34, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	7.5		
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8	
Anthracene	Not detected	330		ug/kg	7.5	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3	
Chrysene	Not detected	330		ug/kg	7.5	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2	
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3	



Analytical Laboratory Report

Lab Sample ID: S43533.16 (continued)

Sample Tag: AOC3-TP01-S

Method: SW8270D, Run Date: 01/03/23 16:34, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1	
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0	
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0	
Fluorene	Not detected	330		ug/kg	7.5	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5	
Isophorone	Not detected	330		ug/kg	7.5	78-59-1	
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5	
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8	
Phenol	Not detected	330		ug/kg	7.5	108-95-2	
Pyrene	Not detected	330		ug/kg	7.5	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2	
Benzidine	Not detected	330		ug/kg	7.5	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/19/22 20:03, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	51.8	108-20-3	
TICs*	None Found			ug/kg	51.8		

Method: SW8260B - SIM, Run Date: 12/23/22 11:06, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	51.8	96-12-8	
1,4-Dioxane*	Not detected	50		ug/kg	51.8	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 20:03, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	1,000		ug/kg	51.8	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	51.8	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	51.8	107-13-1	
2-Butanone (MEK)	Not detected	780		ug/kg	51.8	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	51.8	75-71-8	
Chloromethane	Not detected	300		ug/kg	51.8	74-87-3	
Vinyl chloride	Not detected	50		ug/kg	51.8	75-01-4	
Bromomethane	Not detected	200		ug/kg	51.8	74-83-9	
Chloroethane	Not detected	300		ug/kg	51.8	75-00-3	



Analytical Laboratory Report

Lab Sample ID: S43533.16 (continued)

Sample Tag: AOC3-TP01-S

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 20:03, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichlorofluoromethane	Not detected	100		ug/kg	51.8	75-69-4	
1,1-Dichloroethene	Not detected	50		ug/kg	51.8	75-35-4	
Methylene chloride	Not detected	100		ug/kg	51.8	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	51.8	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	51.8	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	51.8	156-59-2	
Chloroform	Not detected	50		ug/kg	51.8	67-66-3	
1,1,1-Trichloroethane	Not detected	50		ug/kg	51.8	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	51.8	108-10-1	
Carbon tetrachloride	Not detected	50		ug/kg	51.8	56-23-5	
Benzene	Not detected	50		ug/kg	51.8	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	51.8	107-06-2	
Trichloroethene	Not detected	50		ug/kg	51.8	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	51.8	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	51.8	75-27-4	
Dibromomethane	Not detected	300		ug/kg	51.8	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	51.8	10061-01-5	
Toluene	Not detected	50		ug/kg	51.8	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	51.8	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	51.8	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	51.8	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	51.8	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	51.8	106-93-4	M
Chlorobenzene	Not detected	50		ug/kg	51.8	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	51.8	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	51.8	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	51.8		
o-Xylene	Not detected	50		ug/kg	51.8	95-47-6	
Styrene	Not detected	50		ug/kg	51.8	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	51.8	98-82-8	
Bromoform	Not detected	100		ug/kg	51.8	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	51.8	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	51.8	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	51.8	103-65-1	
Bromobenzene	Not detected	100		ug/kg	51.8	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	51.8	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	51.8	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	51.8	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	51.8	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	51.8	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	51.8	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	51.8	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	51.8	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	51.8	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	51.8	104-51-8	
1,2,4-Trichlorobenzene	Not detected	340		ug/kg	51.8	120-82-1	
1,2,3-Trichlorobenzene	Not detected	340		ug/kg	51.8	87-61-6	
Naphthalene	Not detected	300		ug/kg	51.8	91-20-3	
Acrolein	Not detected	50		ug/kg	51.8	107-02-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.16 (continued)

Sample Tag: AOC3-TP01-S

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 20:03, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2-Chlorotoluene	Not detected	50		ug/kg	51.8	95-49-8	
4-Chlorotoluene	Not detected	50		ug/kg	51.8	106-43-4	
1,3-Dichloropropane	Not detected	50		ug/kg	51.8	142-28-9	
1,1-Dichloropropene	Not detected	50		ug/kg	51.8	563-58-6	
2,2-Dichloropropane	Not detected	50		ug/kg	51.8	594-20-7	
Hexachlorobutadiene	Not detected	50		ug/kg	51.8	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	51.8	76-13-1	

Other / Misc.

Method: , Run Date: 12/20/22 17:59, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:03, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.17

Sample Tag: AOC3-TP01-B

Collected Date/Time: 12/14/2022 10:12

Matrix: Soil

COC Reference: 158676

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
3	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/20/22 13:15	JRH	
BNA Extraction*	Completed	SW3546	12/21/22 14:00	TTV	
Extraction, PCB*	Completed	SW3546	12/27/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	17.990/17	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:05	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	84	1		%	1		

Metals

Method: SW6020A, Run Date: 12/20/22 15:12, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	801	1.0		mg/kg	344	7429-90-5	
Antimony	Not detected	0.50		mg/kg	344	7440-36-0	
Arsenic	0.24	0.20		mg/kg	344	7440-38-2	
Barium	5.65	1.0		mg/kg	344	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	344	7440-41-7	
Boron	Not detected	2.0		mg/kg	344	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	344	7440-43-9	
Chromium	6.44	0.50		mg/kg	344	7440-47-3	
Cobalt	0.72	0.50		mg/kg	344	7440-48-4	
Copper	7.44	0.50		mg/kg	344	7440-50-8	
Iron	773	1.0		mg/kg	344	7439-89-6	
Lead	1.32	0.30		mg/kg	344	7439-92-1	
Manganese	12.7	0.50		mg/kg	344	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	344	7439-98-7	
Nickel	2.07	0.50		mg/kg	344	7440-02-0	
Selenium	Not detected	0.40		mg/kg	344	7782-49-2	
Silver	Not detected	0.20		mg/kg	344	7440-22-4	
Strontium	1.74	0.50		mg/kg	344	7440-24-6	
Thallium	Not detected	0.20		mg/kg	344	7440-28-0	
Tin	Not detected	2.0		mg/kg	344	7440-31-5	
Titanium	3.88	1.0		mg/kg	344	7440-32-6	
Vanadium	1.65	0.50		mg/kg	344	7440-62-2	
Zinc	6.89	0.50		mg/kg	344	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S43533.17 (continued)

Sample Tag: AOC3-TP01-B

Method: SW6020A, Run Date: 12/28/22 15:38, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	474	30		mg/kg	344	7440-70-2	
Magnesium	265	15		mg/kg	344	7439-95-4	
Potassium	116	15		mg/kg	344	7440-09-7	
Sodium	37.1	15		mg/kg	344	7440-23-5	

Method: SW7471B, Run Date: 12/20/22 14:01, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	86	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 17:02, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	1	12674-11-2	
PCB-1242	Not detected	330		ug/kg	1	53469-21-9	
PCB-1221	Not detected	330		ug/kg	1	11104-28-2	
PCB-1232	Not detected	330		ug/kg	1	11141-16-5	
PCB-1248	Not detected	330		ug/kg	1	12672-29-6	
PCB-1254	Not detected	330		ug/kg	1	11097-69-1	
PCB-1260	Not detected	330		ug/kg	1	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/05/23 13:38, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	7.5		
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8	
Anthracene	Not detected	330		ug/kg	7.5	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3	
Chrysene	Not detected	330		ug/kg	7.5	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2	
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3	



Analytical Laboratory Report

Lab Sample ID: S43533.17 (continued)

Sample Tag: AOC3-TP01-B

Method: SW8270D, Run Date: 01/05/23 13:38, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1	
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0	
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0	
Fluorene	Not detected	330		ug/kg	7.5	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5	
Isophorone	Not detected	330		ug/kg	7.5	78-59-1	
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5	
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8	
Phenol	Not detected	330		ug/kg	7.5	108-95-2	
Pyrene	Not detected	330		ug/kg	7.5	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2	
Benzidine	Not detected	330		ug/kg	7.5	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/19/22 20:27, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	65.8	108-20-3	
TICs*	None Found			ug/kg	65.8		

Method: SW8260B - SIM, Run Date: 12/23/22 11:27, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	65.8	96-12-8	
1,4-Dioxane*	Not detected	70		ug/kg	65.8	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 20:27, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	1,000		ug/kg	65.8	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	300		ug/kg	65.8	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	65.8	107-13-1	
2-Butanone (MEK)	Not detected	990		ug/kg	65.8	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	65.8	75-71-8	
Chloromethane	Not detected	300		ug/kg	65.8	74-87-3	
Vinyl chloride	Not detected	70		ug/kg	65.8	75-01-4	
Bromomethane	Not detected	300		ug/kg	65.8	74-83-9	
Chloroethane	Not detected	300		ug/kg	65.8	75-00-3	



Analytical Laboratory Report

Lab Sample ID: S43533.17 (continued)

Sample Tag: AOC3-TP01-B

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 20:27, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichlorofluoromethane	Not detected	100		ug/kg	65.8	75-69-4	
1,1-Dichloroethene	Not detected	70		ug/kg	65.8	75-35-4	
Methylene chloride	Not detected	100		ug/kg	65.8	75-09-2	
trans-1,2-Dichloroethene	Not detected	70		ug/kg	65.8	156-60-5	
1,1-Dichloroethane	Not detected	70		ug/kg	65.8	75-34-3	
cis-1,2-Dichloroethene	Not detected	70		ug/kg	65.8	156-59-2	
Chloroform	Not detected	70		ug/kg	65.8	67-66-3	
1,1,1-Trichloroethane	Not detected	70		ug/kg	65.8	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	65.8	108-10-1	
Carbon tetrachloride	Not detected	70		ug/kg	65.8	56-23-5	
Benzene	Not detected	70		ug/kg	65.8	71-43-2	
1,2-Dichloroethane	Not detected	70		ug/kg	65.8	107-06-2	
Trichloroethene	Not detected	70		ug/kg	65.8	79-01-6	
1,2-Dichloropropane	Not detected	70		ug/kg	65.8	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	65.8	75-27-4	
Dibromomethane	Not detected	300		ug/kg	65.8	74-95-3	
cis-1,3-Dichloropropene	Not detected	70		ug/kg	65.8	10061-01-5	
Toluene	Not detected	70		ug/kg	65.8	108-88-3	
trans-1,3-Dichloropropene	Not detected	70		ug/kg	65.8	10061-02-6	
1,1,2-Trichloroethane	Not detected	70		ug/kg	65.8	79-00-5	
Tetrachloroethene	Not detected	70		ug/kg	65.8	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	65.8	124-48-1	
1,2-Dibromoethane	Not detected	30		ug/kg	65.8	106-93-4	M
Chlorobenzene	Not detected	70		ug/kg	65.8	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	65.8	630-20-6	
Ethylbenzene	Not detected	70		ug/kg	65.8	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	65.8		
o-Xylene	Not detected	70		ug/kg	65.8	95-47-6	
Styrene	Not detected	70		ug/kg	65.8	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	65.8	98-82-8	
Bromoform	Not detected	100		ug/kg	65.8	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	70		ug/kg	65.8	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	65.8	96-18-4	
n-Propylbenzene	Not detected	70		ug/kg	65.8	103-65-1	
Bromobenzene	Not detected	100		ug/kg	65.8	108-86-1	
1,3,5-Trimethylbenzene	Not detected	70		ug/kg	65.8	108-67-8	
tert-Butylbenzene	Not detected	70		ug/kg	65.8	98-06-6	
1,2,4-Trimethylbenzene	Not detected	70		ug/kg	65.8	95-63-6	
sec-Butylbenzene	Not detected	70		ug/kg	65.8	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	65.8	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	65.8	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	65.8	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	65.8	95-50-1	
1,2,3-Trimethylbenzene	Not detected	70		ug/kg	65.8	526-73-8	
n-Butylbenzene	Not detected	70		ug/kg	65.8	104-51-8	
1,2,4-Trichlorobenzene	Not detected	430		ug/kg	65.8	120-82-1	
1,2,3-Trichlorobenzene	Not detected	430		ug/kg	65.8	87-61-6	
Naphthalene	Not detected	300		ug/kg	65.8	91-20-3	
Acrolein	Not detected	70		ug/kg	65.8	107-02-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.17 (continued)

Sample Tag: AOC3-TP01-B

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 20:27, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2-Chlorotoluene	Not detected	70		ug/kg	65.8	95-49-8	
4-Chlorotoluene	Not detected	70		ug/kg	65.8	106-43-4	
1,3-Dichloropropane	Not detected	70		ug/kg	65.8	142-28-9	
1,1-Dichloropropene	Not detected	70		ug/kg	65.8	563-58-6	
2,2-Dichloropropane	Not detected	70		ug/kg	65.8	594-20-7	
Hexachlorobutadiene	Not detected	70		ug/kg	65.8	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	70		ug/kg	65.8	76-13-1	

Other / Misc.

Method: , Run Date: 12/20/22 18:20, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:03, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.18

Sample Tag: Dup-07s

Collected Date/Time: 12/14/2022 00:01

Matrix: Soil

COC Reference: 158676

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
3	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/20/22 13:15	JRH	
BNA Extraction*	Completed	SW3546	12/21/22 14:00	TTV	
Extraction, PCB*	Completed	SW3546	12/27/22 12:00	JWR	
Sample wt. (g) / Methanol (ml)*	13.416/13	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:05	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	97	1		%	1		

Metals

Method: SW6020A, Run Date: 12/20/22 15:14, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	1,030	1.0		mg/kg	320	7429-90-5	
Antimony	Not detected	0.50		mg/kg	320	7440-36-0	
Arsenic	0.27	0.20		mg/kg	320	7440-38-2	
Barium	5.76	1.0		mg/kg	320	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	320	7440-41-7	
Boron	Not detected	2.0		mg/kg	320	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	320	7440-43-9	
Chromium	1.48	0.50		mg/kg	320	7440-47-3	
Cobalt	0.64	0.50		mg/kg	320	7440-48-4	
Copper	0.66	0.50		mg/kg	320	7440-50-8	
Iron	1,160	1.0		mg/kg	320	7439-89-6	
Lead	0.53	0.30		mg/kg	320	7439-92-1	
Manganese	71.3	0.50		mg/kg	320	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	320	7439-98-7	
Nickel	1.10	0.50		mg/kg	320	7440-02-0	
Selenium	Not detected	0.40		mg/kg	320	7782-49-2	
Silver	Not detected	0.20		mg/kg	320	7440-22-4	
Strontium	0.55	0.50		mg/kg	320	7440-24-6	
Thallium	Not detected	0.20		mg/kg	320	7440-28-0	
Tin	Not detected	2.0		mg/kg	320	7440-31-5	
Titanium	16.0	1.0		mg/kg	320	7440-32-6	
Vanadium	2.02	0.50		mg/kg	320	7440-62-2	
Zinc	2.73	0.50		mg/kg	320	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S43533.18 (continued)

Sample Tag: Dup-07s

Method: SW6020A, Run Date: 12/28/22 15:39, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	267	30		mg/kg	320	7440-70-2	
Magnesium	222	15		mg/kg	320	7439-95-4	
Potassium	82.1	15		mg/kg	320	7440-09-7	
Sodium	28.7	15		mg/kg	320	7440-23-5	

Method: SW7471B, Run Date: 12/20/22 14:04, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	83	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 17:13, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	1	12674-11-2	
PCB-1242	Not detected	330		ug/kg	1	53469-21-9	
PCB-1221	Not detected	330		ug/kg	1	11104-28-2	
PCB-1232	Not detected	330		ug/kg	1	11141-16-5	
PCB-1248	Not detected	330		ug/kg	1	12672-29-6	
PCB-1254	Not detected	330		ug/kg	1	11097-69-1	
PCB-1260	Not detected	330		ug/kg	1	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/05/23 14:08, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	7.5		
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8	
Anthracene	Not detected	330		ug/kg	7.5	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3	
Chrysene	Not detected	330		ug/kg	7.5	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2	
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3	



Analytical Laboratory Report

Lab Sample ID: S43533.18 (continued)

Sample Tag: Dup-07s

Method: SW8270D, Run Date: 01/05/23 14:08, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1	
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0	
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0	
Fluorene	Not detected	330		ug/kg	7.5	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5	
Isophorone	Not detected	330		ug/kg	7.5	78-59-1	
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5	
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8	
Phenol	Not detected	330		ug/kg	7.5	108-95-2	
Pyrene	Not detected	330		ug/kg	7.5	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2	
Benzidine	Not detected	330		ug/kg	7.5	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/19/22 20:52, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	51.5	108-20-3	
TICs*	None Found			ug/kg	51.5		

Method: SW8260B - SIM, Run Date: 12/23/22 11:48, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	51.5	96-12-8	
1,4-Dioxane*	Not detected	50		ug/kg	51.5	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 20:52, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	1,000		ug/kg	51.5	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	51.5	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	51.5	107-13-1	
2-Butanone (MEK)	Not detected	770		ug/kg	51.5	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	51.5	75-71-8	
Chloromethane	Not detected	300		ug/kg	51.5	74-87-3	
Vinyl chloride	Not detected	50		ug/kg	51.5	75-01-4	
Bromomethane	Not detected	200		ug/kg	51.5	74-83-9	
Chloroethane	Not detected	300		ug/kg	51.5	75-00-3	



Analytical Laboratory Report

Lab Sample ID: S43533.18 (continued)

Sample Tag: Dup-07s

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 20:52, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichlorofluoromethane	Not detected	100		ug/kg	51.5	75-69-4	
1,1-Dichloroethene	Not detected	50		ug/kg	51.5	75-35-4	
Methylene chloride	Not detected	100		ug/kg	51.5	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	51.5	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	51.5	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	51.5	156-59-2	
Chloroform	Not detected	50		ug/kg	51.5	67-66-3	
1,1,1-Trichloroethane	Not detected	50		ug/kg	51.5	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	51.5	108-10-1	
Carbon tetrachloride	Not detected	50		ug/kg	51.5	56-23-5	
Benzene	Not detected	50		ug/kg	51.5	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	51.5	107-06-2	
Trichloroethene	Not detected	50		ug/kg	51.5	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	51.5	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	51.5	75-27-4	
Dibromomethane	Not detected	300		ug/kg	51.5	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	51.5	10061-01-5	
Toluene	Not detected	50		ug/kg	51.5	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	51.5	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	51.5	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	51.5	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	51.5	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	51.5	106-93-4	M
Chlorobenzene	Not detected	50		ug/kg	51.5	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	51.5	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	51.5	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	51.5		
o-Xylene	Not detected	50		ug/kg	51.5	95-47-6	
Styrene	Not detected	50		ug/kg	51.5	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	51.5	98-82-8	
Bromoform	Not detected	100		ug/kg	51.5	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	51.5	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	51.5	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	51.5	103-65-1	
Bromobenzene	Not detected	100		ug/kg	51.5	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	51.5	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	51.5	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	51.5	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	51.5	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	51.5	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	51.5	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	51.5	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	51.5	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	51.5	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	51.5	104-51-8	
1,2,4-Trichlorobenzene	Not detected	340		ug/kg	51.5	120-82-1	
1,2,3-Trichlorobenzene	Not detected	340		ug/kg	51.5	87-61-6	
Naphthalene	Not detected	300		ug/kg	51.5	91-20-3	
Acrolein	Not detected	50		ug/kg	51.5	107-02-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.18 (continued)

Sample Tag: Dup-07s

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 20:52, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2-Chlorotoluene	Not detected	50		ug/kg	51.5	95-49-8	
4-Chlorotoluene	Not detected	50		ug/kg	51.5	106-43-4	
1,3-Dichloropropane	Not detected	50		ug/kg	51.5	142-28-9	
1,1-Dichloropropene	Not detected	50		ug/kg	51.5	563-58-6	
2,2-Dichloropropane	Not detected	50		ug/kg	51.5	594-20-7	
Hexachlorobutadiene	Not detected	50		ug/kg	51.5	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	51.5	76-13-1	

Other / Misc.

Method: , Run Date: 12/20/22 18:41, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:03, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.19

Sample Tag: AOC3-TP02-N

Collected Date/Time: 12/14/2022 10:55

Matrix: Soil

COC Reference: 158676

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
3	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/20/22 13:15	JRH	
BNA Extraction*	Completed	SW3546	12/21/22 14:00	TTV	
Extraction, PCB*	Completed	SW3546	12/27/22 12:00	JWR	
Sample wt. (g) / Methanol (ml)*	12.815/12	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:05	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	93	1		%	1		

Metals

Method: SW6020A, Run Date: 12/20/22 15:16, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	1,370	1.0		mg/kg	316	7429-90-5	
Antimony	Not detected	0.50		mg/kg	316	7440-36-0	
Arsenic	0.66	0.20		mg/kg	316	7440-38-2	
Barium	11.7	1.0		mg/kg	316	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	316	7440-41-7	
Boron	Not detected	2.0		mg/kg	316	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	316	7440-43-9	
Chromium	2.81	0.50		mg/kg	316	7440-47-3	
Cobalt	1.18	0.50		mg/kg	316	7440-48-4	
Copper	4.45	0.50		mg/kg	316	7440-50-8	
Iron	3,020	1.0		mg/kg	316	7439-89-6	
Lead	1.43	0.30		mg/kg	316	7439-92-1	
Manganese	374	0.50		mg/kg	316	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	316	7439-98-7	
Nickel	1.96	0.50		mg/kg	316	7440-02-0	
Selenium	Not detected	0.40		mg/kg	316	7782-49-2	
Silver	Not detected	0.20		mg/kg	316	7440-22-4	
Strontium	1.06	0.50		mg/kg	316	7440-24-6	
Thallium	Not detected	0.20		mg/kg	316	7440-28-0	
Tin	Not detected	2.0		mg/kg	316	7440-31-5	
Titanium	11.9	1.0		mg/kg	316	7440-32-6	
Vanadium	5.42	0.50		mg/kg	316	7440-62-2	
Zinc	4.72	0.50		mg/kg	316	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S43533.19 (continued)

Sample Tag: AOC3-TP02-N

Method: SW6020A, Run Date: 12/28/22 15:40, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	301	30		mg/kg	316	7440-70-2	
Magnesium	370	15		mg/kg	316	7439-95-4	
Potassium	74.7	15		mg/kg	316	7440-09-7	
Sodium	42.9	15		mg/kg	316	7440-23-5	

Method: SW7471B, Run Date: 12/20/22 14:07, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	80	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 17:25, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	1	12674-11-2	
PCB-1242	Not detected	330		ug/kg	1	53469-21-9	
PCB-1221	Not detected	330		ug/kg	1	11104-28-2	
PCB-1232	Not detected	330		ug/kg	1	11141-16-5	
PCB-1248	Not detected	330		ug/kg	1	12672-29-6	
PCB-1254	Not detected	330		ug/kg	1	11097-69-1	
PCB-1260	Not detected	330		ug/kg	1	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/05/23 14:39, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	7.5		
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8	
Anthracene	Not detected	330		ug/kg	7.5	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3	
Chrysene	Not detected	330		ug/kg	7.5	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2	
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3	



Analytical Laboratory Report

Lab Sample ID: S43533.19 (continued)

Sample Tag: AOC3-TP02-N

Method: SW8270D, Run Date: 01/05/23 14:39, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1	
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0	
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0	
Fluorene	Not detected	330		ug/kg	7.5	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5	
Isophorone	Not detected	330		ug/kg	7.5	78-59-1	
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5	
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8	
Phenol	Not detected	330		ug/kg	7.5	108-95-2	
Pyrene	Not detected	330		ug/kg	7.5	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2	
Benzidine	Not detected	330		ug/kg	7.5	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/19/22 21:16, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	54.1	108-20-3	
TICs*	None Found			ug/kg	54.1		

Method: SW8260B - SIM, Run Date: 12/23/22 12:10, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	54.1	96-12-8	
1,4-Dioxane*	Not detected	50		ug/kg	54.1	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 21:16, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	1,000		ug/kg	54.1	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	54.1	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	54.1	107-13-1	
2-Butanone (MEK)	Not detected	810		ug/kg	54.1	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	54.1	75-71-8	
Chloromethane	Not detected	300		ug/kg	54.1	74-87-3	
Vinyl chloride	Not detected	50		ug/kg	54.1	75-01-4	
Bromomethane	Not detected	200		ug/kg	54.1	74-83-9	
Chloroethane	Not detected	300		ug/kg	54.1	75-00-3	



Analytical Laboratory Report

Lab Sample ID: S43533.19 (continued)

Sample Tag: AOC3-TP02-N

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 21:16, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichlorofluoromethane	Not detected	100		ug/kg	54.1	75-69-4	
1,1-Dichloroethene	Not detected	50		ug/kg	54.1	75-35-4	
Methylene chloride	Not detected	100		ug/kg	54.1	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	54.1	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	54.1	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	54.1	156-59-2	
Chloroform	Not detected	50		ug/kg	54.1	67-66-3	
1,1,1-Trichloroethane	Not detected	50		ug/kg	54.1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	54.1	108-10-1	
Carbon tetrachloride	Not detected	50		ug/kg	54.1	56-23-5	
Benzene	Not detected	50		ug/kg	54.1	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	54.1	107-06-2	
Trichloroethene	Not detected	50		ug/kg	54.1	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	54.1	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	54.1	75-27-4	
Dibromomethane	Not detected	300		ug/kg	54.1	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	54.1	10061-01-5	
Toluene	Not detected	50		ug/kg	54.1	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	54.1	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	54.1	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	54.1	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	54.1	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	54.1	106-93-4	M
Chlorobenzene	Not detected	50		ug/kg	54.1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	54.1	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	54.1	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	54.1		
o-Xylene	Not detected	50		ug/kg	54.1	95-47-6	
Styrene	Not detected	50		ug/kg	54.1	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	54.1	98-82-8	
Bromoform	Not detected	100		ug/kg	54.1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	54.1	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	54.1	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	54.1	103-65-1	
Bromobenzene	Not detected	100		ug/kg	54.1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	54.1	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	54.1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	54.1	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	54.1	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	54.1	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	54.1	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	54.1	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	54.1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	54.1	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	54.1	104-51-8	
1,2,4-Trichlorobenzene	Not detected	360		ug/kg	54.1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	360		ug/kg	54.1	87-61-6	
Naphthalene	Not detected	300		ug/kg	54.1	91-20-3	
Acrolein	Not detected	50		ug/kg	54.1	107-02-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.19 (continued)

Sample Tag: AOC3-TP02-N

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 21:16, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2-Chlorotoluene	Not detected	50		ug/kg	54.1	95-49-8	
4-Chlorotoluene	Not detected	50		ug/kg	54.1	106-43-4	
1,3-Dichloropropane	Not detected	50		ug/kg	54.1	142-28-9	
1,1-Dichloropropene	Not detected	50		ug/kg	54.1	563-58-6	
2,2-Dichloropropane	Not detected	50		ug/kg	54.1	594-20-7	
Hexachlorobutadiene	Not detected	50		ug/kg	54.1	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	54.1	76-13-1	

Other / Misc.

Method: , Run Date: 12/20/22 19:02, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:03, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.20

Sample Tag: AOC3-TP02-S

Collected Date/Time: 12/14/2022 11:08

Matrix: Soil

COC Reference: 158676

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
3	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/20/22 13:15	JRH	
BNA Extraction*	Completed	SW3546	12/21/22 14:00	TTV	
Extraction, PCB*	Completed	SW3546	12/27/22 12:00	JWR	
Sample wt. (g) / Methanol (ml)*	12.171/12	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:05	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	95	1		%	1		

Metals

Method: SW6020A, Run Date: 12/20/22 15:18, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	1,400	1.0		mg/kg	297	7429-90-5	
Antimony	Not detected	0.50		mg/kg	297	7440-36-0	
Arsenic	0.90	0.20		mg/kg	297	7440-38-2	
Barium	15.1	1.0		mg/kg	297	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	297	7440-41-7	
Boron	Not detected	2.0		mg/kg	297	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	297	7440-43-9	
Chromium	3.25	0.50		mg/kg	297	7440-47-3	
Cobalt	2.79	0.50		mg/kg	297	7440-48-4	
Copper	2.61	0.50		mg/kg	297	7440-50-8	
Iron	3,640	1.0		mg/kg	297	7439-89-6	
Lead	1.84	0.30		mg/kg	297	7439-92-1	
Manganese	347	0.50		mg/kg	297	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	297	7439-98-7	
Nickel	2.20	0.50		mg/kg	297	7440-02-0	
Selenium	Not detected	0.40		mg/kg	297	7782-49-2	
Silver	Not detected	0.20		mg/kg	297	7440-22-4	
Strontium	1.00	0.50		mg/kg	297	7440-24-6	
Thallium	Not detected	0.20		mg/kg	297	7440-28-0	
Tin	Not detected	2.0		mg/kg	297	7440-31-5	
Titanium	12.5	1.0		mg/kg	297	7440-32-6	
Vanadium	6.46	0.50		mg/kg	297	7440-62-2	
Zinc	4.52	0.50		mg/kg	297	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S43533.20 (continued)

Sample Tag: AOC3-TP02-S

Method: SW6020A, Run Date: 12/28/22 15:42, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	248	30		mg/kg	297	7440-70-2	
Magnesium	324	15		mg/kg	297	7439-95-4	
Potassium	73.3	15		mg/kg	297	7440-09-7	
Sodium	37.1	15		mg/kg	297	7440-23-5	

Method: SW7471B, Run Date: 12/20/22 14:10, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	84	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 17:37, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	1	12674-11-2	
PCB-1242	Not detected	330		ug/kg	1	53469-21-9	
PCB-1221	Not detected	330		ug/kg	1	11104-28-2	
PCB-1232	Not detected	330		ug/kg	1	11141-16-5	
PCB-1248	Not detected	330		ug/kg	1	12672-29-6	
PCB-1254	Not detected	330		ug/kg	1	11097-69-1	
PCB-1260	Not detected	330		ug/kg	1	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/05/23 15:10, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	7.5		
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8	
Anthracene	Not detected	330		ug/kg	7.5	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3	
Chrysene	Not detected	330		ug/kg	7.5	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2	
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3	



Analytical Laboratory Report

Lab Sample ID: S43533.20 (continued)

Sample Tag: AOC3-TP02-S

Method: SW8270D, Run Date: 01/05/23 15:10, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1	
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0	
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0	
Fluorene	Not detected	330		ug/kg	7.5	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5	
Isophorone	Not detected	330		ug/kg	7.5	78-59-1	
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5	
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8	
Phenol	Not detected	330		ug/kg	7.5	108-95-2	
Pyrene	Not detected	330		ug/kg	7.5	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2	
Benzidine	Not detected	330		ug/kg	7.5	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/19/22 21:41, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	54.5	108-20-3	
TICs*	None Found			ug/kg	54.5		

Method: SW8260B - SIM, Run Date: 12/23/22 12:30, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	54.5	96-12-8	
1,4-Dioxane*	Not detected	50		ug/kg	54.5	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 21:41, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	1,000		ug/kg	54.5	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	54.5	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	54.5	107-13-1	
2-Butanone (MEK)	Not detected	820		ug/kg	54.5	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	54.5	75-71-8	
Chloromethane	Not detected	300		ug/kg	54.5	74-87-3	
Vinyl chloride	Not detected	50		ug/kg	54.5	75-01-4	
Bromomethane	Not detected	200		ug/kg	54.5	74-83-9	
Chloroethane	Not detected	300		ug/kg	54.5	75-00-3	



Analytical Laboratory Report

Lab Sample ID: S43533.20 (continued)

Sample Tag: AOC3-TP02-S

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 21:41, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichlorofluoromethane	Not detected	100		ug/kg	54.5	75-69-4	
1,1-Dichloroethene	Not detected	50		ug/kg	54.5	75-35-4	
Methylene chloride	Not detected	100		ug/kg	54.5	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	54.5	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	54.5	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	54.5	156-59-2	
Chloroform	Not detected	50		ug/kg	54.5	67-66-3	
1,1,1-Trichloroethane	Not detected	50		ug/kg	54.5	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	54.5	108-10-1	
Carbon tetrachloride	Not detected	50		ug/kg	54.5	56-23-5	
Benzene	Not detected	50		ug/kg	54.5	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	54.5	107-06-2	
Trichloroethene	Not detected	50		ug/kg	54.5	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	54.5	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	54.5	75-27-4	
Dibromomethane	Not detected	300		ug/kg	54.5	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	54.5	10061-01-5	
Toluene	Not detected	50		ug/kg	54.5	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	54.5	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	54.5	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	54.5	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	54.5	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	54.5	106-93-4	M
Chlorobenzene	Not detected	50		ug/kg	54.5	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	54.5	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	54.5	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	54.5		
o-Xylene	Not detected	50		ug/kg	54.5	95-47-6	
Styrene	Not detected	50		ug/kg	54.5	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	54.5	98-82-8	
Bromoform	Not detected	100		ug/kg	54.5	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	54.5	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	54.5	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	54.5	103-65-1	
Bromobenzene	Not detected	100		ug/kg	54.5	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	54.5	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	54.5	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	54.5	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	54.5	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	54.5	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	54.5	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	54.5	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	54.5	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	54.5	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	54.5	104-51-8	
1,2,4-Trichlorobenzene	Not detected	360		ug/kg	54.5	120-82-1	
1,2,3-Trichlorobenzene	Not detected	360		ug/kg	54.5	87-61-6	
Naphthalene	Not detected	300		ug/kg	54.5	91-20-3	
Acrolein	Not detected	50		ug/kg	54.5	107-02-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.20 (continued)

Sample Tag: AOC3-TP02-S

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 21:41, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2-Chlorotoluene	Not detected	50		ug/kg	54.5	95-49-8	
4-Chlorotoluene	Not detected	50		ug/kg	54.5	106-43-4	
1,3-Dichloropropane	Not detected	50		ug/kg	54.5	142-28-9	
1,1-Dichloropropene	Not detected	50		ug/kg	54.5	563-58-6	
2,2-Dichloropropane	Not detected	50		ug/kg	54.5	594-20-7	
Hexachlorobutadiene	Not detected	50		ug/kg	54.5	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	54.5	76-13-1	

Other / Misc.

Method: , Run Date: 12/20/22 19:23, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:03, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.21

Sample Tag: AOC3-TP02-E

Collected Date/Time: 12/14/2022 11:15

Matrix: Soil

COC Reference: 158676

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
3	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/20/22 13:15	JRH	
BNA Extraction*	Completed	SW3546	12/21/22 14:00	TTV	
Extraction, PCB*	Completed	SW3546	12/27/22 12:00	JWR	
Sample wt. (g) / Methanol (ml)*	12.872/12	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:05	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	94	1		%	1		

Metals

Method: SW6020A, Run Date: 12/20/22 15:20, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	982	1.0		mg/kg	300	7429-90-5	
Antimony	Not detected	0.50		mg/kg	300	7440-36-0	
Arsenic	0.69	0.20		mg/kg	300	7440-38-2	
Barium	7.26	1.0		mg/kg	300	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	300	7440-41-7	
Boron	Not detected	2.0		mg/kg	300	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	300	7440-43-9	
Chromium	3.06	0.50		mg/kg	300	7440-47-3	
Cobalt	2.06	0.50		mg/kg	300	7440-48-4	
Copper	2.27	0.50		mg/kg	300	7440-50-8	
Iron	3,780	1.0		mg/kg	300	7439-89-6	
Lead	0.95	0.30		mg/kg	300	7439-92-1	
Manganese	61.5	0.50		mg/kg	300	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	300	7439-98-7	
Nickel	1.83	0.50		mg/kg	300	7440-02-0	
Selenium	Not detected	0.40		mg/kg	300	7782-49-2	
Silver	Not detected	0.20		mg/kg	300	7440-22-4	
Strontium	1.17	0.50		mg/kg	300	7440-24-6	
Thallium	Not detected	0.20		mg/kg	300	7440-28-0	
Tin	Not detected	2.0		mg/kg	300	7440-31-5	
Titanium	7.75	1.0		mg/kg	300	7440-32-6	
Vanadium	6.03	0.50		mg/kg	300	7440-62-2	
Zinc	5.82	0.50		mg/kg	300	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S43533.21 (continued)

Sample Tag: AOC3-TP02-E

Method: SW6020A, Run Date: 12/28/22 15:43, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	366	30		mg/kg	300	7440-70-2	
Magnesium	281	15		mg/kg	300	7439-95-4	
Potassium	70.8	15		mg/kg	300	7440-09-7	
Sodium	40.1	15		mg/kg	300	7440-23-5	

Method: SW7471B, Run Date: 12/20/22 14:14, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	79	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 17:50, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	1	12674-11-2	
PCB-1242	Not detected	330		ug/kg	1	53469-21-9	
PCB-1221	Not detected	330		ug/kg	1	11104-28-2	
PCB-1232	Not detected	330		ug/kg	1	11141-16-5	
PCB-1248	Not detected	330		ug/kg	1	12672-29-6	
PCB-1254	Not detected	330		ug/kg	1	11097-69-1	
PCB-1260	Not detected	330		ug/kg	1	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/05/23 15:41, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	7.5		
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8	
Anthracene	Not detected	330		ug/kg	7.5	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3	
Chrysene	Not detected	330		ug/kg	7.5	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2	
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3	



Analytical Laboratory Report

Lab Sample ID: S43533.21 (continued)

Sample Tag: AOC3-TP02-E

Method: SW8270D, Run Date: 01/05/23 15:41, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1	
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0	
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0	
Fluorene	Not detected	330		ug/kg	7.5	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5	
Isophorone	Not detected	330		ug/kg	7.5	78-59-1	
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5	
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8	
Phenol	Not detected	330		ug/kg	7.5	108-95-2	
Pyrene	Not detected	330		ug/kg	7.5	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2	
Benzidine	Not detected	330		ug/kg	7.5	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/19/22 22:05, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	52.8	108-20-3	
TICs*	None Found			ug/kg	52.8		

Method: SW8260B - SIM, Run Date: 12/23/22 12:50, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	52.8	96-12-8	
1,4-Dioxane*	Not detected	50		ug/kg	52.8	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 22:05, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	1,000		ug/kg	52.8	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	52.8	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	52.8	107-13-1	
2-Butanone (MEK)	Not detected	790		ug/kg	52.8	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	52.8	75-71-8	
Chloromethane	Not detected	300		ug/kg	52.8	74-87-3	
Vinyl chloride	Not detected	50		ug/kg	52.8	75-01-4	
Bromomethane	Not detected	200		ug/kg	52.8	74-83-9	
Chloroethane	Not detected	300		ug/kg	52.8	75-00-3	



Analytical Laboratory Report

Lab Sample ID: S43533.21 (continued)

Sample Tag: AOC3-TP02-E

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 22:05, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichlorofluoromethane	Not detected	100		ug/kg	52.8	75-69-4	
1,1-Dichloroethene	Not detected	50		ug/kg	52.8	75-35-4	
Methylene chloride	Not detected	100		ug/kg	52.8	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	52.8	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	52.8	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	52.8	156-59-2	
Chloroform	Not detected	50		ug/kg	52.8	67-66-3	
1,1,1-Trichloroethane	Not detected	50		ug/kg	52.8	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	52.8	108-10-1	
Carbon tetrachloride	Not detected	50		ug/kg	52.8	56-23-5	
Benzene	Not detected	50		ug/kg	52.8	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	52.8	107-06-2	
Trichloroethene	Not detected	50		ug/kg	52.8	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	52.8	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	52.8	75-27-4	
Dibromomethane	Not detected	300		ug/kg	52.8	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	52.8	10061-01-5	
Toluene	Not detected	50		ug/kg	52.8	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	52.8	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	52.8	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	52.8	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	52.8	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	52.8	106-93-4	M
Chlorobenzene	Not detected	50		ug/kg	52.8	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	52.8	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	52.8	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	52.8		
o-Xylene	Not detected	50		ug/kg	52.8	95-47-6	
Styrene	Not detected	50		ug/kg	52.8	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	52.8	98-82-8	
Bromoform	Not detected	100		ug/kg	52.8	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	52.8	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	52.8	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	52.8	103-65-1	
Bromobenzene	Not detected	100		ug/kg	52.8	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	52.8	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	52.8	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	52.8	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	52.8	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	52.8	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	52.8	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	52.8	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	52.8	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	52.8	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	52.8	104-51-8	
1,2,4-Trichlorobenzene	Not detected	350		ug/kg	52.8	120-82-1	
1,2,3-Trichlorobenzene	Not detected	350		ug/kg	52.8	87-61-6	
Naphthalene	Not detected	300		ug/kg	52.8	91-20-3	
Acrolein	Not detected	50		ug/kg	52.8	107-02-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.21 (continued)

Sample Tag: AOC3-TP02-E

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 22:05, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2-Chlorotoluene	Not detected	50		ug/kg	52.8	95-49-8	
4-Chlorotoluene	Not detected	50		ug/kg	52.8	106-43-4	
1,3-Dichloropropane	Not detected	50		ug/kg	52.8	142-28-9	
1,1-Dichloropropene	Not detected	50		ug/kg	52.8	563-58-6	
2,2-Dichloropropane	Not detected	50		ug/kg	52.8	594-20-7	
Hexachlorobutadiene	Not detected	50		ug/kg	52.8	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	52.8	76-13-1	

Other / Misc.

Method: , Run Date: 12/20/22 19:44, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:03, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.22

Sample Tag: AOC3-TP02-W

Collected Date/Time: 12/14/2022 11:15

Matrix: Soil

COC Reference: 158676

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
3	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/20/22 13:15	JRH	
BNA Extraction*	Completed	SW3546	12/21/22 14:00	TTV	
Extraction, PCB*	Completed	SW3546	12/27/22 12:00	JWR	
Sample wt. (g) / Methanol (ml)*	11.488/11	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:05	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	94	1		%	1		

Metals

Method: SW6020A, Run Date: 12/20/22 15:22, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	1,100	1.0		mg/kg	296	7429-90-5	
Antimony	Not detected	0.50		mg/kg	296	7440-36-0	
Arsenic	0.64	0.20		mg/kg	296	7440-38-2	
Barium	8.76	1.0		mg/kg	296	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	296	7440-41-7	
Boron	Not detected	2.0		mg/kg	296	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	296	7440-43-9	
Chromium	3.11	0.50		mg/kg	296	7440-47-3	
Cobalt	2.85	0.50		mg/kg	296	7440-48-4	
Copper	2.58	0.50		mg/kg	296	7440-50-8	
Iron	3,140	1.0		mg/kg	296	7439-89-6	
Lead	0.82	0.30		mg/kg	296	7439-92-1	
Manganese	75.1	0.50		mg/kg	296	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	296	7439-98-7	
Nickel	2.17	0.50		mg/kg	296	7440-02-0	
Selenium	Not detected	0.40		mg/kg	296	7782-49-2	
Silver	Not detected	0.20		mg/kg	296	7440-22-4	
Strontium	1.25	0.50		mg/kg	296	7440-24-6	
Thallium	Not detected	0.20		mg/kg	296	7440-28-0	
Tin	Not detected	2.0		mg/kg	296	7440-31-5	
Titanium	9.84	1.0		mg/kg	296	7440-32-6	
Vanadium	5.56	0.50		mg/kg	296	7440-62-2	
Zinc	6.45	0.50		mg/kg	296	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S43533.22 (continued)

Sample Tag: AOC3-TP02-W

Method: SW6020A, Run Date: 12/28/22 15:44, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	404	30		mg/kg	296	7440-70-2	
Magnesium	300	15		mg/kg	296	7439-95-4	
Potassium	75.4	15		mg/kg	296	7440-09-7	
Sodium	36.0	15		mg/kg	296	7440-23-5	

Method: SW7471B, Run Date: 12/20/22 14:17, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	76	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 18:01, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	1	12674-11-2	
PCB-1242	Not detected	330		ug/kg	1	53469-21-9	
PCB-1221	Not detected	330		ug/kg	1	11104-28-2	
PCB-1232	Not detected	330		ug/kg	1	11141-16-5	
PCB-1248	Not detected	330		ug/kg	1	12672-29-6	
PCB-1254	Not detected	330		ug/kg	1	11097-69-1	
PCB-1260	Not detected	330		ug/kg	1	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/05/23 16:12, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	7.5		
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8	
Anthracene	Not detected	330		ug/kg	7.5	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3	
Chrysene	Not detected	330		ug/kg	7.5	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2	
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3	



Analytical Laboratory Report

Lab Sample ID: S43533.22 (continued)

Sample Tag: AOC3-TP02-W

Method: SW8270D, Run Date: 01/05/23 16:12, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1	
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0	
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0	
Fluorene	Not detected	330		ug/kg	7.5	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5	
Isophorone	Not detected	330		ug/kg	7.5	78-59-1	
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5	
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8	
Phenol	Not detected	330		ug/kg	7.5	108-95-2	
Pyrene	Not detected	330		ug/kg	7.5	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2	
Benzidine	Not detected	330		ug/kg	7.5	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/19/22 22:29, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	54.1	108-20-3	
TICs*	None Found			ug/kg	54.1		

Method: SW8260B - SIM, Run Date: 12/23/22 13:11, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	54.1	96-12-8	
1,4-Dioxane*	Not detected	50		ug/kg	54.1	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 22:29, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	1,000		ug/kg	54.1	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	54.1	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	54.1	107-13-1	
2-Butanone (MEK)	Not detected	810		ug/kg	54.1	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	54.1	75-71-8	
Chloromethane	Not detected	300		ug/kg	54.1	74-87-3	
Vinyl chloride	Not detected	50		ug/kg	54.1	75-01-4	
Bromomethane	Not detected	200		ug/kg	54.1	74-83-9	
Chloroethane	Not detected	300		ug/kg	54.1	75-00-3	



Analytical Laboratory Report

Lab Sample ID: S43533.22 (continued)

Sample Tag: AOC3-TP02-W

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 22:29, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichlorofluoromethane	Not detected	100		ug/kg	54.1	75-69-4	
1,1-Dichloroethene	Not detected	50		ug/kg	54.1	75-35-4	
Methylene chloride	Not detected	100		ug/kg	54.1	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	54.1	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	54.1	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	54.1	156-59-2	
Chloroform	Not detected	50		ug/kg	54.1	67-66-3	
1,1,1-Trichloroethane	Not detected	50		ug/kg	54.1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	54.1	108-10-1	
Carbon tetrachloride	Not detected	50		ug/kg	54.1	56-23-5	
Benzene	Not detected	50		ug/kg	54.1	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	54.1	107-06-2	
Trichloroethene	Not detected	50		ug/kg	54.1	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	54.1	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	54.1	75-27-4	
Dibromomethane	Not detected	300		ug/kg	54.1	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	54.1	10061-01-5	
Toluene	Not detected	50		ug/kg	54.1	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	54.1	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	54.1	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	54.1	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	54.1	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	54.1	106-93-4	M
Chlorobenzene	Not detected	50		ug/kg	54.1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	54.1	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	54.1	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	54.1		
o-Xylene	Not detected	50		ug/kg	54.1	95-47-6	
Styrene	Not detected	50		ug/kg	54.1	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	54.1	98-82-8	
Bromoform	Not detected	100		ug/kg	54.1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	54.1	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	54.1	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	54.1	103-65-1	
Bromobenzene	Not detected	100		ug/kg	54.1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	54.1	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	54.1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	54.1	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	54.1	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	54.1	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	54.1	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	54.1	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	54.1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	54.1	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	54.1	104-51-8	
1,2,4-Trichlorobenzene	Not detected	360		ug/kg	54.1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	360		ug/kg	54.1	87-61-6	
Naphthalene	Not detected	300		ug/kg	54.1	91-20-3	
Acrolein	Not detected	50		ug/kg	54.1	107-02-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.22 (continued)

Sample Tag: AOC3-TP02-W

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 22:29, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2-Chlorotoluene	Not detected	50		ug/kg	54.1	95-49-8	
4-Chlorotoluene	Not detected	50		ug/kg	54.1	106-43-4	
1,3-Dichloropropane	Not detected	50		ug/kg	54.1	142-28-9	
1,1-Dichloropropene	Not detected	50		ug/kg	54.1	563-58-6	
2,2-Dichloropropane	Not detected	50		ug/kg	54.1	594-20-7	
Hexachlorobutadiene	Not detected	50		ug/kg	54.1	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	54.1	76-13-1	

Other / Misc.

Method: , Run Date: 12/20/22 20:05, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.23

Sample Tag: AOC3-TP02-B

Collected Date/Time: 12/14/2022 11:36

Matrix: Soil

COC Reference: 158676

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
3	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/29/22 11:15	JRH	
BNA Extraction*	Completed	SW3546	12/21/22 14:00	TTV	
Extraction, PCB*	Completed	SW3546	12/27/22 12:00	JWR	
Sample wt. (g) / Methanol (ml)*	12.926/12	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:40	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	86	1		%	1		

Metals

Method: SW6020A, Run Date: 12/29/22 12:20, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	1,070	1.0		mg/kg	323	7429-90-5	
Antimony	Not detected	0.50		mg/kg	323	7440-36-0	
Arsenic	0.24	0.20		mg/kg	323	7440-38-2	
Barium	4.03	1.0		mg/kg	323	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	323	7440-41-7	
Boron	Not detected	2.0		mg/kg	323	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	323	7440-43-9	
Chromium	2.07	0.50		mg/kg	323	7440-47-3	
Cobalt	1.06	0.50		mg/kg	323	7440-48-4	
Copper	3.28	0.50		mg/kg	323	7440-50-8	
Iron	2,110	1.0		mg/kg	323	7439-89-6	
Lead	0.99	0.30		mg/kg	323	7439-92-1	
Manganese	43.5	0.50		mg/kg	323	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	323	7439-98-7	
Nickel	2.93	0.50		mg/kg	323	7440-02-0	
Selenium	Not detected	0.40		mg/kg	323	7782-49-2	
Silver	Not detected	0.20		mg/kg	323	7440-22-4	
Strontium	11.6	0.50		mg/kg	323	7440-24-6	
Thallium	Not detected	0.20		mg/kg	323	7440-28-0	
Tin	Not detected	2.0		mg/kg	323	7440-31-5	
Titanium	18.2	1.0		mg/kg	323	7440-32-6	
Vanadium	3.39	0.50		mg/kg	323	7440-62-2	
Zinc	7.38	0.50		mg/kg	323	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S43533.23 (continued)

Sample Tag: AOC3-TP02-B

Method: SW6020A, Run Date: 12/29/22 15:41, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	11,000	20		mg/kg	323	7440-70-2	
Magnesium	2,210	20		mg/kg	323	7439-95-4	
Potassium	74.0	60		mg/kg	323	7440-09-7	
Sodium	25.1	20		mg/kg	323	7440-23-5	

Method: SW7471B, Run Date: 12/20/22 14:34, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	87	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 18:14, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	1	12674-11-2	
PCB-1242	Not detected	330		ug/kg	1	53469-21-9	
PCB-1221	Not detected	330		ug/kg	1	11104-28-2	
PCB-1232	Not detected	330		ug/kg	1	11141-16-5	
PCB-1248	Not detected	330		ug/kg	1	12672-29-6	
PCB-1254	Not detected	330		ug/kg	1	11097-69-1	
PCB-1260	Not detected	330		ug/kg	1	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/05/23 16:45, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	7.5		
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8	
Anthracene	Not detected	330		ug/kg	7.5	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3	
Chrysene	Not detected	330		ug/kg	7.5	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2	
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3	



Analytical Laboratory Report

Lab Sample ID: S43533.23 (continued)

Sample Tag: AOC3-TP02-B

Method: SW8270D, Run Date: 01/05/23 16:45, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1	
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0	
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0	
Fluorene	Not detected	330		ug/kg	7.5	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5	
Isophorone	Not detected	330		ug/kg	7.5	78-59-1	
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5	
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8	
Phenol	Not detected	330		ug/kg	7.5	108-95-2	
Pyrene	Not detected	330		ug/kg	7.5	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2	
Benzidine	Not detected	330		ug/kg	7.5	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/19/22 22:54, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	62.1	108-20-3	
TICs*	None Found			ug/kg	62.1		

Method: SW8260B - SIM, Run Date: 12/23/22 13:31, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	62.1	96-12-8	
1,4-Dioxane*	Not detected	60		ug/kg	62.1	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 22:54, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	1,000		ug/kg	62.1	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	62.1	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	62.1	107-13-1	
2-Butanone (MEK)	Not detected	930		ug/kg	62.1	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	62.1	75-71-8	
Chloromethane	Not detected	300		ug/kg	62.1	74-87-3	
Vinyl chloride	Not detected	60		ug/kg	62.1	75-01-4	
Bromomethane	Not detected	200		ug/kg	62.1	74-83-9	
Chloroethane	Not detected	300		ug/kg	62.1	75-00-3	



Analytical Laboratory Report

Lab Sample ID: S43533.23 (continued)

Sample Tag: AOC3-TP02-B

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 22:54, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichlorofluoromethane	Not detected	100		ug/kg	62.1	75-69-4	
1,1-Dichloroethene	Not detected	60		ug/kg	62.1	75-35-4	
Methylene chloride	Not detected	100		ug/kg	62.1	75-09-2	
trans-1,2-Dichloroethene	Not detected	60		ug/kg	62.1	156-60-5	
1,1-Dichloroethane	Not detected	60		ug/kg	62.1	75-34-3	
cis-1,2-Dichloroethene	Not detected	60		ug/kg	62.1	156-59-2	
Chloroform	Not detected	60		ug/kg	62.1	67-66-3	
1,1,1-Trichloroethane	Not detected	60		ug/kg	62.1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	62.1	108-10-1	
Carbon tetrachloride	Not detected	60		ug/kg	62.1	56-23-5	
Benzene	Not detected	60		ug/kg	62.1	71-43-2	
1,2-Dichloroethane	Not detected	60		ug/kg	62.1	107-06-2	
Trichloroethene	Not detected	60		ug/kg	62.1	79-01-6	
1,2-Dichloropropane	Not detected	60		ug/kg	62.1	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	62.1	75-27-4	
Dibromomethane	Not detected	300		ug/kg	62.1	74-95-3	
cis-1,3-Dichloropropene	Not detected	60		ug/kg	62.1	10061-01-5	
Toluene	Not detected	60		ug/kg	62.1	108-88-3	
trans-1,3-Dichloropropene	Not detected	60		ug/kg	62.1	10061-02-6	
1,1,2-Trichloroethane	Not detected	60		ug/kg	62.1	79-00-5	
Tetrachloroethene	Not detected	60		ug/kg	62.1	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	62.1	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	62.1	106-93-4	M
Chlorobenzene	Not detected	60		ug/kg	62.1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	62.1	630-20-6	
Ethylbenzene	Not detected	60		ug/kg	62.1	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	62.1		
o-Xylene	Not detected	60		ug/kg	62.1	95-47-6	
Styrene	Not detected	60		ug/kg	62.1	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	62.1	98-82-8	
Bromoform	Not detected	100		ug/kg	62.1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	62.1	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	62.1	96-18-4	
n-Propylbenzene	Not detected	60		ug/kg	62.1	103-65-1	
Bromobenzene	Not detected	100		ug/kg	62.1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	62.1	108-67-8	
tert-Butylbenzene	Not detected	60		ug/kg	62.1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	62.1	95-63-6	
sec-Butylbenzene	Not detected	60		ug/kg	62.1	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	62.1	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	62.1	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	62.1	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	62.1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	62.1	526-73-8	
n-Butylbenzene	Not detected	60		ug/kg	62.1	104-51-8	
1,2,4-Trichlorobenzene	Not detected	410		ug/kg	62.1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	410		ug/kg	62.1	87-61-6	
Naphthalene	Not detected	300		ug/kg	62.1	91-20-3	
Acrolein	Not detected	60		ug/kg	62.1	107-02-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.23 (continued)

Sample Tag: AOC3-TP02-B

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 22:54, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2-Chlorotoluene	Not detected	60		ug/kg	62.1	95-49-8	
4-Chlorotoluene	Not detected	60		ug/kg	62.1	106-43-4	
1,3-Dichloropropane	Not detected	60		ug/kg	62.1	142-28-9	
1,1-Dichloropropene	Not detected	60		ug/kg	62.1	563-58-6	
2,2-Dichloropropane	Not detected	60		ug/kg	62.1	594-20-7	
Hexachlorobutadiene	Not detected	60		ug/kg	62.1	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	62.1	76-13-1	

Other / Misc.

Method: , Run Date: 12/20/22 20:26, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.24

Sample Tag: Dup-08s

Collected Date/Time: 12/14/2022 00:01

Matrix: Soil

COC Reference: 158676

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
3	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/29/22 11:15	JRH	
BNA Extraction*	Completed	SW3546	12/21/22 14:00	TTV	
Extraction, PCB*	Completed	SW3546	12/27/22 12:00	JWR	
Sample wt. (g) / Methanol (ml)*	13.751/13	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:40	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	94	1		%	1		

Metals

Method: SW6020A, Run Date: 12/29/22 12:23, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	2,350	1.0		mg/kg	306	7429-90-5	
Antimony	Not detected	0.50		mg/kg	306	7440-36-0	
Arsenic	0.96	0.20		mg/kg	306	7440-38-2	
Barium	13.3	1.0		mg/kg	306	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	306	7440-41-7	
Boron	Not detected	2.0		mg/kg	306	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	306	7440-43-9	
Chromium	5.81	0.50		mg/kg	306	7440-47-3	
Cobalt	2.11	0.50		mg/kg	306	7440-48-4	
Copper	5.32	0.50		mg/kg	306	7440-50-8	
Iron	5,920	1.0		mg/kg	306	7439-89-6	
Lead	2.07	0.30		mg/kg	306	7439-92-1	
Manganese	407	0.50		mg/kg	306	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	306	7439-98-7	
Nickel	4.00	0.50		mg/kg	306	7440-02-0	
Selenium	Not detected	0.40		mg/kg	306	7782-49-2	
Silver	Not detected	0.20		mg/kg	306	7440-22-4	
Strontium	1.31	0.50		mg/kg	306	7440-24-6	
Thallium	Not detected	0.20		mg/kg	306	7440-28-0	
Tin	Not detected	2.0		mg/kg	306	7440-31-5	
Titanium	39.1	1.0		mg/kg	306	7440-32-6	
Vanadium	11.3	0.50		mg/kg	306	7440-62-2	
Zinc	8.88	0.50		mg/kg	306	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S43533.24 (continued)

Sample Tag: Dup-08s

Method: SW6020A, Run Date: 12/29/22 15:43, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	338	20		mg/kg	306	7440-70-2	
Magnesium	625	20		mg/kg	306	7439-95-4	
Potassium	78.3	60		mg/kg	306	7440-09-7	
Sodium	31.0	20		mg/kg	306	7440-23-5	

Method: SW7471B, Run Date: 12/20/22 14:37, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	78	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 18:26, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	1	12674-11-2	
PCB-1242	Not detected	330		ug/kg	1	53469-21-9	
PCB-1221	Not detected	330		ug/kg	1	11104-28-2	
PCB-1232	Not detected	330		ug/kg	1	11141-16-5	
PCB-1248	Not detected	330		ug/kg	1	12672-29-6	
PCB-1254	Not detected	330		ug/kg	1	11097-69-1	
PCB-1260	Not detected	330		ug/kg	1	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/05/23 17:15, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	7.5		
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8	
Anthracene	Not detected	330		ug/kg	7.5	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3	
Chrysene	Not detected	330		ug/kg	7.5	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2	
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3	



Analytical Laboratory Report

Lab Sample ID: S43533.24 (continued)

Sample Tag: Dup-08s

Method: SW8270D, Run Date: 01/05/23 17:15, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1	
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0	
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0	
Fluorene	Not detected	330		ug/kg	7.5	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5	
Isophorone	Not detected	330		ug/kg	7.5	78-59-1	
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5	
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8	
Phenol	Not detected	330		ug/kg	7.5	108-95-2	
Pyrene	Not detected	330		ug/kg	7.5	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2	
Benzidine	Not detected	330		ug/kg	7.5	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/19/22 23:18, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	53.5	108-20-3	
TICs*	None Found			ug/kg	53.5		

Method: SW8260B - SIM, Run Date: 12/23/22 13:52, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	53.5	96-12-8	
1,4-Dioxane*	Not detected	50		ug/kg	53.5	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 23:18, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	1,000		ug/kg	53.5	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	53.5	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	53.5	107-13-1	
2-Butanone (MEK)	Not detected	800		ug/kg	53.5	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	53.5	75-71-8	
Chloromethane	Not detected	300		ug/kg	53.5	74-87-3	
Vinyl chloride	Not detected	50		ug/kg	53.5	75-01-4	
Bromomethane	Not detected	200		ug/kg	53.5	74-83-9	
Chloroethane	Not detected	300		ug/kg	53.5	75-00-3	



Analytical Laboratory Report

Lab Sample ID: S43533.24 (continued)

Sample Tag: Dup-08s

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 23:18, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichlorofluoromethane	Not detected	100		ug/kg	53.5	75-69-4	
1,1-Dichloroethene	Not detected	50		ug/kg	53.5	75-35-4	
Methylene chloride	Not detected	100		ug/kg	53.5	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	53.5	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	53.5	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	53.5	156-59-2	
Chloroform	Not detected	50		ug/kg	53.5	67-66-3	
1,1,1-Trichloroethane	Not detected	50		ug/kg	53.5	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	53.5	108-10-1	
Carbon tetrachloride	Not detected	50		ug/kg	53.5	56-23-5	
Benzene	Not detected	50		ug/kg	53.5	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	53.5	107-06-2	
Trichloroethene	Not detected	50		ug/kg	53.5	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	53.5	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	53.5	75-27-4	
Dibromomethane	Not detected	300		ug/kg	53.5	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	53.5	10061-01-5	
Toluene	Not detected	50		ug/kg	53.5	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	53.5	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	53.5	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	53.5	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	53.5	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	53.5	106-93-4	M
Chlorobenzene	Not detected	50		ug/kg	53.5	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	53.5	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	53.5	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	53.5		
o-Xylene	Not detected	50		ug/kg	53.5	95-47-6	
Styrene	Not detected	50		ug/kg	53.5	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	53.5	98-82-8	
Bromoform	Not detected	100		ug/kg	53.5	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	53.5	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	53.5	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	53.5	103-65-1	
Bromobenzene	Not detected	100		ug/kg	53.5	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	53.5	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	53.5	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	53.5	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	53.5	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	53.5	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	53.5	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	53.5	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	53.5	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	53.5	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	53.5	104-51-8	
1,2,4-Trichlorobenzene	Not detected	350		ug/kg	53.5	120-82-1	
1,2,3-Trichlorobenzene	Not detected	350		ug/kg	53.5	87-61-6	
Naphthalene	Not detected	300		ug/kg	53.5	91-20-3	
Acrolein	Not detected	50		ug/kg	53.5	107-02-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.24 (continued)

Sample Tag: Dup-08s

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 23:18, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2-Chlorotoluene	Not detected	50		ug/kg	53.5	95-49-8	
4-Chlorotoluene	Not detected	50		ug/kg	53.5	106-43-4	
1,3-Dichloropropane	Not detected	50		ug/kg	53.5	142-28-9	
1,1-Dichloropropene	Not detected	50		ug/kg	53.5	563-58-6	
2,2-Dichloropropane	Not detected	50		ug/kg	53.5	594-20-7	
Hexachlorobutadiene	Not detected	50		ug/kg	53.5	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	53.5	76-13-1	

Other / Misc.

Method: , Run Date: 12/20/22 20:47, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.25

Sample Tag: AOC3-TP03-N

Collected Date/Time: 12/14/2022 12:46

Matrix: Soil

COC Reference: 158677

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
3	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/29/22 11:15	JRH	
BNA Extraction*	Completed	SW3546	12/21/22 14:00	TTV	
Extraction, PCB*	Completed	SW3546	12/27/22 12:00	JWR	
Sample wt. (g) / Methanol (ml)*	12.704/12	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:40	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	94	1		%	1		

Metals

Method: SW6020A, Run Date: 12/29/22 12:25, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	1,610	1.0		mg/kg	300	7429-90-5	
Antimony	Not detected	0.50		mg/kg	300	7440-36-0	
Arsenic	0.53	0.20		mg/kg	300	7440-38-2	
Barium	10.7	1.0		mg/kg	300	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	300	7440-41-7	
Boron	Not detected	2.0		mg/kg	300	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	300	7440-43-9	
Chromium	4.73	0.50		mg/kg	300	7440-47-3	
Cobalt	0.75	0.50		mg/kg	300	7440-48-4	
Copper	1.46	0.50		mg/kg	300	7440-50-8	
Iron	2,670	1.0		mg/kg	300	7439-89-6	
Lead	1.04	0.30		mg/kg	300	7439-92-1	
Manganese	21.9	0.50		mg/kg	300	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	300	7439-98-7	
Nickel	2.31	0.50		mg/kg	300	7440-02-0	
Selenium	Not detected	0.40		mg/kg	300	7782-49-2	
Silver	Not detected	0.20		mg/kg	300	7440-22-4	
Strontium	0.80	0.50		mg/kg	300	7440-24-6	
Thallium	Not detected	0.20		mg/kg	300	7440-28-0	
Tin	Not detected	2.0		mg/kg	300	7440-31-5	
Titanium	29.2	1.0		mg/kg	300	7440-32-6	
Vanadium	4.68	0.50		mg/kg	300	7440-62-2	
Zinc	5.42	0.50		mg/kg	300	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S43533.25 (continued)

Sample Tag: AOC3-TP03-N

Method: SW6020A, Run Date: 12/29/22 15:44, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	259	20		mg/kg	300	7440-70-2	
Magnesium	366	20		mg/kg	300	7439-95-4	
Potassium	Not detected	60		mg/kg	300	7440-09-7	
Sodium	46.8	20		mg/kg	300	7440-23-5	

Method: SW7471B, Run Date: 12/20/22 14:40, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	77	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 18:38, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	1	12674-11-2	
PCB-1242	Not detected	330		ug/kg	1	53469-21-9	
PCB-1221	Not detected	330		ug/kg	1	11104-28-2	
PCB-1232	Not detected	330		ug/kg	1	11141-16-5	
PCB-1248	Not detected	330		ug/kg	1	12672-29-6	
PCB-1254	Not detected	330		ug/kg	1	11097-69-1	
PCB-1260	Not detected	330		ug/kg	1	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/05/23 17:46, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	7.5		
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8	
Anthracene	Not detected	330		ug/kg	7.5	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3	
Chrysene	Not detected	330		ug/kg	7.5	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2	
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3	



Analytical Laboratory Report

Lab Sample ID: S43533.25 (continued)

Sample Tag: AOC3-TP03-N

Method: SW8270D, Run Date: 01/05/23 17:46, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1	
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0	
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0	
Fluorene	Not detected	330		ug/kg	7.5	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5	
Isophorone	Not detected	330		ug/kg	7.5	78-59-1	
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5	
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8	
Phenol	Not detected	330		ug/kg	7.5	108-95-2	
Pyrene	Not detected	330		ug/kg	7.5	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2	
Benzidine	Not detected	330		ug/kg	7.5	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/19/22 23:42, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	53.4	108-20-3	
TICs*	None Found			ug/kg	53.4		

Method: SW8260B - SIM, Run Date: 12/23/22 14:12, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	53.4	96-12-8	
1,4-Dioxane*	Not detected	50		ug/kg	53.4	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 23:42, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	1,000		ug/kg	53.4	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	53.4	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	53.4	107-13-1	
2-Butanone (MEK)	Not detected	800		ug/kg	53.4	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	53.4	75-71-8	
Chloromethane	Not detected	300		ug/kg	53.4	74-87-3	
Vinyl chloride	Not detected	50		ug/kg	53.4	75-01-4	
Bromomethane	Not detected	200		ug/kg	53.4	74-83-9	
Chloroethane	Not detected	300		ug/kg	53.4	75-00-3	



Analytical Laboratory Report

Lab Sample ID: S43533.25 (continued)

Sample Tag: AOC3-TP03-N

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 23:42, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichlorofluoromethane	Not detected	100		ug/kg	53.4	75-69-4	
1,1-Dichloroethene	Not detected	50		ug/kg	53.4	75-35-4	
Methylene chloride	Not detected	100		ug/kg	53.4	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	53.4	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	53.4	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	53.4	156-59-2	
Chloroform	Not detected	50		ug/kg	53.4	67-66-3	
1,1,1-Trichloroethane	Not detected	50		ug/kg	53.4	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	53.4	108-10-1	
Carbon tetrachloride	Not detected	50		ug/kg	53.4	56-23-5	
Benzene	Not detected	50		ug/kg	53.4	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	53.4	107-06-2	
Trichloroethene	Not detected	50		ug/kg	53.4	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	53.4	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	53.4	75-27-4	
Dibromomethane	Not detected	300		ug/kg	53.4	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	53.4	10061-01-5	
Toluene	Not detected	50		ug/kg	53.4	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	53.4	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	53.4	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	53.4	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	53.4	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	53.4	106-93-4	M
Chlorobenzene	Not detected	50		ug/kg	53.4	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	53.4	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	53.4	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	53.4		
o-Xylene	Not detected	50		ug/kg	53.4	95-47-6	
Styrene	Not detected	50		ug/kg	53.4	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	53.4	98-82-8	
Bromoform	Not detected	100		ug/kg	53.4	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	53.4	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	53.4	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	53.4	103-65-1	
Bromobenzene	Not detected	100		ug/kg	53.4	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	53.4	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	53.4	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	53.4	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	53.4	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	53.4	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	53.4	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	53.4	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	53.4	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	53.4	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	53.4	104-51-8	
1,2,4-Trichlorobenzene	Not detected	350		ug/kg	53.4	120-82-1	
1,2,3-Trichlorobenzene	Not detected	350		ug/kg	53.4	87-61-6	
Naphthalene	Not detected	300		ug/kg	53.4	91-20-3	
Acrolein	Not detected	50		ug/kg	53.4	107-02-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.25 (continued)

Sample Tag: AOC3-TP03-N

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/19/22 23:42, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2-Chlorotoluene	Not detected	50		ug/kg	53.4	95-49-8	
4-Chlorotoluene	Not detected	50		ug/kg	53.4	106-43-4	
1,3-Dichloropropane	Not detected	50		ug/kg	53.4	142-28-9	
1,1-Dichloropropene	Not detected	50		ug/kg	53.4	563-58-6	
2,2-Dichloropropane	Not detected	50		ug/kg	53.4	594-20-7	
Hexachlorobutadiene	Not detected	50		ug/kg	53.4	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	53.4	76-13-1	

Other / Misc.

Method: , Run Date: 12/20/22 21:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.26

Sample Tag: AOC3-TP03-S

Collected Date/Time: 12/14/2022 12:55

Matrix: Soil

COC Reference: 158677

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
3	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/29/22 11:15	JRH	
BNA Extraction*	Completed	SW3546	12/21/22 14:00	TTV	
Extraction, PCB*	Completed	SW3546	12/27/22 12:00	JWR	
Sample wt. (g) / Methanol (ml)*	9.927/10	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:40	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	93	1		%	1		

Metals

Method: SW6020A, Run Date: 12/29/22 12:27, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	2,000	1.0		mg/kg	318	7429-90-5	
Antimony	Not detected	0.50		mg/kg	318	7440-36-0	
Arsenic	0.24	0.20		mg/kg	318	7440-38-2	
Barium	17.6	1.0		mg/kg	318	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	318	7440-41-7	
Boron	Not detected	2.0		mg/kg	318	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	318	7440-43-9	
Chromium	3.87	0.50		mg/kg	318	7440-47-3	
Cobalt	0.80	0.50		mg/kg	318	7440-48-4	
Copper	2.63	0.50		mg/kg	318	7440-50-8	
Iron	2,020	1.0		mg/kg	318	7439-89-6	
Lead	0.71	0.30		mg/kg	318	7439-92-1	
Manganese	40.6	0.50		mg/kg	318	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	318	7439-98-7	
Nickel	2.63	0.50		mg/kg	318	7440-02-0	
Selenium	Not detected	0.40		mg/kg	318	7782-49-2	
Silver	Not detected	0.20		mg/kg	318	7440-22-4	
Strontium	1.18	0.50		mg/kg	318	7440-24-6	
Thallium	Not detected	0.20		mg/kg	318	7440-28-0	
Tin	Not detected	2.0		mg/kg	318	7440-31-5	
Titanium	25.1	1.0		mg/kg	318	7440-32-6	
Vanadium	3.25	0.50		mg/kg	318	7440-62-2	
Zinc	5.88	0.50		mg/kg	318	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S43533.26 (continued)

Sample Tag: AOC3-TP03-S

Method: SW6020A, Run Date: 12/29/22 15:45, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	301	20		mg/kg	318	7440-70-2	
Magnesium	400	20		mg/kg	318	7439-95-4	
Potassium	82.1	60		mg/kg	318	7440-09-7	
Sodium	53.0	20		mg/kg	318	7440-23-5	

Method: SW7471B, Run Date: 12/20/22 14:43, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	78	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 19:01, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	1	12674-11-2	
PCB-1242	Not detected	330		ug/kg	1	53469-21-9	
PCB-1221	Not detected	330		ug/kg	1	11104-28-2	
PCB-1232	Not detected	330		ug/kg	1	11141-16-5	
PCB-1248	Not detected	330		ug/kg	1	12672-29-6	
PCB-1254	Not detected	330		ug/kg	1	11097-69-1	
PCB-1260	Not detected	330		ug/kg	1	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/05/23 18:17, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	7.5		
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8	
Anthracene	Not detected	330		ug/kg	7.5	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3	
Chrysene	Not detected	330		ug/kg	7.5	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2	
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3	



Analytical Laboratory Report

Lab Sample ID: S43533.26 (continued)

Sample Tag: AOC3-TP03-S

Method: SW8270D, Run Date: 01/05/23 18:17, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1	
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0	
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0	
Fluorene	Not detected	330		ug/kg	7.5	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5	
Isophorone	Not detected	330		ug/kg	7.5	78-59-1	
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5	
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8	
Phenol	Not detected	330		ug/kg	7.5	108-95-2	
Pyrene	Not detected	330		ug/kg	7.5	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2	
Benzidine	Not detected	330		ug/kg	7.5	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/20/22 00:07, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	57.9	108-20-3	
TICs*	None Found			ug/kg	57.9		

Method: SW8260B - SIM, Run Date: 12/23/22 15:59, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	57.9	96-12-8	
1,4-Dioxane*	Not detected	60		ug/kg	57.9	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 00:07, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	1,000		ug/kg	57.9	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	57.9	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	57.9	107-13-1	
2-Butanone (MEK)	Not detected	870		ug/kg	57.9	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	57.9	75-71-8	
Chloromethane	Not detected	300		ug/kg	57.9	74-87-3	
Vinyl chloride	Not detected	60		ug/kg	57.9	75-01-4	
Bromomethane	Not detected	200		ug/kg	57.9	74-83-9	
Chloroethane	Not detected	300		ug/kg	57.9	75-00-3	



Analytical Laboratory Report

Lab Sample ID: S43533.26 (continued)

Sample Tag: AOC3-TP03-S

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 00:07, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichlorofluoromethane	Not detected	100		ug/kg	57.9	75-69-4	
1,1-Dichloroethene	Not detected	60		ug/kg	57.9	75-35-4	
Methylene chloride	Not detected	100		ug/kg	57.9	75-09-2	
trans-1,2-Dichloroethene	Not detected	60		ug/kg	57.9	156-60-5	
1,1-Dichloroethane	Not detected	60		ug/kg	57.9	75-34-3	
cis-1,2-Dichloroethene	Not detected	60		ug/kg	57.9	156-59-2	
Chloroform	Not detected	60		ug/kg	57.9	67-66-3	
1,1,1-Trichloroethane	Not detected	60		ug/kg	57.9	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	57.9	108-10-1	
Carbon tetrachloride	Not detected	60		ug/kg	57.9	56-23-5	
Benzene	Not detected	60		ug/kg	57.9	71-43-2	
1,2-Dichloroethane	Not detected	60		ug/kg	57.9	107-06-2	
Trichloroethene	Not detected	60		ug/kg	57.9	79-01-6	
1,2-Dichloropropane	Not detected	60		ug/kg	57.9	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	57.9	75-27-4	
Dibromomethane	Not detected	300		ug/kg	57.9	74-95-3	
cis-1,3-Dichloropropene	Not detected	60		ug/kg	57.9	10061-01-5	
Toluene	Not detected	60		ug/kg	57.9	108-88-3	
trans-1,3-Dichloropropene	Not detected	60		ug/kg	57.9	10061-02-6	
1,1,2-Trichloroethane	Not detected	60		ug/kg	57.9	79-00-5	
Tetrachloroethene	Not detected	60		ug/kg	57.9	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	57.9	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	57.9	106-93-4	M
Chlorobenzene	Not detected	60		ug/kg	57.9	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	57.9	630-20-6	
Ethylbenzene	Not detected	60		ug/kg	57.9	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	57.9		
o-Xylene	Not detected	60		ug/kg	57.9	95-47-6	
Styrene	Not detected	60		ug/kg	57.9	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	57.9	98-82-8	
Bromoform	Not detected	100		ug/kg	57.9	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	57.9	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	57.9	96-18-4	
n-Propylbenzene	Not detected	60		ug/kg	57.9	103-65-1	
Bromobenzene	Not detected	100		ug/kg	57.9	108-86-1	
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	57.9	108-67-8	
tert-Butylbenzene	Not detected	60		ug/kg	57.9	98-06-6	
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	57.9	95-63-6	
sec-Butylbenzene	Not detected	60		ug/kg	57.9	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	57.9	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	57.9	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	57.9	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	57.9	95-50-1	
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	57.9	526-73-8	
n-Butylbenzene	Not detected	60		ug/kg	57.9	104-51-8	
1,2,4-Trichlorobenzene	Not detected	380		ug/kg	57.9	120-82-1	
1,2,3-Trichlorobenzene	Not detected	380		ug/kg	57.9	87-61-6	
Naphthalene	Not detected	300		ug/kg	57.9	91-20-3	
Acrolein	Not detected	60		ug/kg	57.9	107-02-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.26 (continued)

Sample Tag: AOC3-TP03-S

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 00:07, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2-Chlorotoluene	Not detected	60		ug/kg	57.9	95-49-8	
4-Chlorotoluene	Not detected	60		ug/kg	57.9	106-43-4	
1,3-Dichloropropane	Not detected	60		ug/kg	57.9	142-28-9	
1,1-Dichloropropene	Not detected	60		ug/kg	57.9	563-58-6	
2,2-Dichloropropane	Not detected	60		ug/kg	57.9	594-20-7	
Hexachlorobutadiene	Not detected	60		ug/kg	57.9	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	57.9	76-13-1	

Other / Misc.

Method: , Run Date: 12/20/22 21:28, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.27

Sample Tag: AOC3-TP03-E

Collected Date/Time: 12/14/2022 13:02

Matrix: Soil

COC Reference: 158677

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
3	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/29/22 11:15	JRH	
BNA Extraction*	Completed	SW3546	12/21/22 14:00	TTV	
Extraction, PCB*	Completed	SW3546	12/27/22 12:00	JWR	
Sample wt. (g) / Methanol (ml)*	12.309/12	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:40	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	94	1		%	1		

Metals

Method: SW6020A, Run Date: 12/29/22 12:29, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	1,790	1.0		mg/kg	302	7429-90-5	
Antimony	Not detected	0.50		mg/kg	302	7440-36-0	
Arsenic	0.27	0.20		mg/kg	302	7440-38-2	
Barium	15.2	1.0		mg/kg	302	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	302	7440-41-7	
Boron	Not detected	2.0		mg/kg	302	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	302	7440-43-9	
Chromium	4.03	0.50		mg/kg	302	7440-47-3	
Cobalt	0.98	0.50		mg/kg	302	7440-48-4	
Copper	1.74	0.50		mg/kg	302	7440-50-8	
Iron	2,230	1.0		mg/kg	302	7439-89-6	
Lead	0.86	0.30		mg/kg	302	7439-92-1	
Manganese	169	0.50		mg/kg	302	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	302	7439-98-7	
Nickel	2.52	0.50		mg/kg	302	7440-02-0	
Selenium	Not detected	0.40		mg/kg	302	7782-49-2	
Silver	Not detected	0.20		mg/kg	302	7440-22-4	
Strontium	1.40	0.50		mg/kg	302	7440-24-6	
Thallium	Not detected	0.20		mg/kg	302	7440-28-0	
Tin	Not detected	2.0		mg/kg	302	7440-31-5	
Titanium	31.8	1.0		mg/kg	302	7440-32-6	
Vanadium	3.48	0.50		mg/kg	302	7440-62-2	
Zinc	5.22	0.50		mg/kg	302	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S43533.27 (continued)

Sample Tag: AOC3-TP03-E

Method: SW6020A, Run Date: 12/29/22 15:46, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	359	20		mg/kg	302	7440-70-2	
Magnesium	413	20		mg/kg	302	7439-95-4	
Potassium	62.5	60		mg/kg	302	7440-09-7	
Sodium	49.0	20		mg/kg	302	7440-23-5	

Method: SW7471B, Run Date: 12/20/22 14:47, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	80	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 19:13, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	1	12674-11-2	
PCB-1242	Not detected	330		ug/kg	1	53469-21-9	
PCB-1221	Not detected	330		ug/kg	1	11104-28-2	
PCB-1232	Not detected	330		ug/kg	1	11141-16-5	
PCB-1248	Not detected	330		ug/kg	1	12672-29-6	
PCB-1254	Not detected	330		ug/kg	1	11097-69-1	
PCB-1260	Not detected	330		ug/kg	1	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/05/23 18:49, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	7.5		
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8	
Anthracene	Not detected	330		ug/kg	7.5	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3	
Chrysene	Not detected	330		ug/kg	7.5	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2	
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3	



Analytical Laboratory Report

Lab Sample ID: S43533.27 (continued)

Sample Tag: AOC3-TP03-E

Method: SW8270D, Run Date: 01/05/23 18:49, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1	
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0	
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0	
Fluorene	Not detected	330		ug/kg	7.5	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5	
Isophorone	Not detected	330		ug/kg	7.5	78-59-1	
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5	
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8	
Phenol	Not detected	330		ug/kg	7.5	108-95-2	
Pyrene	Not detected	330		ug/kg	7.5	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2	
Benzidine	Not detected	330		ug/kg	7.5	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/20/22 00:31, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	55	108-20-3	
TICs*	None Found			ug/kg	55		

Method: SW8260B - SIM, Run Date: 12/23/22 16:20, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	55	96-12-8	
1,4-Dioxane*	Not detected	60		ug/kg	55	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 00:31, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	1,000		ug/kg	55	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	55	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	55	107-13-1	
2-Butanone (MEK)	Not detected	830		ug/kg	55	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	55	75-71-8	
Chloromethane	Not detected	300		ug/kg	55	74-87-3	
Vinyl chloride	Not detected	60		ug/kg	55	75-01-4	
Bromomethane	Not detected	200		ug/kg	55	74-83-9	
Chloroethane	Not detected	300		ug/kg	55	75-00-3	



Analytical Laboratory Report

Lab Sample ID: S43533.27 (continued)

Sample Tag: AOC3-TP03-E

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 00:31, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichlorofluoromethane	Not detected	100		ug/kg	55	75-69-4	
1,1-Dichloroethene	Not detected	60		ug/kg	55	75-35-4	
Methylene chloride	Not detected	100		ug/kg	55	75-09-2	
trans-1,2-Dichloroethene	Not detected	60		ug/kg	55	156-60-5	
1,1-Dichloroethane	Not detected	60		ug/kg	55	75-34-3	
cis-1,2-Dichloroethene	Not detected	60		ug/kg	55	156-59-2	
Chloroform	Not detected	60		ug/kg	55	67-66-3	
1,1,1-Trichloroethane	Not detected	60		ug/kg	55	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	55	108-10-1	
Carbon tetrachloride	Not detected	60		ug/kg	55	56-23-5	
Benzene	Not detected	60		ug/kg	55	71-43-2	
1,2-Dichloroethane	Not detected	60		ug/kg	55	107-06-2	
Trichloroethene	Not detected	60		ug/kg	55	79-01-6	
1,2-Dichloropropane	Not detected	60		ug/kg	55	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	55	75-27-4	
Dibromomethane	Not detected	300		ug/kg	55	74-95-3	
cis-1,3-Dichloropropene	Not detected	60		ug/kg	55	10061-01-5	
Toluene	Not detected	60		ug/kg	55	108-88-3	
trans-1,3-Dichloropropene	Not detected	60		ug/kg	55	10061-02-6	
1,1,2-Trichloroethane	Not detected	60		ug/kg	55	79-00-5	
Tetrachloroethene	Not detected	60		ug/kg	55	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	55	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	55	106-93-4	M
Chlorobenzene	Not detected	60		ug/kg	55	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	55	630-20-6	
Ethylbenzene	Not detected	60		ug/kg	55	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	55		
o-Xylene	Not detected	60		ug/kg	55	95-47-6	
Styrene	Not detected	60		ug/kg	55	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	55	98-82-8	
Bromoform	Not detected	100		ug/kg	55	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	55	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	55	96-18-4	
n-Propylbenzene	Not detected	60		ug/kg	55	103-65-1	
Bromobenzene	Not detected	100		ug/kg	55	108-86-1	
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	55	108-67-8	
tert-Butylbenzene	Not detected	60		ug/kg	55	98-06-6	
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	55	95-63-6	
sec-Butylbenzene	Not detected	60		ug/kg	55	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	55	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	55	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	55	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	55	95-50-1	
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	55	526-73-8	
n-Butylbenzene	Not detected	60		ug/kg	55	104-51-8	
1,2,4-Trichlorobenzene	Not detected	360		ug/kg	55	120-82-1	
1,2,3-Trichlorobenzene	Not detected	360		ug/kg	55	87-61-6	
Naphthalene	Not detected	300		ug/kg	55	91-20-3	
Acrolein	Not detected	60		ug/kg	55	107-02-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.27 (continued)

Sample Tag: AOC3-TP03-E

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 00:31, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2-Chlorotoluene	Not detected	60		ug/kg	55	95-49-8	
4-Chlorotoluene	Not detected	60		ug/kg	55	106-43-4	
1,3-Dichloropropane	Not detected	60		ug/kg	55	142-28-9	
1,1-Dichloropropene	Not detected	60		ug/kg	55	563-58-6	
2,2-Dichloropropane	Not detected	60		ug/kg	55	594-20-7	
Hexachlorobutadiene	Not detected	60		ug/kg	55	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	55	76-13-1	

Other / Misc.

Method: , Run Date: 12/21/22 23:32, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.28

Sample Tag: AOC3-TP03-W

Collected Date/Time: 12/14/2022 13:02

Matrix: Soil

COC Reference: 158677

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
3	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/29/22 11:15	JRH	
BNA Extraction*	Completed	SW3546	12/21/22 14:00	TTV	
Extraction, PCB*	Completed	SW3546	12/27/22 12:00	JWR	
Sample wt. (g) / Methanol (ml)*	13.670/13	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:40	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	94	1		%	1		

Metals

Method: SW6020A, Run Date: 12/29/22 12:31, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	1,640	1.0		mg/kg	320	7429-90-5	
Antimony	Not detected	0.50		mg/kg	320	7440-36-0	
Arsenic	0.27	0.20		mg/kg	320	7440-38-2	
Barium	15.7	1.0		mg/kg	320	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	320	7440-41-7	
Boron	Not detected	2.0		mg/kg	320	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	320	7440-43-9	
Chromium	3.34	0.50		mg/kg	320	7440-47-3	
Cobalt	0.71	0.50		mg/kg	320	7440-48-4	
Copper	1.51	0.50		mg/kg	320	7440-50-8	
Iron	1,790	1.0		mg/kg	320	7439-89-6	
Lead	0.57	0.30		mg/kg	320	7439-92-1	
Manganese	69.8	0.50		mg/kg	320	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	320	7439-98-7	
Nickel	2.45	0.50		mg/kg	320	7440-02-0	
Selenium	Not detected	0.40		mg/kg	320	7782-49-2	
Silver	Not detected	0.20		mg/kg	320	7440-22-4	
Strontium	1.00	0.50		mg/kg	320	7440-24-6	
Thallium	Not detected	0.20		mg/kg	320	7440-28-0	
Tin	Not detected	2.0		mg/kg	320	7440-31-5	
Titanium	38.0	1.0		mg/kg	320	7440-32-6	
Vanadium	2.54	0.50		mg/kg	320	7440-62-2	
Zinc	4.96	0.50		mg/kg	320	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S43533.28 (continued)

Sample Tag: AOC3-TP03-W

Method: SW6020A, Run Date: 12/29/22 15:48, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	279	20		mg/kg	320	7440-70-2	
Magnesium	328	20		mg/kg	320	7439-95-4	
Potassium	62.1	60		mg/kg	320	7440-09-7	
Sodium	49.0	20		mg/kg	320	7440-23-5	

Method: SW7471B, Run Date: 12/20/22 14:50, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	84	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 19:25, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	1	12674-11-2	
PCB-1242	Not detected	330		ug/kg	1	53469-21-9	
PCB-1221	Not detected	330		ug/kg	1	11104-28-2	
PCB-1232	Not detected	330		ug/kg	1	11141-16-5	
PCB-1248	Not detected	330		ug/kg	1	12672-29-6	
PCB-1254	Not detected	330		ug/kg	1	11097-69-1	
PCB-1260	Not detected	330		ug/kg	1	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/05/23 19:21, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	7.5		
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8	
Anthracene	Not detected	330		ug/kg	7.5	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3	
Chrysene	Not detected	330		ug/kg	7.5	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2	
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3	



Analytical Laboratory Report

Lab Sample ID: S43533.28 (continued)

Sample Tag: AOC3-TP03-W

Method: SW8270D, Run Date: 01/05/23 19:21, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1	
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0	
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0	
Fluorene	Not detected	330		ug/kg	7.5	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5	
Isophorone	Not detected	330		ug/kg	7.5	78-59-1	
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5	
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8	
Phenol	Not detected	330		ug/kg	7.5	108-95-2	
Pyrene	Not detected	330		ug/kg	7.5	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2	
Benzidine	Not detected	330		ug/kg	7.5	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/20/22 00:55, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	53.8	108-20-3	
TICs*	None Found			ug/kg	53.8		

Method: SW8260B - SIM, Run Date: 12/23/22 16:41, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	53.8	96-12-8	
1,4-Dioxane*	Not detected	50		ug/kg	53.8	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 00:55, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	1,000		ug/kg	53.8	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	53.8	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	53.8	107-13-1	
2-Butanone (MEK)	Not detected	810		ug/kg	53.8	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	53.8	75-71-8	
Chloromethane	Not detected	300		ug/kg	53.8	74-87-3	
Vinyl chloride	Not detected	50		ug/kg	53.8	75-01-4	
Bromomethane	Not detected	200		ug/kg	53.8	74-83-9	
Chloroethane	Not detected	300		ug/kg	53.8	75-00-3	



Analytical Laboratory Report

Lab Sample ID: S43533.28 (continued)

Sample Tag: AOC3-TP03-W

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 00:55, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichlorofluoromethane	Not detected	100		ug/kg	53.8	75-69-4	
1,1-Dichloroethene	Not detected	50		ug/kg	53.8	75-35-4	
Methylene chloride	Not detected	100		ug/kg	53.8	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	53.8	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	53.8	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	53.8	156-59-2	
Chloroform	Not detected	50		ug/kg	53.8	67-66-3	
1,1,1-Trichloroethane	Not detected	50		ug/kg	53.8	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	53.8	108-10-1	
Carbon tetrachloride	Not detected	50		ug/kg	53.8	56-23-5	
Benzene	Not detected	50		ug/kg	53.8	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	53.8	107-06-2	
Trichloroethene	Not detected	50		ug/kg	53.8	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	53.8	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	53.8	75-27-4	
Dibromomethane	Not detected	300		ug/kg	53.8	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	53.8	10061-01-5	
Toluene	Not detected	50		ug/kg	53.8	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	53.8	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	53.8	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	53.8	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	53.8	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	53.8	106-93-4	M
Chlorobenzene	Not detected	50		ug/kg	53.8	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	53.8	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	53.8	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	53.8		
o-Xylene	Not detected	50		ug/kg	53.8	95-47-6	
Styrene	Not detected	50		ug/kg	53.8	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	53.8	98-82-8	
Bromoform	Not detected	100		ug/kg	53.8	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	53.8	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	53.8	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	53.8	103-65-1	
Bromobenzene	Not detected	100		ug/kg	53.8	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	53.8	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	53.8	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	53.8	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	53.8	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	53.8	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	53.8	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	53.8	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	53.8	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	53.8	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	53.8	104-51-8	
1,2,4-Trichlorobenzene	Not detected	360		ug/kg	53.8	120-82-1	
1,2,3-Trichlorobenzene	Not detected	360		ug/kg	53.8	87-61-6	
Naphthalene	Not detected	300		ug/kg	53.8	91-20-3	
Acrolein	Not detected	50		ug/kg	53.8	107-02-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.28 (continued)

Sample Tag: AOC3-TP03-W

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 00:55, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2-Chlorotoluene	Not detected	50		ug/kg	53.8	95-49-8	
4-Chlorotoluene	Not detected	50		ug/kg	53.8	106-43-4	
1,3-Dichloropropane	Not detected	50		ug/kg	53.8	142-28-9	
1,1-Dichloropropene	Not detected	50		ug/kg	53.8	563-58-6	
2,2-Dichloropropane	Not detected	50		ug/kg	53.8	594-20-7	
Hexachlorobutadiene	Not detected	50		ug/kg	53.8	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	53.8	76-13-1	

Other / Misc.

Method: , Run Date: 12/21/22 23:53, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.29

Sample Tag: AOC3-TP03-B

Collected Date/Time: 12/14/2022 13:27

Matrix: Soil

COC Reference: 158677

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
3	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/29/22 11:15	JRH	
BNA Extraction*	Completed	SW3546	12/21/22 14:00	TTV	
Extraction, PCB*	Completed	SW3546	12/27/22 12:00	JWR	
Sample wt. (g) / Methanol (ml)*	16.657/16	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:40	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	86	1		%	1		

Metals

Method: SW6020A, Run Date: 12/29/22 12:33, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	1,340	1.0		mg/kg	363	7429-90-5	
Antimony	Not detected	0.50		mg/kg	363	7440-36-0	
Arsenic	0.45	0.20		mg/kg	363	7440-38-2	
Barium	4.88	1.0		mg/kg	363	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	363	7440-41-7	
Boron	Not detected	2.0		mg/kg	363	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	363	7440-43-9	
Chromium	3.50	0.50		mg/kg	363	7440-47-3	
Cobalt	1.47	0.50		mg/kg	363	7440-48-4	
Copper	5.61	0.50		mg/kg	363	7440-50-8	
Iron	2,030	1.0		mg/kg	363	7439-89-6	
Lead	1.62	0.30		mg/kg	363	7439-92-1	
Manganese	22.7	0.50		mg/kg	363	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	363	7439-98-7	
Nickel	4.03	0.50		mg/kg	363	7440-02-0	
Selenium	Not detected	0.40		mg/kg	363	7782-49-2	
Silver	Not detected	0.20		mg/kg	363	7440-22-4	
Strontium	3.36	0.50		mg/kg	363	7440-24-6	
Thallium	Not detected	0.20		mg/kg	363	7440-28-0	
Tin	Not detected	2.0		mg/kg	363	7440-31-5	
Titanium	26.3	1.0		mg/kg	363	7440-32-6	
Vanadium	5.01	0.50		mg/kg	363	7440-62-2	
Zinc	9.22	0.50		mg/kg	363	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S43533.29 (continued)

Sample Tag: AOC3-TP03-B

Method: SW6020A, Run Date: 12/29/22 15:49, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	2,020	20		mg/kg	363	7440-70-2	
Magnesium	784	20		mg/kg	363	7439-95-4	
Potassium	85.7	60		mg/kg	363	7440-09-7	
Sodium	29.0	20		mg/kg	363	7440-23-5	

Method: SW7471B, Run Date: 12/20/22 14:53, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	93	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 19:37, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	1	12674-11-2	
PCB-1242	Not detected	330		ug/kg	1	53469-21-9	
PCB-1221	Not detected	330		ug/kg	1	11104-28-2	
PCB-1232	Not detected	330		ug/kg	1	11141-16-5	
PCB-1248	Not detected	330		ug/kg	1	12672-29-6	
PCB-1254	Not detected	330		ug/kg	1	11097-69-1	
PCB-1260	Not detected	330		ug/kg	1	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/05/23 19:52, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	7.5		
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8	
Anthracene	Not detected	330		ug/kg	7.5	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3	
Chrysene	Not detected	330		ug/kg	7.5	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2	
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3	



Analytical Laboratory Report

Lab Sample ID: S43533.29 (continued)

Sample Tag: AOC3-TP03-B

Method: SW8270D, Run Date: 01/05/23 19:52, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1	
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0	
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0	
Fluorene	Not detected	330		ug/kg	7.5	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5	
Isophorone	Not detected	330		ug/kg	7.5	78-59-1	
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5	
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8	
Phenol	Not detected	330		ug/kg	7.5	108-95-2	
Pyrene	Not detected	330		ug/kg	7.5	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2	
Benzidine	Not detected	330		ug/kg	7.5	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/20/22 01:19, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	64	108-20-3	
TICs*	None Found			ug/kg	64		

Method: SW8260B - SIM, Run Date: 12/23/22 17:01, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	64	96-12-8	
1,4-Dioxane*	Not detected	60		ug/kg	64	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 01:19, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	1,000		ug/kg	64	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	300		ug/kg	64	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	64	107-13-1	
2-Butanone (MEK)	Not detected	960		ug/kg	64	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	64	75-71-8	
Chloromethane	Not detected	300		ug/kg	64	74-87-3	
Vinyl chloride	Not detected	60		ug/kg	64	75-01-4	
Bromomethane	Not detected	300		ug/kg	64	74-83-9	
Chloroethane	Not detected	300		ug/kg	64	75-00-3	



Analytical Laboratory Report

Lab Sample ID: S43533.29 (continued)

Sample Tag: AOC3-TP03-B

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 01:19, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichlorofluoromethane	Not detected	100		ug/kg	64	75-69-4	
1,1-Dichloroethene	Not detected	60		ug/kg	64	75-35-4	
Methylene chloride	Not detected	100		ug/kg	64	75-09-2	
trans-1,2-Dichloroethene	Not detected	60		ug/kg	64	156-60-5	
1,1-Dichloroethane	Not detected	60		ug/kg	64	75-34-3	
cis-1,2-Dichloroethene	Not detected	60		ug/kg	64	156-59-2	
Chloroform	Not detected	60		ug/kg	64	67-66-3	
1,1,1-Trichloroethane	Not detected	60		ug/kg	64	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	64	108-10-1	
Carbon tetrachloride	Not detected	60		ug/kg	64	56-23-5	
Benzene	Not detected	60		ug/kg	64	71-43-2	
1,2-Dichloroethane	Not detected	60		ug/kg	64	107-06-2	
Trichloroethene	Not detected	60		ug/kg	64	79-01-6	
1,2-Dichloropropane	Not detected	60		ug/kg	64	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	64	75-27-4	
Dibromomethane	Not detected	300		ug/kg	64	74-95-3	
cis-1,3-Dichloropropene	Not detected	60		ug/kg	64	10061-01-5	
Toluene	Not detected	60		ug/kg	64	108-88-3	
trans-1,3-Dichloropropene	Not detected	60		ug/kg	64	10061-02-6	
1,1,2-Trichloroethane	Not detected	60		ug/kg	64	79-00-5	
Tetrachloroethene	Not detected	60		ug/kg	64	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	64	124-48-1	
1,2-Dibromoethane	Not detected	30		ug/kg	64	106-93-4	M
Chlorobenzene	Not detected	60		ug/kg	64	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	64	630-20-6	
Ethylbenzene	Not detected	60		ug/kg	64	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	64		
o-Xylene	Not detected	60		ug/kg	64	95-47-6	
Styrene	Not detected	60		ug/kg	64	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	64	98-82-8	
Bromoform	Not detected	100		ug/kg	64	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	64	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	64	96-18-4	
n-Propylbenzene	Not detected	60		ug/kg	64	103-65-1	
Bromobenzene	Not detected	100		ug/kg	64	108-86-1	
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	64	108-67-8	
tert-Butylbenzene	Not detected	60		ug/kg	64	98-06-6	
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	64	95-63-6	
sec-Butylbenzene	Not detected	60		ug/kg	64	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	64	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	64	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	64	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	64	95-50-1	
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	64	526-73-8	
n-Butylbenzene	Not detected	60		ug/kg	64	104-51-8	
1,2,4-Trichlorobenzene	Not detected	420		ug/kg	64	120-82-1	
1,2,3-Trichlorobenzene	Not detected	420		ug/kg	64	87-61-6	
Naphthalene	Not detected	300		ug/kg	64	91-20-3	
Acrolein	Not detected	60		ug/kg	64	107-02-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.29 (continued)

Sample Tag: AOC3-TP03-B

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 01:19, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2-Chlorotoluene	Not detected	60		ug/kg	64	95-49-8	
4-Chlorotoluene	Not detected	60		ug/kg	64	106-43-4	
1,3-Dichloropropane	Not detected	60		ug/kg	64	142-28-9	
1,1-Dichloropropene	Not detected	60		ug/kg	64	563-58-6	
2,2-Dichloropropane	Not detected	60		ug/kg	64	594-20-7	
Hexachlorobutadiene	Not detected	60		ug/kg	64	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	64	76-13-1	

Other / Misc.

Method: , Run Date: 12/22/22 00:14, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.30

Sample Tag: Dup-09s

Collected Date/Time: 12/14/2022 00:01

Matrix: Soil

COC Reference: 158677

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
3	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/29/22 11:15	JRH	
BNA Extraction*	Completed	SW3546	12/21/22 14:00	TTV	
Extraction, PCB*	Completed	SW3546	12/27/22 12:00	JWR	
Sample wt. (g) / Methanol (ml)*	13.527/13	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:40	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	95	1		%	1		

Metals

Method: SW6020A, Run Date: 12/29/22 12:35, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	2,240	1.0		mg/kg	299	7429-90-5	
Antimony	Not detected	0.50		mg/kg	299	7440-36-0	
Arsenic	1.16	0.20		mg/kg	299	7440-38-2	
Barium	11.4	1.0		mg/kg	299	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	299	7440-41-7	
Boron	Not detected	2.0		mg/kg	299	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	299	7440-43-9	
Chromium	8.08	0.50		mg/kg	299	7440-47-3	
Cobalt	1.26	0.50		mg/kg	299	7440-48-4	
Copper	2.14	0.50		mg/kg	299	7440-50-8	
Iron	4,420	1.0		mg/kg	299	7439-89-6	
Lead	1.70	0.30		mg/kg	299	7439-92-1	
Manganese	48.7	0.50		mg/kg	299	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	299	7439-98-7	
Nickel	4.00	0.50		mg/kg	299	7440-02-0	
Selenium	Not detected	0.40		mg/kg	299	7782-49-2	
Silver	Not detected	0.20		mg/kg	299	7440-22-4	
Strontium	1.08	0.50		mg/kg	299	7440-24-6	
Thallium	Not detected	0.20		mg/kg	299	7440-28-0	
Tin	Not detected	2.0		mg/kg	299	7440-31-5	
Titanium	39.8	1.0		mg/kg	299	7440-32-6	
Vanadium	7.20	0.50		mg/kg	299	7440-62-2	
Zinc	6.35	0.50		mg/kg	299	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S43533.30 (continued)

Sample Tag: Dup-09s

Method: SW6020A, Run Date: 12/29/22 15:50, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	308	20		mg/kg	299	7440-70-2	
Magnesium	631	20		mg/kg	299	7439-95-4	
Potassium	71.4	60		mg/kg	299	7440-09-7	
Sodium	55.4	20		mg/kg	299	7440-23-5	

Method: SW7471B, Run Date: 12/20/22 14:57, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	81	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/29/22 10:51, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	1	12674-11-2	
PCB-1242	Not detected	330		ug/kg	1	53469-21-9	
PCB-1221	Not detected	330		ug/kg	1	11104-28-2	
PCB-1232	Not detected	330		ug/kg	1	11141-16-5	
PCB-1248	Not detected	330		ug/kg	1	12672-29-6	
PCB-1254	Not detected	330		ug/kg	1	11097-69-1	
PCB-1260	Not detected	330		ug/kg	1	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/05/23 20:23, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	7.5		
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8	
Anthracene	Not detected	330		ug/kg	7.5	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3	
Chrysene	Not detected	330		ug/kg	7.5	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2	
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3	



Analytical Laboratory Report

Lab Sample ID: S43533.30 (continued)

Sample Tag: Dup-09s

Method: SW8270D, Run Date: 01/05/23 20:23, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1	
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0	
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0	
Fluorene	Not detected	330		ug/kg	7.5	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5	
Isophorone	Not detected	330		ug/kg	7.5	78-59-1	
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5	
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8	
Phenol	Not detected	330		ug/kg	7.5	108-95-2	
Pyrene	Not detected	330		ug/kg	7.5	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2	
Benzidine	Not detected	330		ug/kg	7.5	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/20/22 01:43, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	53.2	108-20-3	
TICs*	None Found			ug/kg	53.2		

Method: SW8260B - SIM, Run Date: 12/23/22 17:22, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	53.2	96-12-8	
1,4-Dioxane*	Not detected	50		ug/kg	53.2	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 01:43, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	1,000		ug/kg	53.2	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	53.2	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	53.2	107-13-1	
2-Butanone (MEK)	Not detected	800		ug/kg	53.2	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	53.2	75-71-8	
Chloromethane	Not detected	300		ug/kg	53.2	74-87-3	
Vinyl chloride	Not detected	50		ug/kg	53.2	75-01-4	
Bromomethane	Not detected	200		ug/kg	53.2	74-83-9	
Chloroethane	Not detected	300		ug/kg	53.2	75-00-3	



Analytical Laboratory Report

Lab Sample ID: S43533.30 (continued)

Sample Tag: Dup-09s

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 01:43, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichlorofluoromethane	Not detected	100		ug/kg	53.2	75-69-4	
1,1-Dichloroethene	Not detected	50		ug/kg	53.2	75-35-4	
Methylene chloride	Not detected	100		ug/kg	53.2	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	53.2	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	53.2	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	53.2	156-59-2	
Chloroform	Not detected	50		ug/kg	53.2	67-66-3	
1,1,1-Trichloroethane	Not detected	50		ug/kg	53.2	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	53.2	108-10-1	
Carbon tetrachloride	Not detected	50		ug/kg	53.2	56-23-5	
Benzene	Not detected	50		ug/kg	53.2	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	53.2	107-06-2	
Trichloroethene	Not detected	50		ug/kg	53.2	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	53.2	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	53.2	75-27-4	
Dibromomethane	Not detected	300		ug/kg	53.2	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	53.2	10061-01-5	
Toluene	Not detected	50		ug/kg	53.2	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	53.2	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	53.2	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	53.2	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	53.2	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	53.2	106-93-4	M
Chlorobenzene	Not detected	50		ug/kg	53.2	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	53.2	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	53.2	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	53.2		
o-Xylene	Not detected	50		ug/kg	53.2	95-47-6	
Styrene	Not detected	50		ug/kg	53.2	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	53.2	98-82-8	
Bromoform	Not detected	100		ug/kg	53.2	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	53.2	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	53.2	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	53.2	103-65-1	
Bromobenzene	Not detected	100		ug/kg	53.2	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	53.2	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	53.2	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	53.2	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	53.2	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	53.2	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	53.2	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	53.2	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	53.2	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	53.2	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	53.2	104-51-8	
1,2,4-Trichlorobenzene	Not detected	350		ug/kg	53.2	120-82-1	
1,2,3-Trichlorobenzene	Not detected	350		ug/kg	53.2	87-61-6	
Naphthalene	Not detected	300		ug/kg	53.2	91-20-3	
Acrolein	Not detected	50		ug/kg	53.2	107-02-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.30 (continued)

Sample Tag: Dup-09s

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 01:43, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2-Chlorotoluene	Not detected	50		ug/kg	53.2	95-49-8	
4-Chlorotoluene	Not detected	50		ug/kg	53.2	106-43-4	
1,3-Dichloropropane	Not detected	50		ug/kg	53.2	142-28-9	
1,1-Dichloropropene	Not detected	50		ug/kg	53.2	563-58-6	
2,2-Dichloropropane	Not detected	50		ug/kg	53.2	594-20-7	
Hexachlorobutadiene	Not detected	50		ug/kg	53.2	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	53.2	76-13-1	

Other / Misc.

Method: , Run Date: 12/22/22 00:35, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.31

Sample Tag: AOC3-TP04-W

Collected Date/Time: 12/14/2022 14:22

Matrix: Soil

COC Reference: 158677

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
3	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/29/22 11:15	JRH	
BNA Extraction*	Completed	SW3546	12/21/22 14:00	TTV	
Extraction, PCB*	Completed	SW3546	12/27/22 12:00	JWR	
Sample wt. (g) / Methanol (ml)*	13.324/13	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:40	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	96	1		%	1		

Metals

Method: SW6020A, Run Date: 12/29/22 13:43, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	3,230	1.0		mg/kg	289	7429-90-5	
Antimony	Not detected	0.50		mg/kg	289	7440-36-0	
Arsenic	0.97	0.20		mg/kg	289	7440-38-2	
Barium	12.7	1.0		mg/kg	289	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	289	7440-41-7	
Boron	Not detected	2.0		mg/kg	289	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	289	7440-43-9	
Chromium	5.31	0.50		mg/kg	289	7440-47-3	
Cobalt	1.50	0.50		mg/kg	289	7440-48-4	
Copper	2.75	0.50		mg/kg	289	7440-50-8	
Iron	3,880	1.0		mg/kg	289	7439-89-6	
Lead	2.54	0.30		mg/kg	289	7439-92-1	
Manganese	131	0.50		mg/kg	289	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	289	7439-98-7	
Nickel	4.71	0.50		mg/kg	289	7440-02-0	
Selenium	Not detected	0.40		mg/kg	289	7782-49-2	
Silver	Not detected	0.20		mg/kg	289	7440-22-4	
Strontium	1.72	0.50		mg/kg	289	7440-24-6	
Thallium	Not detected	0.20		mg/kg	289	7440-28-0	
Tin	Not detected	2.0		mg/kg	289	7440-31-5	
Titanium	55.6	1.0		mg/kg	289	7440-32-6	
Vanadium	7.56	0.50		mg/kg	289	7440-62-2	
Zinc	7.71	0.50		mg/kg	289	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S43533.31 (continued)

Sample Tag: AOC3-TP04-W

Method: SW6020A, Run Date: 12/29/22 16:05, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	313	20		mg/kg	289	7440-70-2	
Magnesium	448	20		mg/kg	289	7439-95-4	
Potassium	Not detected	60		mg/kg	289	7440-09-7	
Sodium	55.8	20		mg/kg	289	7440-23-5	

Method: SW7471B, Run Date: 12/20/22 15:07, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	85	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 19:49, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	1	12674-11-2	
PCB-1242	Not detected	330		ug/kg	1	53469-21-9	
PCB-1221	Not detected	330		ug/kg	1	11104-28-2	
PCB-1232	Not detected	330		ug/kg	1	11141-16-5	
PCB-1248	Not detected	330		ug/kg	1	12672-29-6	
PCB-1254	Not detected	330		ug/kg	1	11097-69-1	
PCB-1260	Not detected	330		ug/kg	1	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/05/23 20:54, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	7.5		
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8	
Anthracene	Not detected	330		ug/kg	7.5	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3	
Chrysene	Not detected	330		ug/kg	7.5	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2	
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3	



Analytical Laboratory Report

Lab Sample ID: S43533.31 (continued)

Sample Tag: AOC3-TP04-W

Method: SW8270D, Run Date: 01/05/23 20:54, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1	
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0	
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0	
Fluorene	Not detected	330		ug/kg	7.5	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5	
Isophorone	Not detected	330		ug/kg	7.5	78-59-1	
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5	
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8	
Phenol	Not detected	330		ug/kg	7.5	108-95-2	
Pyrene	Not detected	330		ug/kg	7.5	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2	
Benzidine	Not detected	330		ug/kg	7.5	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/20/22 02:08, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	52.9	108-20-3	
TICs*	None Found			ug/kg	52.9		

Method: SW8260B - SIM, Run Date: 12/23/22 17:43, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	52.9	96-12-8	
1,4-Dioxane*	Not detected	50		ug/kg	52.9	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 02:08, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	1,000		ug/kg	52.9	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	52.9	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	52.9	107-13-1	
2-Butanone (MEK)	Not detected	790		ug/kg	52.9	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	52.9	75-71-8	
Chloromethane	Not detected	300		ug/kg	52.9	74-87-3	
Vinyl chloride	Not detected	50		ug/kg	52.9	75-01-4	
Bromomethane	Not detected	200		ug/kg	52.9	74-83-9	
Chloroethane	Not detected	300		ug/kg	52.9	75-00-3	



Analytical Laboratory Report

Lab Sample ID: S43533.31 (continued)

Sample Tag: AOC3-TP04-W

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 02:08, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichlorofluoromethane	Not detected	100		ug/kg	52.9	75-69-4	
1,1-Dichloroethene	Not detected	50		ug/kg	52.9	75-35-4	
Methylene chloride	Not detected	100		ug/kg	52.9	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	52.9	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	52.9	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	52.9	156-59-2	
Chloroform	Not detected	50		ug/kg	52.9	67-66-3	
1,1,1-Trichloroethane	Not detected	50		ug/kg	52.9	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	52.9	108-10-1	
Carbon tetrachloride	Not detected	50		ug/kg	52.9	56-23-5	
Benzene	Not detected	50		ug/kg	52.9	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	52.9	107-06-2	
Trichloroethene	Not detected	50		ug/kg	52.9	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	52.9	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	52.9	75-27-4	
Dibromomethane	Not detected	300		ug/kg	52.9	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	52.9	10061-01-5	
Toluene	Not detected	50		ug/kg	52.9	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	52.9	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	52.9	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	52.9	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	52.9	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	52.9	106-93-4	M
Chlorobenzene	Not detected	50		ug/kg	52.9	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	52.9	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	52.9	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	52.9		
o-Xylene	Not detected	50		ug/kg	52.9	95-47-6	
Styrene	Not detected	50		ug/kg	52.9	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	52.9	98-82-8	
Bromoform	Not detected	100		ug/kg	52.9	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	52.9	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	52.9	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	52.9	103-65-1	
Bromobenzene	Not detected	100		ug/kg	52.9	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	52.9	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	52.9	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	52.9	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	52.9	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	52.9	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	52.9	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	52.9	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	52.9	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	52.9	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	52.9	104-51-8	
1,2,4-Trichlorobenzene	Not detected	350		ug/kg	52.9	120-82-1	
1,2,3-Trichlorobenzene	Not detected	350		ug/kg	52.9	87-61-6	
Naphthalene	Not detected	300		ug/kg	52.9	91-20-3	
Acrolein	Not detected	50		ug/kg	52.9	107-02-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.31 (continued)

Sample Tag: AOC3-TP04-W

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 02:08, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2-Chlorotoluene	Not detected	50		ug/kg	52.9	95-49-8	
4-Chlorotoluene	Not detected	50		ug/kg	52.9	106-43-4	
1,3-Dichloropropane	Not detected	50		ug/kg	52.9	142-28-9	
1,1-Dichloropropene	Not detected	50		ug/kg	52.9	563-58-6	
2,2-Dichloropropane	Not detected	50		ug/kg	52.9	594-20-7	
Hexachlorobutadiene	80	50		ug/kg	52.9	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	52.9	76-13-1	

Other / Misc.

Method: , Run Date: 12/22/22 00:56, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.32

Sample Tag: AOC3-TP04-E

Collected Date/Time: 12/14/2022 14:35

Matrix: Soil

COC Reference: 158677

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
3	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/29/22 11:15	JRH	
BNA Extraction*	Completed	SW3546	12/21/22 14:00	TTV	
Extraction, PCB*	Completed	SW3546	12/27/22 12:00	JWR	
Sample wt. (g) / Methanol (ml)*	14.796/14	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:40	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	97	1		%	1		

Metals

Method: SW6020A, Run Date: 12/29/22 16:06, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	296	20		mg/kg	320	7440-70-2	
Magnesium	398	20		mg/kg	320	7439-95-4	
Potassium	68.9	60		mg/kg	320	7440-09-7	
Sodium	Not detected	20		mg/kg	320	7440-23-5	

Method: SW6020A, Run Date: 12/29/22 13:45, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	1,370	1.0		mg/kg	320	7429-90-5	
Antimony	Not detected	0.50		mg/kg	320	7440-36-0	
Arsenic	1.31	0.20		mg/kg	320	7440-38-2	
Barium	10.4	1.0		mg/kg	320	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	320	7440-41-7	
Boron	Not detected	2.0		mg/kg	320	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	320	7440-43-9	
Chromium	4.01	0.50		mg/kg	320	7440-47-3	
Cobalt	0.86	0.50		mg/kg	320	7440-48-4	
Copper	6.48	0.50		mg/kg	320	7440-50-8	
Iron	3,020	1.0		mg/kg	320	7439-89-6	
Lead	9.34	0.30		mg/kg	320	7439-92-1	
Manganese	61.2	0.50		mg/kg	320	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	320	7439-98-7	
Nickel	3.19	0.50		mg/kg	320	7440-02-0	
Selenium	Not detected	0.40		mg/kg	320	7782-49-2	
Silver	Not detected	0.20		mg/kg	320	7440-22-4	
Strontium	0.88	0.50		mg/kg	320	7440-24-6	
Thallium	Not detected	0.20		mg/kg	320	7440-28-0	
Tin	Not detected	2.0		mg/kg	320	7440-31-5	



Analytical Laboratory Report

Lab Sample ID: S43533.32 (continued)

Sample Tag: AOC3-TP04-E

Method: SW6020A, Run Date: 12/29/22 13:45, Analyst: JRH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Titanium	31.7	1.0		mg/kg	320	7440-32-6	
Vanadium	53.9	0.50		mg/kg	320	7440-62-2	
Zinc	5.66	0.50		mg/kg	320	7440-66-6	

Method: SW7471B, Run Date: 12/20/22 15:10, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	81	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 20:01, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	1	12674-11-2	
PCB-1242	Not detected	330		ug/kg	1	53469-21-9	
PCB-1221	Not detected	330		ug/kg	1	11104-28-2	
PCB-1232	Not detected	330		ug/kg	1	11141-16-5	
PCB-1248	Not detected	330		ug/kg	1	12672-29-6	
PCB-1254	Not detected	330		ug/kg	1	11097-69-1	
PCB-1260	Not detected	330		ug/kg	1	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/05/23 21:25, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	7.5		
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8	
Anthracene	Not detected	330		ug/kg	7.5	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3	
Chrysene	Not detected	330		ug/kg	7.5	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2	
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1	



Analytical Laboratory Report

Lab Sample ID: S43533.32 (continued)

Sample Tag: AOC3-TP04-E

Method: SW8270D, Run Date: 01/05/23 21:25, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0	
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0	
Fluorene	Not detected	330		ug/kg	7.5	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5	
Isophorone	Not detected	330		ug/kg	7.5	78-59-1	
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5	
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8	
Phenol	Not detected	330		ug/kg	7.5	108-95-2	
Pyrene	Not detected	330		ug/kg	7.5	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2	
Benzidine	Not detected	330		ug/kg	7.5	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/20/22 02:32, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	50.3	108-20-3	
TICs*	None Found			ug/kg	50.3		

Method: SW8260B - SIM, Run Date: 12/23/22 18:04, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	50.3	96-12-8	
1,4-Dioxane*	Not detected	50		ug/kg	50.3	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 02:32, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	1,000		ug/kg	50.3	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	50.3	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	50.3	107-13-1	
2-Butanone (MEK)	Not detected	750		ug/kg	50.3	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	50.3	75-71-8	
Chloromethane	Not detected	300		ug/kg	50.3	74-87-3	
Vinyl chloride	Not detected	50		ug/kg	50.3	75-01-4	
Bromomethane	Not detected	200		ug/kg	50.3	74-83-9	
Chloroethane	Not detected	300		ug/kg	50.3	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	50.3	75-69-4	



Analytical Laboratory Report

Lab Sample ID: S43533.32 (continued)

Sample Tag: AOC3-TP04-E

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 02:32, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,1-Dichloroethene	Not detected	50		ug/kg	50.3	75-35-4	
Methylene chloride	Not detected	100		ug/kg	50.3	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	50.3	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	50.3	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	50.3	156-59-2	
Chloroform	Not detected	50		ug/kg	50.3	67-66-3	
1,1,1-Trichloroethane	Not detected	50		ug/kg	50.3	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	50.3	108-10-1	
Carbon tetrachloride	Not detected	50		ug/kg	50.3	56-23-5	
Benzene	Not detected	50		ug/kg	50.3	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	50.3	107-06-2	
Trichloroethene	Not detected	50		ug/kg	50.3	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	50.3	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	50.3	75-27-4	
Dibromomethane	Not detected	300		ug/kg	50.3	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	50.3	10061-01-5	
Toluene	Not detected	50		ug/kg	50.3	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	50.3	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	50.3	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	50.3	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	50.3	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	50.3	106-93-4	M
Chlorobenzene	Not detected	50		ug/kg	50.3	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	50.3	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	50.3	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	50.3		
o-Xylene	Not detected	50		ug/kg	50.3	95-47-6	
Styrene	Not detected	50		ug/kg	50.3	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	50.3	98-82-8	
Bromoform	Not detected	100		ug/kg	50.3	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	50.3	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	50.3	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	50.3	103-65-1	
Bromobenzene	Not detected	100		ug/kg	50.3	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	50.3	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	50.3	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	50.3	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	50.3	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	50.3	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	50.3	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	50.3	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	50.3	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	50.3	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	50.3	104-51-8	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	50.3	120-82-1	
1,2,3-Trichlorobenzene	Not detected	330		ug/kg	50.3	87-61-6	
Naphthalene	Not detected	300		ug/kg	50.3	91-20-3	
Acrolein	Not detected	50		ug/kg	50.3	107-02-8	
2-Chlorotoluene	Not detected	50		ug/kg	50.3	95-49-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.32 (continued)

Sample Tag: AOC3-TP04-E

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 02:32, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4-Chlorotoluene	Not detected	50		ug/kg	50.3	106-43-4	
1,3-Dichloropropane	Not detected	50		ug/kg	50.3	142-28-9	
1,1-Dichloropropene	Not detected	50		ug/kg	50.3	563-58-6	
2,2-Dichloropropane	Not detected	50		ug/kg	50.3	594-20-7	
Hexachlorobutadiene	170	50		ug/kg	50.3	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	50.3	76-13-1	

Other / Misc.

Method: , Run Date: 12/22/22 01:17, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.33

Sample Tag: AOC3-TP04-N

Collected Date/Time: 12/14/2022 14:40

Matrix: Soil

COC Reference: 158677

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
3	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/29/22 11:15	JRH	
BNA Extraction*	Completed	SW3546	12/23/22 14:00	JWR	
Extraction, PCB*	Completed	SW3546	12/27/22 12:00	JWR	
Sample wt. (g) / Methanol (ml)*	13.951/13	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:40	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	97	1		%	1		

Metals

Method: SW6020A, Run Date: 12/29/22 16:08, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	379	20		mg/kg	293	7440-70-2	
Magnesium	527	20		mg/kg	293	7439-95-4	
Potassium	81.0	60		mg/kg	293	7440-09-7	
Sodium	21.2	20		mg/kg	293	7440-23-5	

Method: SW6020A, Run Date: 12/29/22 13:47, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	1,820	1.0		mg/kg	293	7429-90-5	
Antimony	Not detected	0.50		mg/kg	293	7440-36-0	
Arsenic	0.66	0.20		mg/kg	293	7440-38-2	
Barium	10.9	1.0		mg/kg	293	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	293	7440-41-7	
Boron	Not detected	2.0		mg/kg	293	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	293	7440-43-9	
Chromium	4.61	0.50		mg/kg	293	7440-47-3	
Cobalt	1.19	0.50		mg/kg	293	7440-48-4	
Copper	3.34	0.50		mg/kg	293	7440-50-8	
Iron	3,110	1.0		mg/kg	293	7439-89-6	
Lead	1.96	0.30		mg/kg	293	7439-92-1	
Manganese	205	0.50		mg/kg	293	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	293	7439-98-7	
Nickel	6.51	0.50		mg/kg	293	7440-02-0	
Selenium	Not detected	0.40		mg/kg	293	7782-49-2	
Silver	Not detected	0.20		mg/kg	293	7440-22-4	
Strontium	1.86	0.50		mg/kg	293	7440-24-6	
Thallium	Not detected	0.20		mg/kg	293	7440-28-0	
Tin	Not detected	2.0		mg/kg	293	7440-31-5	



Analytical Laboratory Report

Lab Sample ID: S43533.33 (continued)

Sample Tag: AOC3-TP04-N

Method: SW6020A, Run Date: 12/29/22 13:47, Analyst: JRH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Titanium	25.4	1.0		mg/kg	293	7440-32-6	
Vanadium	4.32	0.50		mg/kg	293	7440-62-2	
Zinc	6.96	0.50		mg/kg	293	7440-66-6	

Method: SW7471B, Run Date: 12/20/22 15:20, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	77	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 20:13, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	1	12674-11-2	
PCB-1242	Not detected	330		ug/kg	1	53469-21-9	
PCB-1221	Not detected	330		ug/kg	1	11104-28-2	
PCB-1232	Not detected	330		ug/kg	1	11141-16-5	
PCB-1248	Not detected	330		ug/kg	1	12672-29-6	
PCB-1254	Not detected	330		ug/kg	1	11097-69-1	
PCB-1260	Not detected	330		ug/kg	1	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/03/23 17:05, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	7.5		
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8	
Anthracene	Not detected	330		ug/kg	7.5	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3	
Chrysene	Not detected	330		ug/kg	7.5	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2	
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1	



Analytical Laboratory Report

Lab Sample ID: S43533.33 (continued)

Sample Tag: AOC3-TP04-N

Method: SW8270D, Run Date: 01/03/23 17:05, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0	
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0	
Fluorene	Not detected	330		ug/kg	7.5	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5	
Isophorone	Not detected	330		ug/kg	7.5	78-59-1	
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5	
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8	
Phenol	Not detected	330		ug/kg	7.5	108-95-2	
Pyrene	Not detected	330		ug/kg	7.5	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2	
Benzidine	Not detected	330		ug/kg	7.5	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/20/22 02:56, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	200		ug/kg	49.6	108-20-3	
TICs*	None Found			ug/kg	49.6		

Method: SW8260B - SIM, Run Date: 12/23/22 18:24, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	2		ug/kg	49.6	96-12-8	
1,4-Dioxane*	Not detected	50		ug/kg	49.6	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 02:56, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	1,000		ug/kg	49.6	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	49.6	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	49.6	107-13-1	
2-Butanone (MEK)	Not detected	740		ug/kg	49.6	78-93-3	
Dichlorodifluoromethane	Not detected	200		ug/kg	49.6	75-71-8	
Chloromethane	Not detected	200		ug/kg	49.6	74-87-3	
Vinyl chloride	Not detected	50		ug/kg	49.6	75-01-4	
Bromomethane	Not detected	200		ug/kg	49.6	74-83-9	
Chloroethane	Not detected	200		ug/kg	49.6	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	49.6	75-69-4	



Analytical Laboratory Report

Lab Sample ID: S43533.33 (continued)

Sample Tag: AOC3-TP04-N

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 02:56, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,1-Dichloroethene	Not detected	50		ug/kg	49.6	75-35-4	
Methylene chloride	Not detected	100		ug/kg	49.6	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	49.6	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	49.6	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	49.6	156-59-2	
Chloroform	Not detected	50		ug/kg	49.6	67-66-3	
1,1,1-Trichloroethane	Not detected	50		ug/kg	49.6	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	2,000		ug/kg	49.6	108-10-1	
Carbon tetrachloride	Not detected	50		ug/kg	49.6	56-23-5	
Benzene	Not detected	50		ug/kg	49.6	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	49.6	107-06-2	
Trichloroethene	Not detected	50		ug/kg	49.6	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	49.6	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	49.6	75-27-4	
Dibromomethane	Not detected	200		ug/kg	49.6	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	49.6	10061-01-5	
Toluene	Not detected	50		ug/kg	49.6	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	49.6	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	49.6	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	49.6	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	49.6	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	49.6	106-93-4	M
Chlorobenzene	Not detected	50		ug/kg	49.6	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	49.6	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	49.6	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	49.6		
o-Xylene	Not detected	50		ug/kg	49.6	95-47-6	
Styrene	Not detected	50		ug/kg	49.6	100-42-5	
Isopropylbenzene	Not detected	200		ug/kg	49.6	98-82-8	
Bromoform	Not detected	100		ug/kg	49.6	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	49.6	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	49.6	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	49.6	103-65-1	
Bromobenzene	Not detected	100		ug/kg	49.6	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	49.6	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	49.6	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	49.6	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	49.6	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	49.6	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	49.6	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	49.6	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	49.6	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	49.6	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	49.6	104-51-8	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	49.6	120-82-1	
1,2,3-Trichlorobenzene	Not detected	330		ug/kg	49.6	87-61-6	
Naphthalene	Not detected	200		ug/kg	49.6	91-20-3	
Acrolein	Not detected	50		ug/kg	49.6	107-02-8	
2-Chlorotoluene	Not detected	50		ug/kg	49.6	95-49-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.33 (continued)

Sample Tag: AOC3-TP04-N

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 02:56, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
4-Chlorotoluene	Not detected	50		ug/kg	49.6	106-43-4	
1,3-Dichloropropane	Not detected	50		ug/kg	49.6	142-28-9	
1,1-Dichloropropene	Not detected	50		ug/kg	49.6	563-58-6	
2,2-Dichloropropane	Not detected	50		ug/kg	49.6	594-20-7	
Hexachlorobutadiene	Not detected	50		ug/kg	49.6	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	49.6	76-13-1	

Other / Misc.

Method: , Run Date: 12/22/22 01:38, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.34

Sample Tag: AOC3-TP04-S

Collected Date/Time: 12/14/2022 14:40

Matrix: Soil

COC Reference: 158677

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
3	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/29/22 11:15	JRH	
BNA Extraction*	Completed	SW3546	12/23/22 14:00	JWR	
Extraction, PCB*	Completed	SW3546	12/27/22 12:00	JWR	
Sample wt. (g) / Methanol (ml)*	11.527/11	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:40	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	96	1		%	1		

Metals

Method: SW6020A, Run Date: 12/29/22 16:09, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	272	20		mg/kg	323	7440-70-2	
Magnesium	489	20		mg/kg	323	7439-95-4	
Potassium	61.0	60		mg/kg	323	7440-09-7	
Sodium	30.6	20		mg/kg	323	7440-23-5	

Method: SW6020A, Run Date: 12/29/22 13:49, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	3,270	1.0		mg/kg	323	7429-90-5	
Antimony	Not detected	0.50		mg/kg	323	7440-36-0	
Arsenic	1.54	0.20		mg/kg	323	7440-38-2	
Barium	11.4	1.0		mg/kg	323	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	323	7440-41-7	
Boron	Not detected	2.0		mg/kg	323	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	323	7440-43-9	
Chromium	5.40	0.50		mg/kg	323	7440-47-3	
Cobalt	5.75	0.50		mg/kg	323	7440-48-4	
Copper	21.2	0.50		mg/kg	323	7440-50-8	
Iron	4,850	1.0		mg/kg	323	7439-89-6	
Lead	44.9	0.30		mg/kg	323	7439-92-1	
Manganese	69.2	0.50		mg/kg	323	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	323	7439-98-7	
Nickel	8.15	0.50		mg/kg	323	7440-02-0	
Selenium	Not detected	0.40		mg/kg	323	7782-49-2	
Silver	Not detected	0.20		mg/kg	323	7440-22-4	
Strontium	1.20	0.50		mg/kg	323	7440-24-6	
Thallium	Not detected	0.20		mg/kg	323	7440-28-0	
Tin	Not detected	2.0		mg/kg	323	7440-31-5	



Analytical Laboratory Report

Lab Sample ID: S43533.34 (continued)

Sample Tag: AOC3-TP04-S

Method: SW6020A, Run Date: 12/29/22 13:49, Analyst: JRH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Titanium	58.0	1.0		mg/kg	323	7440-32-6	
Vanadium	30.6	0.50		mg/kg	323	7440-62-2	
Zinc	11.3	0.50		mg/kg	323	7440-66-6	

Method: SW7471B, Run Date: 12/20/22 15:23, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	78	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 20:25, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	1	12674-11-2	
PCB-1242	Not detected	330		ug/kg	1	53469-21-9	
PCB-1221	Not detected	330		ug/kg	1	11104-28-2	
PCB-1232	Not detected	330		ug/kg	1	11141-16-5	
PCB-1248	Not detected	330		ug/kg	1	12672-29-6	
PCB-1254	Not detected	330		ug/kg	1	11097-69-1	
PCB-1260	Not detected	330		ug/kg	1	11096-82-5	

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/03/23 18:38, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8	
Anthracene	Not detected	330		ug/kg	7.5	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3	
Chrysene	Not detected	330		ug/kg	7.5	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2	
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1	
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5	



Analytical Laboratory Report

Lab Sample ID: S43533.34 (continued)

Sample Tag: AOC3-TP04-S

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/03/23 18:38, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0	
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0	
Fluorene	Not detected	330		ug/kg	7.5	86-73-7	
Hexachlorobenzene	1,240	330		ug/kg	7.5	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5	
Isophorone	Not detected	330		ug/kg	7.5	78-59-1	
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5	
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8	
Phenol	Not detected	330		ug/kg	7.5	108-95-2	
Pyrene	Not detected	330		ug/kg	7.5	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2	
Benzidine	Not detected	330		ug/kg	7.5	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9	

TICs Semi-Volatiles, Method: SW8270D, Run Date: 01/03/23 18:38, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	Found			ug/kg	7.5		
Hexachlorobenzene	Found			ug/kg	7.5	118-74-1	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/20/22 03:20, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	51.8	108-20-3	
TICs*	None Found			ug/kg	51.8		

Method: SW8260B - SIM, Run Date: 12/23/22 18:45, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	51.8	96-12-8	
1,4-Dioxane*	Not detected	50		ug/kg	51.8	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 03:20, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	1,000		ug/kg	51.8	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	51.8	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	51.8	107-13-1	
2-Butanone (MEK)	Not detected	780		ug/kg	51.8	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	51.8	75-71-8	
Chloromethane	Not detected	300		ug/kg	51.8	74-87-3	



Analytical Laboratory Report

Lab Sample ID: S43533.34 (continued)

Sample Tag: AOC3-TP04-S

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 03:20, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Vinyl chloride	Not detected	50		ug/kg	51.8	75-01-4	
Bromomethane	Not detected	200		ug/kg	51.8	74-83-9	
Chloroethane	Not detected	300		ug/kg	51.8	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	51.8	75-69-4	
1,1-Dichloroethene	Not detected	50		ug/kg	51.8	75-35-4	
Methylene chloride	Not detected	100		ug/kg	51.8	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	51.8	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	51.8	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	51.8	156-59-2	
Chloroform	Not detected	50		ug/kg	51.8	67-66-3	
1,1,1-Trichloroethane	Not detected	50		ug/kg	51.8	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	51.8	108-10-1	
Carbon tetrachloride	Not detected	50		ug/kg	51.8	56-23-5	
Benzene	Not detected	50		ug/kg	51.8	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	51.8	107-06-2	
Trichloroethene	Not detected	50		ug/kg	51.8	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	51.8	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	51.8	75-27-4	
Dibromomethane	Not detected	300		ug/kg	51.8	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	51.8	10061-01-5	
Toluene	Not detected	50		ug/kg	51.8	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	51.8	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	51.8	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	51.8	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	51.8	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	51.8	106-93-4	M
Chlorobenzene	Not detected	50		ug/kg	51.8	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	51.8	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	51.8	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	51.8		
o-Xylene	Not detected	50		ug/kg	51.8	95-47-6	
Styrene	Not detected	50		ug/kg	51.8	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	51.8	98-82-8	
Bromoform	Not detected	100		ug/kg	51.8	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	51.8	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	51.8	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	51.8	103-65-1	
Bromobenzene	Not detected	100		ug/kg	51.8	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	51.8	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	51.8	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	51.8	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	51.8	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	51.8	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	51.8	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	51.8	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	51.8	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	51.8	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	51.8	104-51-8	
1,2,4-Trichlorobenzene	Not detected	340		ug/kg	51.8	120-82-1	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.34 (continued)

Sample Tag: AOC3-TP04-S

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 03:20, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2,3-Trichlorobenzene	Not detected	340		ug/kg	51.8	87-61-6	
Naphthalene	Not detected	300		ug/kg	51.8	91-20-3	
Acrolein	Not detected	50		ug/kg	51.8	107-02-8	
2-Chlorotoluene	Not detected	50		ug/kg	51.8	95-49-8	
4-Chlorotoluene	Not detected	50		ug/kg	51.8	106-43-4	
1,3-Dichloropropane	Not detected	50		ug/kg	51.8	142-28-9	
1,1-Dichloropropene	Not detected	50		ug/kg	51.8	563-58-6	
2,2-Dichloropropane	Not detected	50		ug/kg	51.8	594-20-7	
Hexachlorobutadiene	200	50		ug/kg	51.8	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	51.8	76-13-1	

Other / Misc.

Method: , Run Date: 12/22/22 01:59, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.35

Sample Tag: AOC3-TP04-B

Collected Date/Time: 12/14/2022 14:52

Matrix: Soil

COC Reference: 158677

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
3	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/29/22 11:15	JRH	
BNA Extraction*	Completed	SW3546	12/23/22 14:00	JWR	
Extraction, PCB*	Completed	SW3546	12/27/22 12:00	JWR	
Sample wt. (g) / Methanol (ml)*	16.985/16	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:40	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	88	1		%	1		

Metals

Method: SW6020A, Run Date: 12/29/22 16:10, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	20,700	20		mg/kg	336	7440-70-2	
Magnesium	3,530	20		mg/kg	336	7439-95-4	
Potassium	75.1	60		mg/kg	336	7440-09-7	
Sodium	20.0	20		mg/kg	336	7440-23-5	

Method: SW6020A, Run Date: 12/29/22 13:51, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	787	1.0		mg/kg	336	7429-90-5	
Antimony	Not detected	0.50		mg/kg	336	7440-36-0	
Arsenic	0.39	0.20		mg/kg	336	7440-38-2	
Barium	3.87	1.0		mg/kg	336	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	336	7440-41-7	
Boron	Not detected	2.0		mg/kg	336	7440-42-8	
Cadmium	Not detected	0.20		mg/kg	336	7440-43-9	
Chromium	1.92	0.50		mg/kg	336	7440-47-3	
Cobalt	0.84	0.50		mg/kg	336	7440-48-4	
Copper	2.01	0.50		mg/kg	336	7440-50-8	
Iron	2,320	1.0		mg/kg	336	7439-89-6	
Lead	1.16	0.30		mg/kg	336	7439-92-1	
Manganese	57.8	0.50		mg/kg	336	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	336	7439-98-7	
Nickel	2.38	0.50		mg/kg	336	7440-02-0	
Selenium	Not detected	0.40		mg/kg	336	7782-49-2	
Silver	Not detected	0.20		mg/kg	336	7440-22-4	
Strontium	23.2	0.50		mg/kg	336	7440-24-6	
Thallium	Not detected	0.20		mg/kg	336	7440-28-0	
Tin	Not detected	2.0		mg/kg	336	7440-31-5	



Analytical Laboratory Report

Lab Sample ID: S43533.35 (continued)

Sample Tag: AOC3-TP04-B

Method: SW6020A, Run Date: 12/29/22 13:51, Analyst: JRH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Titanium	28.3	1.0		mg/kg	336	7440-32-6	
Vanadium	3.17	0.50		mg/kg	336	7440-62-2	
Zinc	6.00	0.50		mg/kg	336	7440-66-6	

Method: SW7471B, Run Date: 12/20/22 15:26, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	91	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 20:37, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	1	12674-11-2	
PCB-1242	Not detected	330		ug/kg	1	53469-21-9	
PCB-1221	Not detected	330		ug/kg	1	11104-28-2	
PCB-1232	Not detected	330		ug/kg	1	11141-16-5	
PCB-1248	Not detected	330		ug/kg	1	12672-29-6	
PCB-1254	Not detected	330		ug/kg	1	11097-69-1	
PCB-1260	Not detected	330		ug/kg	1	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/03/23 19:09, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	7.5		
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8	
Anthracene	Not detected	330		ug/kg	7.5	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3	
Chrysene	Not detected	330		ug/kg	7.5	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2	
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1	



Analytical Laboratory Report

Lab Sample ID: S43533.35 (continued)

Sample Tag: AOC3-TP04-B

Method: SW8270D, Run Date: 01/03/23 19:09, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0	
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0	
Fluorene	Not detected	330		ug/kg	7.5	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5	
Isophorone	Not detected	330		ug/kg	7.5	78-59-1	
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5	
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8	
Phenol	Not detected	330		ug/kg	7.5	108-95-2	
Pyrene	Not detected	330		ug/kg	7.5	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2	
Benzidine	Not detected	330		ug/kg	7.5	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/28/22 06:31, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	60.3	108-20-3	
TICs*	None Found			ug/kg	60.3		

Method: SW8260B - SIM, Run Date: 12/23/22 19:06, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	60.3	96-12-8	
1,4-Dioxane*	Not detected	60		ug/kg	60.3	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 06:31, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	2,000	1,000		ug/kg	60.3	67-64-1	B
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	60.3	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	60.3	107-13-1	
2-Butanone (MEK)	Not detected	900		ug/kg	60.3	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	60.3	75-71-8	
Chloromethane	Not detected	300		ug/kg	60.3	74-87-3	
Vinyl chloride	Not detected	60		ug/kg	60.3	75-01-4	
Bromomethane	Not detected	200		ug/kg	60.3	74-83-9	
Chloroethane	Not detected	300		ug/kg	60.3	75-00-3	

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43533.35 (continued)

Sample Tag: AOC3-TP04-B

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 06:31, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichlorofluoromethane	Not detected	100		ug/kg	60.3	75-69-4	
1,1-Dichloroethene	Not detected	60		ug/kg	60.3	75-35-4	
Methylene chloride	Not detected	100		ug/kg	60.3	75-09-2	
trans-1,2-Dichloroethene	Not detected	60		ug/kg	60.3	156-60-5	
1,1-Dichloroethane	Not detected	60		ug/kg	60.3	75-34-3	
cis-1,2-Dichloroethene	Not detected	60		ug/kg	60.3	156-59-2	
Chloroform	Not detected	60		ug/kg	60.3	67-66-3	
1,1,1-Trichloroethane	Not detected	60		ug/kg	60.3	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	60.3	108-10-1	
Carbon tetrachloride	Not detected	60		ug/kg	60.3	56-23-5	
Benzene	Not detected	60		ug/kg	60.3	71-43-2	
1,2-Dichloroethane	Not detected	60		ug/kg	60.3	107-06-2	
Trichloroethene	Not detected	60		ug/kg	60.3	79-01-6	
1,2-Dichloropropane	Not detected	60		ug/kg	60.3	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	60.3	75-27-4	
Dibromomethane	Not detected	300		ug/kg	60.3	74-95-3	
cis-1,3-Dichloropropene	Not detected	60		ug/kg	60.3	10061-01-5	
Toluene	Not detected	60		ug/kg	60.3	108-88-3	
trans-1,3-Dichloropropene	Not detected	60		ug/kg	60.3	10061-02-6	
1,1,2-Trichloroethane	Not detected	60		ug/kg	60.3	79-00-5	
Tetrachloroethene	Not detected	60		ug/kg	60.3	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	60.3	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	60.3	106-93-4	M
Chlorobenzene	Not detected	60		ug/kg	60.3	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	60.3	630-20-6	
Ethylbenzene	Not detected	60		ug/kg	60.3	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	60.3		
o-Xylene	Not detected	60		ug/kg	60.3	95-47-6	
Styrene	Not detected	60		ug/kg	60.3	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	60.3	98-82-8	
Bromoform	Not detected	100		ug/kg	60.3	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	60.3	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	60.3	96-18-4	
n-Propylbenzene	Not detected	60		ug/kg	60.3	103-65-1	
Bromobenzene	Not detected	100		ug/kg	60.3	108-86-1	
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	60.3	108-67-8	
tert-Butylbenzene	Not detected	60		ug/kg	60.3	98-06-6	
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	60.3	95-63-6	
sec-Butylbenzene	Not detected	60		ug/kg	60.3	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	60.3	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	60.3	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	60.3	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	60.3	95-50-1	
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	60.3	526-73-8	
n-Butylbenzene	Not detected	60		ug/kg	60.3	104-51-8	
1,2,4-Trichlorobenzene	Not detected	400		ug/kg	60.3	120-82-1	
1,2,3-Trichlorobenzene	Not detected	400		ug/kg	60.3	87-61-6	
Naphthalene	Not detected	300		ug/kg	60.3	91-20-3	
Acrolein	Not detected	60		ug/kg	60.3	107-02-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.35 (continued)

Sample Tag: AOC3-TP04-B

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 06:31, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2-Chlorotoluene	Not detected	60		ug/kg	60.3	95-49-8	
4-Chlorotoluene	Not detected	60		ug/kg	60.3	106-43-4	
1,3-Dichloropropane	Not detected	60		ug/kg	60.3	142-28-9	
1,1-Dichloropropene	Not detected	60		ug/kg	60.3	563-58-6	
2,2-Dichloropropane	Not detected	60		ug/kg	60.3	594-20-7	
Hexachlorobutadiene	Not detected	60		ug/kg	60.3	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	60.3	76-13-1	

Other / Misc.

Method: , Run Date: 12/22/22 02:20, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.36

Sample Tag: Dup-10s

Collected Date/Time: 12/14/2022 00:01

Matrix: Soil

COC Reference: 158677

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	4.0	IR
3	4oz Glass	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/29/22 11:15	JRH	
BNA Extraction*	Completed	SW3546	12/23/22 14:00	JWR	
Extraction, PCB*	Completed	SW3546	12/27/22 12:00	JWR	
Sample wt. (g) / Methanol (ml)*	12.225/12	SW5035A	12/16/22 09:33	BDO	
Mercury Digestion	Completed	SW7471B	12/20/22 12:40	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	95	1		%	1		

Metals

Method: SW6020A, Run Date: 12/29/22 16:11, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium	422	20		mg/kg	301	7440-70-2	
Magnesium	1,340	20		mg/kg	301	7439-95-4	
Potassium	75.8	60		mg/kg	301	7440-09-7	
Sodium	83.2	20		mg/kg	301	7440-23-5	

Method: SW6020A, Run Date: 12/29/22 13:53, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	4,380	1.0		mg/kg	301	7429-90-5	
Antimony	Not detected	0.50		mg/kg	301	7440-36-0	
Arsenic	0.91	0.20		mg/kg	301	7440-38-2	
Barium	11.0	1.0		mg/kg	301	7440-39-3	
Beryllium	Not detected	0.20		mg/kg	301	7440-41-7	
Boron	Not detected	2.0		mg/kg	301	7440-42-8	
Cadmium	0.20	0.20		mg/kg	301	7440-43-9	
Chromium	4.75	0.50		mg/kg	301	7440-47-3	
Cobalt	2.86	0.50		mg/kg	301	7440-48-4	
Copper	8.33	0.50		mg/kg	301	7440-50-8	
Iron	6,340	1.0		mg/kg	301	7439-89-6	
Lead	2.61	0.30		mg/kg	301	7439-92-1	
Manganese	123	0.50		mg/kg	301	7439-96-5	
Molybdenum	Not detected	0.50		mg/kg	301	7439-98-7	
Nickel	11.1	0.50		mg/kg	301	7440-02-0	
Selenium	Not detected	0.40		mg/kg	301	7782-49-2	
Silver	Not detected	0.20		mg/kg	301	7440-22-4	
Strontium	1.92	0.50		mg/kg	301	7440-24-6	
Thallium	Not detected	0.20		mg/kg	301	7440-28-0	
Tin	Not detected	2.0		mg/kg	301	7440-31-5	



Analytical Laboratory Report

Lab Sample ID: S43533.36 (continued)

Sample Tag: Dup-10s

Method: SW6020A, Run Date: 12/29/22 13:53, Analyst: JRH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Titanium	112	1.0		mg/kg	301	7440-32-6	
Vanadium	13.2	0.50		mg/kg	301	7440-62-2	
Zinc	12.3	0.50		mg/kg	301	7440-66-6	

Method: SW7471B, Run Date: 12/20/22 15:30, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	83	7439-97-6	

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 20:49, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PCB-1016	Not detected	330		ug/kg	1	12674-11-2	
PCB-1242	Not detected	330		ug/kg	1	53469-21-9	
PCB-1221	Not detected	330		ug/kg	1	11104-28-2	
PCB-1232	Not detected	330		ug/kg	1	11141-16-5	
PCB-1248	Not detected	330		ug/kg	1	12672-29-6	
PCB-1254	Not detected	330		ug/kg	1	11097-69-1	
PCB-1260	Not detected	330		ug/kg	1	11096-82-5	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/03/23 19:40, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/kg	7.5		
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9	
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8	
Anthracene	Not detected	330		ug/kg	7.5	120-12-7	
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3	
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2	
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9	
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2	
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3	
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7	
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7	
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3	
Chrysene	Not detected	330		ug/kg	7.5	218-01-9	
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3	
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1	
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2	
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2	
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9	
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1	



Analytical Laboratory Report

Lab Sample ID: S43533.36 (continued)

Sample Tag: Dup-10s

Method: SW8270D, Run Date: 01/03/23 19:40, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5	
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2	
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2	
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0	
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0	
Fluorene	Not detected	330		ug/kg	7.5	86-73-7	
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1	
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4	
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5	
Isophorone	Not detected	330		ug/kg	7.5	78-59-1	
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3	
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3	
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5	
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7	
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5	
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8	
Phenol	Not detected	330		ug/kg	7.5	108-95-2	
Pyrene	Not detected	330		ug/kg	7.5	129-00-0	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2	
Benzidine	Not detected	330		ug/kg	7.5	92-87-5	
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/28/22 06:55, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	54.3	108-20-3	
TICs*	None Found			ug/kg	54.3		

Method: SW8260B - SIM, Run Date: 12/23/22 19:26, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	54.3	96-12-8	
1,4-Dioxane*	Not detected	50		ug/kg	54.3	123-91-1	

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 06:55, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	2,000	1,000		ug/kg	54.3	67-64-1	B
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	54.3	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	54.3	107-13-1	
2-Butanone (MEK)	Not detected	810		ug/kg	54.3	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	54.3	75-71-8	
Chloromethane	Not detected	300		ug/kg	54.3	74-87-3	
Vinyl chloride	Not detected	50		ug/kg	54.3	75-01-4	
Bromomethane	Not detected	200		ug/kg	54.3	74-83-9	
Chloroethane	Not detected	300		ug/kg	54.3	75-00-3	

B-Compound also found in associated method blank



Analytical Laboratory Report

Lab Sample ID: S43533.36 (continued)

Sample Tag: Dup-10s

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 06:55, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichlorofluoromethane	Not detected	100		ug/kg	54.3	75-69-4	
1,1-Dichloroethene	Not detected	50		ug/kg	54.3	75-35-4	
Methylene chloride	Not detected	100		ug/kg	54.3	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	54.3	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	54.3	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	54.3	156-59-2	
Chloroform	Not detected	50		ug/kg	54.3	67-66-3	
1,1,1-Trichloroethane	Not detected	50		ug/kg	54.3	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	54.3	108-10-1	
Carbon tetrachloride	Not detected	50		ug/kg	54.3	56-23-5	
Benzene	Not detected	50		ug/kg	54.3	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	54.3	107-06-2	
Trichloroethene	Not detected	50		ug/kg	54.3	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	54.3	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	54.3	75-27-4	
Dibromomethane	Not detected	300		ug/kg	54.3	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	54.3	10061-01-5	
Toluene	Not detected	50		ug/kg	54.3	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	54.3	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	54.3	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	54.3	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	54.3	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	54.3	106-93-4	M
Chlorobenzene	Not detected	50		ug/kg	54.3	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	54.3	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	54.3	100-41-4	
p,m-Xylene	Not detected	100		ug/kg	54.3		
o-Xylene	Not detected	50		ug/kg	54.3	95-47-6	
Styrene	Not detected	50		ug/kg	54.3	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	54.3	98-82-8	
Bromoform	Not detected	100		ug/kg	54.3	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	54.3	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	54.3	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	54.3	103-65-1	
Bromobenzene	Not detected	100		ug/kg	54.3	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	54.3	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	54.3	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	54.3	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	54.3	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	54.3	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	54.3	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	54.3	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	54.3	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	54.3	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	54.3	104-51-8	
1,2,4-Trichlorobenzene	Not detected	360		ug/kg	54.3	120-82-1	
1,2,3-Trichlorobenzene	Not detected	360		ug/kg	54.3	87-61-6	
Naphthalene	Not detected	300		ug/kg	54.3	91-20-3	
Acrolein	Not detected	50		ug/kg	54.3	107-02-8	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.36 (continued)

Sample Tag: Dup-10s

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/28/22 06:55, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
2-Chlorotoluene	Not detected	50		ug/kg	54.3	95-49-8	
4-Chlorotoluene	Not detected	50		ug/kg	54.3	106-43-4	
1,3-Dichloropropane	Not detected	50		ug/kg	54.3	142-28-9	
1,1-Dichloropropene	Not detected	50		ug/kg	54.3	563-58-6	
2,2-Dichloropropane	Not detected	50		ug/kg	54.3	594-20-7	
Hexachlorobutadiene	Not detected	50		ug/kg	54.3	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	54.3	76-13-1	

Other / Misc.

Method: , Run Date: 12/22/22 02:41, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

Method: , Run Date: 12/30/22 09:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.37

Sample Tag: Trip Blank - MW

Collected Date/Time: 12/15/2022 08:00

Matrix: Methanol

COC Reference: 145616

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Sample wt. (g) / Methanol (ml)*	10/10	SW5035A	12/16/22 09:33	BDO	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/20/22 08:10, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	50	108-20-3	
Acetone	Not detected	1,000		ug/kg	50	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	50	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	50	107-13-1	
2-Butanone (MEK)	Not detected	750		ug/kg	50	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	50	75-71-8	
Chloromethane	Not detected	300		ug/kg	50	74-87-3	
Vinyl chloride	Not detected	50		ug/kg	50	75-01-4	
Bromomethane	Not detected	200		ug/kg	50	74-83-9	
Chloroethane	Not detected	300		ug/kg	50	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	50	75-69-4	
1,1-Dichloroethene	Not detected	50		ug/kg	50	75-35-4	
Methylene chloride	Not detected	100		ug/kg	50	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	50	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	50	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	50	156-59-2	
Chloroform	Not detected	50		ug/kg	50	67-66-3	
1,1,1-Trichloroethane	Not detected	50		ug/kg	50	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	50	108-10-1	
Carbon tetrachloride	Not detected	50		ug/kg	50	56-23-5	
Benzene	Not detected	50		ug/kg	50	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	50	107-06-2	
Trichloroethene	Not detected	50		ug/kg	50	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	50	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	50	75-27-4	
Dibromomethane	Not detected	300		ug/kg	50	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	50	10061-01-5	
Toluene	Not detected	50		ug/kg	50	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	50	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	50	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	50	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	50	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	50	106-93-4	M
Chlorobenzene	Not detected	50		ug/kg	50	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	50	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	50	100-41-4	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.37 (continued)

Sample Tag: Trip Blank - MW

Method: SW5035A/8260C, Run Date: 12/20/22 08:10, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
p,m-Xylene	Not detected	100		ug/kg	50		
o-Xylene	Not detected	50		ug/kg	50	95-47-6	
Styrene	Not detected	50		ug/kg	50	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	50	98-82-8	
Bromoform	Not detected	100		ug/kg	50	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	50	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	50	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	50	103-65-1	
Bromobenzene	Not detected	100		ug/kg	50	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	50	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	50	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	50	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	50	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	50	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	50	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	50	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	50	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	50	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	50	104-51-8	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	50	120-82-1	
1,2,3-Trichlorobenzene	Not detected	330		ug/kg	50	87-61-6	
Naphthalene	Not detected	300		ug/kg	50	91-20-3	
Acrolein	Not detected	50		ug/kg	50	107-02-8	
2-Chlorotoluene	Not detected	50		ug/kg	50	95-49-8	
4-Chlorotoluene	Not detected	50		ug/kg	50	106-43-4	
1,3-Dichloropropane	Not detected	50		ug/kg	50	142-28-9	
1,1-Dichloropropene	Not detected	50		ug/kg	50	563-58-6	
2,2-Dichloropropane	Not detected	50		ug/kg	50	594-20-7	
Hexachlorobutadiene	Not detected	50		ug/kg	50	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	50	76-13-1	

Other / Misc.

Method: , Run Date: 12/30/22 09:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43533.38

Sample Tag: Trip Blank - TP

Collected Date/Time: 12/15/2022 08:10

Matrix: Methanol

COC Reference: 145616

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Sample wt. (g) / Methanol (ml)*	10/10	SW5035A	12/16/22 09:33	BDO	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/20/22 08:35, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	50	108-20-3	
Acetone	Not detected	1,000		ug/kg	50	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	50	1634-04-4	
Acrylonitrile	Not detected	100		ug/kg	50	107-13-1	
2-Butanone (MEK)	Not detected	750		ug/kg	50	78-93-3	
Dichlorodifluoromethane	Not detected	300		ug/kg	50	75-71-8	
Chloromethane	Not detected	300		ug/kg	50	74-87-3	
Vinyl chloride	Not detected	50		ug/kg	50	75-01-4	
Bromomethane	Not detected	200		ug/kg	50	74-83-9	
Chloroethane	Not detected	300		ug/kg	50	75-00-3	
Trichlorofluoromethane	Not detected	100		ug/kg	50	75-69-4	
1,1-Dichloroethene	Not detected	50		ug/kg	50	75-35-4	
Methylene chloride	Not detected	100		ug/kg	50	75-09-2	
trans-1,2-Dichloroethene	Not detected	50		ug/kg	50	156-60-5	
1,1-Dichloroethane	Not detected	50		ug/kg	50	75-34-3	
cis-1,2-Dichloroethene	Not detected	50		ug/kg	50	156-59-2	
Chloroform	Not detected	50		ug/kg	50	67-66-3	
1,1,1-Trichloroethane	Not detected	50		ug/kg	50	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	50	108-10-1	
Carbon tetrachloride	Not detected	50		ug/kg	50	56-23-5	
Benzene	Not detected	50		ug/kg	50	71-43-2	
1,2-Dichloroethane	Not detected	50		ug/kg	50	107-06-2	
Trichloroethene	Not detected	50		ug/kg	50	79-01-6	
1,2-Dichloropropane	Not detected	50		ug/kg	50	78-87-5	
Bromodichloromethane	Not detected	100		ug/kg	50	75-27-4	
Dibromomethane	Not detected	300		ug/kg	50	74-95-3	
cis-1,3-Dichloropropene	Not detected	50		ug/kg	50	10061-01-5	
Toluene	Not detected	50		ug/kg	50	108-88-3	
trans-1,3-Dichloropropene	Not detected	50		ug/kg	50	10061-02-6	
1,1,2-Trichloroethane	Not detected	50		ug/kg	50	79-00-5	
Tetrachloroethene	Not detected	50		ug/kg	50	127-18-4	
Dibromochloromethane	Not detected	100		ug/kg	50	124-48-1	
1,2-Dibromoethane	Not detected	20		ug/kg	50	106-93-4	M
Chlorobenzene	Not detected	50		ug/kg	50	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	50	630-20-6	
Ethylbenzene	Not detected	50		ug/kg	50	100-41-4	

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43533.38 (continued)

Sample Tag: Trip Blank - TP

Method: SW5035A/8260C, Run Date: 12/20/22 08:35, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
p,m-Xylene	Not detected	100		ug/kg	50		
o-Xylene	Not detected	50		ug/kg	50	95-47-6	
Styrene	Not detected	50		ug/kg	50	100-42-5	
Isopropylbenzene	Not detected	300		ug/kg	50	98-82-8	
Bromoform	Not detected	100		ug/kg	50	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	50	79-34-5	
1,2,3-Trichloropropane	Not detected	100		ug/kg	50	96-18-4	
n-Propylbenzene	Not detected	50		ug/kg	50	103-65-1	
Bromobenzene	Not detected	100		ug/kg	50	108-86-1	
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	50	108-67-8	
tert-Butylbenzene	Not detected	50		ug/kg	50	98-06-6	
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	50	95-63-6	
sec-Butylbenzene	Not detected	50		ug/kg	50	135-98-8	
p-Isopropyltoluene	Not detected	100		ug/kg	50	99-87-6	
1,3-Dichlorobenzene	Not detected	100		ug/kg	50	541-73-1	
1,4-Dichlorobenzene	Not detected	100		ug/kg	50	106-46-7	
1,2-Dichlorobenzene	Not detected	100		ug/kg	50	95-50-1	
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	50	526-73-8	
n-Butylbenzene	Not detected	50		ug/kg	50	104-51-8	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	50	120-82-1	
1,2,3-Trichlorobenzene	Not detected	330		ug/kg	50	87-61-6	
Naphthalene	Not detected	300		ug/kg	50	91-20-3	
Acrolein	Not detected	50		ug/kg	50	107-02-8	
2-Chlorotoluene	Not detected	50		ug/kg	50	95-49-8	
4-Chlorotoluene	Not detected	50		ug/kg	50	106-43-4	
1,3-Dichloropropane	Not detected	50		ug/kg	50	142-28-9	
1,1-Dichloropropene	Not detected	50		ug/kg	50	563-58-6	
2,2-Dichloropropane	Not detected	50		ug/kg	50	594-20-7	
Hexachlorobutadiene	Not detected	50		ug/kg	50	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	50	76-13-1	

Other / Misc.

Method: , Run Date: 12/30/22 09:08, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Misc. Special Project*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.

Merit Laboratories Login Checklist

Lab Set ID:S43533

Client:TRC (TRC)

Project: Det. Axle South. Bound.

Submitted: 12/15/2022 16:00 Login User: MMC

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place

Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Selection	Description	Note
Sample Receiving		
01.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples are received at 4C +/- 2C Thermometer # IR 4.0
02.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Received on ice/ cooling process begun
03.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples shipped
04.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples left in 24 hr. drop box
05.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Are there custody seals/tape or is the drop box locked
Chain of Custody		
06.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC adequately filled out
07.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC signed and relinquished to the lab
08.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sample tag on bottles match COC
09.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Subcontracting needed? Subcontracted to: Eurofins
Preservation		
10.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Do sample have correct chemical preservation
11.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Completed pH checks on preserved samples? (no VOAs)
12.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Did any samples need to be preserved in the lab?
Bottle Conditions		
13.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	All bottles intact
14.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Appropriate analytical bottles are used
15.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Merit bottles used
16.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sufficient sample volume received
17.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples require laboratory filtration
18.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples submitted within holding time
19.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Do water VOC or TOX bottles contain headspace

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____



2680 East Lansing Dr., East Lansing, MI 48823
 Phone (517) 332-0167 Fax (517) 332-4034
 www.meritlabs.com

C.O.C. PAGE # _____ OF _____

158678

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME **K CRATSENBURG**
 COMPANY **TRC**
 ADDRESS **1540 EISENHOWER**
 CITY **ANN ARBOR** STATE **MI** ZIP CODE **48108**
 PHONE NO. _____ CELL NO. _____ P.O. NO. **193431**
 E-MAIL ADDRESS **Kcratsenburg@trccompanies.com** QUOTE NO. _____

CONTACT NAME _____ SAME
 COMPANY _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP CODE _____
 PHONE NO. _____ E-MAIL ADDRESS _____

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME **DET. AXLE SOUTH BOUND.** SAMPLER(S) - PLEASE PRINT SIGN NAME **B. YELEN**
 TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____
 DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER **TRC EDD**
 MATRIX W=WATER GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 CODE: SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR WS=WASTE

# Containers & Preservatives		VOLATILES, 1,4 Diox	SUBC + TICs	METALS *	3 ALCOHOLS	PCB	THORIUM	TETRAETHYL Pb	31 PFAS
NONE		X	X	X	X	X	X	X	
HCl		X	X	X	X	X	X	X	
HNO ₃		X	X	X	X	X	X	X	
H ₂ SO ₄		X	X	X	X	X	X	X	
NaOH		X	X	X	X	X	X	X	
MeOH		X	X	X	X	X	X	X	
OTHER		X	X	X	X	X	X	X	

Certifications
 OHIO VAP Drinking Water
 DoD NPDES
 Project Locations
 Detroit New York
 Other _____
 Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	COLLECTION		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER
	DATE	TIME										
43533/01	12.14.22	0930	A009-MW-22-13(2-4)	S	9	7						
43534/02		0940	A009-MW-22-13(8-10)									
		1040	A009-SB-01(2-4)									
		1100	A009-SB-01(8-10)									
		1130	A009-MW-22-14(2-4)									
		1150	A009-MW-22-14(8-10)									
		1230	A009-SB-02(2-4)									
		1300	A009-SB-02(8-10)									
		1330	A009-MW-22-15(2-4)									
		1340	A009-MW-22-15(8-10)									
		1550	A0010-MW-22-16(2-4)		8	6						
		1600	A0010-MW-22-16(8-10)		8	6						

* SEE PROJECT SCOPE FOR SOUTHERN BOUNDARY SOILS

RELINQUISHED BY: **B. Yelen** (Sampler) DATE **12.15.22** TIME **1422**
 RECEIVED BY: **M. Chlucotto** DATE **12/15/22** TIME **1400**
 RELINQUISHED BY: **Merit** DATE **12/15/22** TIME **1600**
 RECEIVED BY: **M. Chlucotto** DATE **12/15/22** TIME **1600**

RELINQUISHED BY: _____ DATE _____ TIME _____
 RECEIVED BY: _____ DATE _____ TIME _____
 SEAL NO. SEAL INTACT YES NO INITIALS _____
 SEAL NO. SEAL INTACT YES NO INITIALS _____
 NOTES: TEMP. ON ARRIVAL **4.0**



REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME: *Kelly Cratsen burg*
 COMPANY: *TRC*
 ADDRESS: *1540 Eisenhower Place*
 CITY: *Ann Arbor* STATE: *MI* ZIP CODE: *48108*
 PHONE NO.: _____ CELL NO.: _____ P.O. NO.: *193431*
 E-MAIL ADDRESS: *Kcratsen@trc.com* QUOTE NO.: _____

CONTACT NAME: _____ SAME
 COMPANY: _____
 ADDRESS: _____
 CITY: _____ STATE: _____ ZIP CODE: _____
 PHONE NO.: _____ E-MAIL ADDRESS: _____

PROJECT NO./NAME: *Defiant Axis Southern Inv. / 4954300001* SAMPLER(S) PLEASE PRINT/SIGN NAME: *Pl. Schmidt*
 TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____
 DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER *TRC EDD*

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

MATRIX W=WATER GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 CODE: SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR WS=WASTE

Containers & Preservatives
 Certifications
 OHIO VAP Drinking Water
 DoD NPDES
 Project Locations
 Detroit New York
 Other _____
 Special Instructions

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	COLLECTION		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	ANALYSIS	ANALYSIS	ANALYSIS	ANALYSIS	ANALYSIS	ANALYSIS	
	DATE	TIME																	
<i>43533/43534</i>	<i>12/14/22</i>	<i>937</i>	<i>AOC3 - TPO1 - W</i>	<i>S</i>	<i>9</i>	<i>7</i>					<i>2</i>		<i>XX</i>	<i>XX</i>	<i>X</i>	<i>XX</i>			
<i>.14</i>		<i>947</i>	<i>AOC3 - TPO1 - E</i>																
<i>.15</i>		<i>955</i>	<i>AOC3 - TPO1 - N</i>																
<i>.16</i>		<i>955</i>	<i>AOC3 - TPO1 - S</i>																
<i>.17</i>		<i>1012</i>	<i>AOC3 - TPO1 - B</i>																
<i>.18</i>		<i>-</i>	<i>Dup - 075</i>																
<i>.19</i>		<i>1055</i>	<i>AOC3 - TPO2 - N</i>																
<i>.20</i>		<i>1108</i>	<i>AOC3 - TPO2 - S</i>																
<i>.21</i>		<i>1115</i>	<i>AOC3 - TPO2 - E</i>																
<i>.22</i>		<i>1115</i>	<i>AOC3 - TPO2 - W</i>																
<i>.23</i>		<i>1136</i>	<i>AOC3 - TPO2 - B</i>																
<i>.24</i>		<i>-</i>	<i>Dup - 085</i>																

*VOCs + TICs + 14
 Discrete STMs
 SVOCs + TICs
 Metals *
 PCBs
 Alcohols (3)
 Thorium
 31 PFAS*

** Southern
 Boundary Soil
 Metals*

RELINQUISHED BY: *Henry Schmidt* (Sampler) DATE: *12/14/22* TIME: *1600*
 RECEIVED BY: *Sample drop spot* DATE: *12/14/22* TIME: *1600*
 RELINQUISHED BY: *B. Vaen* DATE: *12.15.22* TIME: *M*
 RECEIVED BY: *[Signature]* DATE: *12.15.22* TIME: *[Time]*

RELINQUISHED BY: *[Signature]* DATE: *12.15.22* TIME: *1600*
 RECEIVED BY: *M. Cratsen* DATE: *12/15/22* TIME: *1600*
 SEAL NO. SEAL INTACT YES NO INITIALS _____ NOTES: TEMP. ON ARRIVAL *4.0*



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 www.meritlabs.com

C.O.C. PAGE # _____ OF _____ 158677

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME: Kelly Eratsenburg
 COMPANY: TPC
 ADDRESS: 1540 Eisenhower Place
 CITY: Anna Arbor
 STATE: MT ZIP CODE: 48108
 PHONE NO.: P.O. NO. 193431
 E-MAIL ADDRESS: kcratsenburg@tpc.com

CONTACT NAME: SAME
 COMPANY:
 ADDRESS:
 CITY: STATE: ZIP CODE:
 PHONE NO.: E-MAIL ADDRESS:

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME: DE 1st Ayr Southern Invt. / 495430.000
 SAMPLER(S) - PLEASE PRINT/SIGN NAME: Ft. Schwaidt
 TURNAROUND TIME REQUIRED: 1 DAY 2 DAYS 3 DAYS STANDARD OTHER
 DELIVERABLES REQUIRED: STD LEVEL II LEVEL III LEVEL IV EDD OTHER TALEDO

Certifications
 OHIO VAP Drinking Water
 DoD NPDES
 Project Locations
 Detroit New York
 Other _____
 Special Instructions

MATRIX W=WATER GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 CODE: SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR WS=WASTE

Containers & Preservatives

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	COLLECTION		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	ANALYSIS	ANALYSIS	ANALYSIS	ANALYSIS	ANALYSIS	ANALYSIS	
	DATE	TIME																	
43533/43534	12/14/22	1246	AOC3-TPO3-N	S	9	7					2		X	X	X	X	X	X	X
		1255	AOC3-TPO3-S																
		1302	AOC3-TPO3-E																
		1302	AOC3-TPO3-W																
		1327	AOC3-TPO3-B																
		-	Dup-09s																
		1422	AOC3-TPO4-W																
		1435	AOC3-TPO4-E																
		1440	AOC3-TPO4-N																
		1440	AOC3-TPO4-S																
		1452	AOC3-TPO4-B																
		-	Dup-10s																

RELINQUISHED BY: Henry Schwaidt (SAMPLER) DATE: 12/14/22 TIME: 1600
 RECEIVED BY: Sample drop pt DATE: 12/14/22 TIME: 1606
 RELINQUISHED BY: B. Yeager DATE: 12.15.22 TIME: 1400
 RECEIVED BY: [Signature] DATE: 1/5/23

RELINQUISHED BY: [Signature] Merit DATE: 12/15/22 TIME: 1600
 RECEIVED BY: M Chilcote DATE: 12/15/22 TIME: 1600
 SEAL NO. SEAL INTACT YES NO INITIALS NOTES: TEMP. ON ARRIVAL 4.0

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE



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C.O.C. PAGE # _____ OF _____ 145616

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME **K KRATZENBURG**
 COMPANY **JRC**
 ADDRESS **1540 EISENHOWER**
 CITY **ANN ARBOR** STATE **MI** ZIP CODE _____
 PHONE NO. _____ FAX NO. _____ P.O. NO. **193431**
 E-MAIL ADDRESS **kratzenburg@jrccompanies** QUOTE NO. _____

CONTACT NAME _____ SAME
 COMPANY _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP CODE _____
 PHONE NO. _____ E-MAIL ADDRESS _____

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME **DET. AUC SOUTH B.** SAMPLER(S) - PLEASE PRINT/SIGN NAME **B. Yoon**

TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____

DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV TEDD OTHER **JRC EDN**

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIFE A=AIR W=WASTE

Containers & Preservatives

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives														
	DATE	TIME				NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER								
43533.37	12.15.22	0800	TRIP BLANK - MW		1															
.38	12.15.22	0810	TRIP BLANK - TP		1															

VOC'S 1,4-D
XX

Certifications
 OHIO VAP Drinking Water
 DoD NPDES
Project Locations
 Detroit New York
 Other _____
Special Instructions

RELINQUISHED BY: **B. Yoon** Sampler DATE **12.15.22** TIME **1400**
 RECEIVED BY: **[Signature]** DATE **12-15-22** TIME **1400**
 RELINQUISHED BY: **[Signature]** DATE **12-15-22** TIME **1600**
 RECEIVED BY: **M. Chilcote** DATE **12/15/22** TIME **1600**

RELINQUISHED BY: _____ DATE _____ TIME _____
 RECEIVED BY: _____ DATE _____ TIME _____
 SEAL NO. SEAL INTACT YES NO INITIALS _____
 SEAL NO. SEAL INTACT YES NO INITIALS _____
 NOTES: TEMP. ON ARRIVAL **4.0**

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Lab Results
Merit Laboratories
2680 E Lansing Drive
East Lansing, Michigan 48823

Generated 1/5/2023 9:09:24 AM

JOB DESCRIPTION

S43533

JOB NUMBER

190-30664-1

Eurofins Michigan

Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



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Authorized for release by
Sue Schafer, Project Manager II
Sue.Schafer@et.eurofinsus.com
(810)229-2763



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Sample Summary

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
190-30664-3	S43533.03	Solid	12/14/22 10:40	12/16/22 13:52
190-30664-4	S43533.04	Solid	12/14/22 11:00	12/16/22 13:52
190-30664-5	S43533.05	Solid	12/14/22 11:30	12/16/22 13:52
190-30664-6	S43533.06	Solid	12/14/22 11:50	12/16/22 13:52
190-30664-7	S43533.07	Solid	12/14/22 12:50	12/16/22 13:52
190-30664-8	S43533.08	Solid	12/14/22 13:00	12/16/22 13:52
190-30664-9	S43533.09	Solid	12/14/22 13:30	12/16/22 13:52
190-30664-10	S43533.10	Solid	12/14/22 13:40	12/16/22 13:52
190-30664-11	S43533.11	Solid	12/14/22 15:50	12/16/22 13:52
190-30664-12	S43533.12	Solid	12/14/22 16:00	12/16/22 13:52
190-30664-13	S43533.13	Solid	12/14/22 09:37	12/16/22 13:52
190-30664-14	S43533.14	Solid	12/14/22 09:47	12/16/22 13:52
190-30664-15	S43533.15	Solid	12/14/22 09:55	12/16/22 13:52
190-30664-16	S43533.16	Solid	12/14/22 09:55	12/16/22 13:52
190-30664-17	S43533.17	Solid	12/14/22 10:12	12/16/22 13:52
190-30664-18	S43533.18	Solid	12/14/22 00:01	12/16/22 13:52
190-30664-19	S43533.19	Solid	12/14/22 10:55	12/16/22 13:52
190-30664-20	S43533.20	Solid	12/14/22 11:08	12/16/22 13:52
190-30664-21	S43533.21	Solid	12/14/22 11:15	12/16/22 13:52
190-30664-22	S43533.22	Solid	12/14/22 11:15	12/16/22 13:52
190-30664-23	S43533.23	Solid	12/14/22 11:36	12/16/22 13:52
190-30664-24	S43533.24	Solid	12/14/22 00:01	12/16/22 13:52
190-30664-25	S43533.25	Solid	12/14/22 12:46	12/16/22 13:52
190-30664-26	S43533.26	Solid	12/14/22 12:55	12/16/22 13:52
190-30664-27	S43533.27	Solid	12/14/22 13:02	12/16/22 13:52
190-30664-28	S43533.28	Solid	12/14/22 13:02	12/16/22 13:52
190-30664-29	S43533.29	Solid	12/14/22 13:27	12/16/22 13:52
190-30664-30	S43533.30	Solid	12/14/22 00:01	12/16/22 13:52
190-30664-31	S43533.31	Solid	12/14/22 14:22	12/16/22 13:52
190-30664-32	S43533.32	Solid	12/14/22 14:35	12/16/22 13:52
190-30664-33	S43533.33	Solid	12/14/22 14:40	12/16/22 13:52
190-30664-34	S43533.34	Solid	12/14/22 14:40	12/16/22 13:52
190-30664-35	S43533.35	Solid	12/14/22 14:52	12/16/22 13:52
190-30664-36	S43533.36	Solid	12/14/22 00:01	12/16/22 13:52

Case Narrative

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Job ID: 190-30664-1

Laboratory: Eurofins Michigan

Narrative

Job Narrative 190-30664-1

Receipt

The samples were received on 12/16/2022 1:52 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice.

No sample volume was received for S43533.01 and S43533.02. Client was notified and acknowledged.

GC/MS Semi VOA

Method 8270D: The following samples: S43533.04 (190-30664-4), S43533.05 (190-30664-5), S43533.06 (190-30664-6) and S43533.07 (190-30664-7) were decanted prior to preparation.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

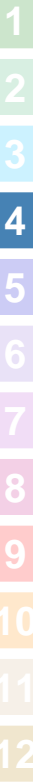
Method MOISTURE_2540G: The sample duplicate precision for the following sample associated with analytical batch 680-755934 was outside control limits: (190-30664-A-31 DU). The associated Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD) precision met acceptance criteria.

Method MOISTURE_2540G: The sample duplicate precision for the following sample associated with analytical batch 680-755944 was outside control limits: (190-30664-A-6 DU) and (190-30664-A-20 DU). The associated Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD) precision met acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Geotechnical

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.



Client Sample Results

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.03

Lab Sample ID: 190-30664-3

Date Collected: 12/14/22 10:40

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 88.3

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<1100		1100	ug/Kg	☼	12/21/22 08:15	12/22/22 15:11	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	91		53 - 120			12/21/22 08:15	12/22/22 15:11	1
p-Terphenyl-d14 (Surr)	93		79 - 130			12/21/22 08:15	12/22/22 15:11	1
Phenol-d5 (Surr)	87		54 - 120			12/21/22 08:15	12/22/22 15:11	1
2-Fluorophenol (Surr)	85		52 - 120			12/21/22 08:15	12/22/22 15:11	1
2,4,6-Tribromophenol (Surr)	97		54 - 120			12/21/22 08:15	12/22/22 15:11	1
2-Fluorobiphenyl (Surr)	100		60 - 120			12/21/22 08:15	12/22/22 15:11	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.6		0.21	mg/Kg	☼	12/30/22 09:03	01/03/23 16:23	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	11.7		0.1	%			12/20/22 09:26	1
Percent Solids (EPA Moisture)	88.3		0.1	%			12/20/22 09:26	1
Percent Moisture (SM Moisture - 2540)	3.4		0.10	%			12/19/22 15:28	1
Percent Solids (SM Moisture - 2540)	97		0.10	%			12/19/22 15:28	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	3.7		0.1	%			12/19/22 15:28	1

Client Sample ID: S43533.03

Lab Sample ID: 190-30664-3

Date Collected: 12/14/22 10:40

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 96.6

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.1		5.1	mg/Kg	☼		12/19/22 21:03	1
Methanol	<2.0		2.0	mg/Kg	☼		12/19/22 21:03	1
n-Butanol	<5.1		5.1	mg/Kg	☼		12/19/22 21:03	1

Client Sample ID: S43533.04

Lab Sample ID: 190-30664-4

Date Collected: 12/14/22 11:00

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 93.8

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<1000		1000	ug/Kg	☼	12/21/22 08:15	12/22/22 15:35	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	64		53 - 120			12/21/22 08:15	12/22/22 15:35	1
p-Terphenyl-d14 (Surr)	79		79 - 130			12/21/22 08:15	12/22/22 15:35	1
Phenol-d5 (Surr)	61		54 - 120			12/21/22 08:15	12/22/22 15:35	1
2-Fluorophenol (Surr)	59		52 - 120			12/21/22 08:15	12/22/22 15:35	1
2,4,6-Tribromophenol (Surr)	77		54 - 120			12/21/22 08:15	12/22/22 15:35	1
2-Fluorobiphenyl (Surr)	66		60 - 120			12/21/22 08:15	12/22/22 15:35	1

Eurofins Michigan

Client Sample Results

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.04

Lab Sample ID: 190-30664-4

Date Collected: 12/14/22 11:00

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 93.8

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	2.0		0.18	mg/Kg	☼	12/30/22 09:03	01/03/23 16:51	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	6.2		0.1	%			12/20/22 09:26	1
Percent Solids (EPA Moisture)	93.8		0.1	%			12/20/22 09:26	1
Percent Moisture (SM Moisture - 2540)	4.1		0.10	%			12/19/22 15:28	1
Percent Solids (SM Moisture - 2540)	96		0.10	%			12/19/22 15:28	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	4.5		0.1	%			12/19/22 15:28	1

Client Sample ID: S43533.04

Lab Sample ID: 190-30664-4

Date Collected: 12/14/22 11:00

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 95.9

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.1		5.1	mg/Kg	☼		12/19/22 21:24	1
Methanol	<2.1		2.1	mg/Kg	☼		12/19/22 21:24	1
n-Butanol	<5.1		5.1	mg/Kg	☼		12/19/22 21:24	1

Client Sample ID: S43533.05

Lab Sample ID: 190-30664-5

Date Collected: 12/14/22 11:30

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 76.2

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<1300		1300	ug/Kg	☼	12/21/22 08:15	12/22/22 15:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	66		53 - 120	12/21/22 08:15	12/22/22 15:59	1
p-Terphenyl-d14 (Surr)	81		79 - 130	12/21/22 08:15	12/22/22 15:59	1
Phenol-d5 (Surr)	65		54 - 120	12/21/22 08:15	12/22/22 15:59	1
2-Fluorophenol (Surr)	60		52 - 120	12/21/22 08:15	12/22/22 15:59	1
2,4,6-Tribromophenol (Surr)	82		54 - 120	12/21/22 08:15	12/22/22 15:59	1
2-Fluorobiphenyl (Surr)	74		60 - 120	12/21/22 08:15	12/22/22 15:59	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.56		0.25	mg/Kg	☼	12/30/22 09:03	01/03/23 16:54	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	23.8		0.1	%			12/20/22 09:26	1
Percent Solids (EPA Moisture)	76.2		0.1	%			12/20/22 09:26	1
Percent Moisture (SM Moisture - 2540)	5.3		0.10	%			12/19/22 15:28	1
Percent Solids (SM Moisture - 2540)	95		0.10	%			12/19/22 15:28	1

Eurofins Michigan

Client Sample Results

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.05

Lab Sample ID: 190-30664-5

Date Collected: 12/14/22 11:30

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 76.2

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	5.9		0.1	%			12/19/22 15:28	1

Client Sample ID: S43533.05

Lab Sample ID: 190-30664-5

Date Collected: 12/14/22 11:30

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 94.7

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.3		5.3	mg/Kg	☼		12/19/22 21:45	1
Methanol	<2.1		2.1	mg/Kg	☼		12/19/22 21:45	1
n-Butanol	<5.3		5.3	mg/Kg	☼		12/19/22 21:45	1

Client Sample ID: S43533.06

Lab Sample ID: 190-30664-6

Date Collected: 12/14/22 11:50

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 85.0

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<1200		1200	ug/Kg	☼	12/21/22 08:15	12/22/22 16:23	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	84		53 - 120			12/21/22 08:15	12/22/22 16:23	1
p-Terphenyl-d14 (Surr)	94		79 - 130			12/21/22 08:15	12/22/22 16:23	1
Phenol-d5 (Surr)	79		54 - 120			12/21/22 08:15	12/22/22 16:23	1
2-Fluorophenol (Surr)	77		52 - 120			12/21/22 08:15	12/22/22 16:23	1
2,4,6-Tribromophenol (Surr)	93		54 - 120			12/21/22 08:15	12/22/22 16:23	1
2-Fluorobiphenyl (Surr)	92		60 - 120			12/21/22 08:15	12/22/22 16:23	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.78		0.21	mg/Kg	☼	12/30/22 09:03	01/03/23 16:58	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	15.0		0.1	%			12/20/22 09:26	1
Percent Solids (EPA Moisture)	85.0		0.1	%			12/20/22 09:26	1
Percent Moisture (SM Moisture - 2540)	9.1		0.10	%			12/19/22 15:28	1
Percent Solids (SM Moisture - 2540)	91		0.10	%			12/19/22 15:28	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	10.6		0.1	%			12/19/22 15:28	1

Client Sample ID: S43533.06

Lab Sample ID: 190-30664-6

Date Collected: 12/14/22 11:50

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 90.9

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.3		5.3	mg/Kg	☼		12/19/22 22:06	1

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Client Sample Results

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.06

Lab Sample ID: 190-30664-6

Date Collected: 12/14/22 11:50

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 90.9

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<2.1		2.1	mg/Kg	☼		12/19/22 22:06	1
n-Butanol	<5.3		5.3	mg/Kg	☼		12/19/22 22:06	1

Client Sample ID: S43533.07

Lab Sample ID: 190-30664-7

Date Collected: 12/14/22 12:50

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 84.3

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<1200		1200	ug/Kg	☼	12/21/22 08:15	12/22/22 16:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	60		53 - 120			12/21/22 08:15	12/22/22 16:48	1
p-Terphenyl-d14 (Surr)	85		79 - 130			12/21/22 08:15	12/22/22 16:48	1
Phenol-d5 (Surr)	60		54 - 120			12/21/22 08:15	12/22/22 16:48	1
2-Fluorophenol (Surr)	56		52 - 120			12/21/22 08:15	12/22/22 16:48	1
2,4,6-Tribromophenol (Surr)	85		54 - 120			12/21/22 08:15	12/22/22 16:48	1
2-Fluorobiphenyl (Surr)	68		60 - 120			12/21/22 08:15	12/22/22 16:48	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.95		0.23	mg/Kg	☼	12/30/22 09:03	01/03/23 17:01	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	15.7		0.1	%			12/20/22 09:26	1
Percent Solids (EPA Moisture)	84.3		0.1	%			12/20/22 09:26	1
Percent Moisture (SM Moisture - 2540)	8.3		0.10	%			12/19/22 15:28	1
Percent Solids (SM Moisture - 2540)	92		0.10	%			12/19/22 15:28	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	9.5		0.1	%			12/19/22 15:28	1

Client Sample ID: S43533.07

Lab Sample ID: 190-30664-7

Date Collected: 12/14/22 12:50

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 91.7

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.4		5.4	mg/Kg	☼		12/20/22 14:50	1
Methanol	<2.2		2.2	mg/Kg	☼		12/20/22 14:50	1
n-Butanol	<5.4		5.4	mg/Kg	☼		12/20/22 14:50	1

Client Sample Results

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.08

Lab Sample ID: 190-30664-8

Date Collected: 12/14/22 13:00

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 75.4

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<1300		1300	ug/Kg	☼	12/21/22 08:15	12/22/22 17:12	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	88		53 - 120			12/21/22 08:15	12/22/22 17:12	1
p-Terphenyl-d14 (Surr)	93		79 - 130			12/21/22 08:15	12/22/22 17:12	1
Phenol-d5 (Surr)	84		54 - 120			12/21/22 08:15	12/22/22 17:12	1
2-Fluorophenol (Surr)	82		52 - 120			12/21/22 08:15	12/22/22 17:12	1
2,4,6-Tribromophenol (Surr)	97		54 - 120			12/21/22 08:15	12/22/22 17:12	1
2-Fluorobiphenyl (Surr)	95		60 - 120			12/21/22 08:15	12/22/22 17:12	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.69		0.24	mg/Kg	☼	12/30/22 09:03	01/03/23 17:05	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	24.6		0.1	%			12/20/22 09:26	1
Percent Solids (EPA Moisture)	75.4		0.1	%			12/20/22 09:26	1
Percent Moisture (SM Moisture - 2540)	7.6		0.10	%			12/19/22 15:28	1
Percent Solids (SM Moisture - 2540)	92		0.10	%			12/19/22 15:28	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	8.7		0.1	%			12/19/22 15:28	1

Client Sample ID: S43533.08

Lab Sample ID: 190-30664-8

Date Collected: 12/14/22 13:00

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 92.4

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.3		5.3	mg/Kg	☼		12/20/22 15:11	1
Methanol	<2.1		2.1	mg/Kg	☼		12/20/22 15:11	1
n-Butanol	<5.3		5.3	mg/Kg	☼		12/20/22 15:11	1

Client Sample ID: S43533.09

Lab Sample ID: 190-30664-9

Date Collected: 12/14/22 13:30

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 83.4

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<1200		1200	ug/Kg	☼	12/21/22 08:15	12/22/22 17:37	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	93		53 - 120			12/21/22 08:15	12/22/22 17:37	1
p-Terphenyl-d14 (Surr)	93		79 - 130			12/21/22 08:15	12/22/22 17:37	1
Phenol-d5 (Surr)	87		54 - 120			12/21/22 08:15	12/22/22 17:37	1
2-Fluorophenol (Surr)	86		52 - 120			12/21/22 08:15	12/22/22 17:37	1
2,4,6-Tribromophenol (Surr)	98		54 - 120			12/21/22 08:15	12/22/22 17:37	1
2-Fluorobiphenyl (Surr)	104		60 - 120			12/21/22 08:15	12/22/22 17:37	1

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Client Sample Results

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.09

Lab Sample ID: 190-30664-9

Date Collected: 12/14/22 13:30

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 83.4

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.68		0.21	mg/Kg	☼	12/30/22 09:03	01/03/23 17:08	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	16.6		0.1	%			12/20/22 09:26	1
Percent Solids (EPA Moisture)	83.4		0.1	%			12/20/22 09:26	1
Percent Moisture (SM Moisture - 2540)	11		0.10	%			12/19/22 15:28	1
Percent Solids (SM Moisture - 2540)	89		0.10	%			12/19/22 15:28	1

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	12.5		0.1	%			12/19/22 15:28	1

Client Sample ID: S43533.09

Lab Sample ID: 190-30664-9

Date Collected: 12/14/22 13:30

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 89.4

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.5		5.5	mg/Kg	☼		12/20/22 15:32	1
Methanol	<2.2		2.2	mg/Kg	☼		12/20/22 15:32	1
n-Butanol	<5.5		5.5	mg/Kg	☼		12/20/22 15:32	1

Client Sample ID: S43533.10

Lab Sample ID: 190-30664-10

Date Collected: 12/14/22 13:40

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 76.2

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<1300		1300	ug/Kg	☼	12/21/22 08:15	12/22/22 18:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	74		53 - 120	12/21/22 08:15	12/22/22 18:01	1
p-Terphenyl-d14 (Surr)	84		79 - 130	12/21/22 08:15	12/22/22 18:01	1
Phenol-d5 (Surr)	70		54 - 120	12/21/22 08:15	12/22/22 18:01	1
2-Fluorophenol (Surr)	69		52 - 120	12/21/22 08:15	12/22/22 18:01	1
2,4,6-Tribromophenol (Surr)	86		54 - 120	12/21/22 08:15	12/22/22 18:01	1
2-Fluorobiphenyl (Surr)	82		60 - 120	12/21/22 08:15	12/22/22 18:01	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.87		0.23	mg/Kg	☼	12/30/22 09:03	01/03/23 17:11	2

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	23.8		0.1	%			12/20/22 09:26	1
Percent Solids (EPA Moisture)	76.2		0.1	%			12/20/22 09:26	1
Percent Moisture (SM Moisture - 2540)	3.8		0.10	%			12/19/22 15:28	1
Percent Solids (SM Moisture - 2540)	96		0.10	%			12/19/22 15:28	1

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Client Sample Results

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.10

Lab Sample ID: 190-30664-10

Date Collected: 12/14/22 13:40

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 76.2

Method: ASTM D2216-90 - Water (Moisture) Content

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Moisture Content	4.2		0.1	%			12/19/22 15:28	1

Client Sample ID: S43533.10

Lab Sample ID: 190-30664-10

Date Collected: 12/14/22 13:40

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 96.2

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.1		5.1	mg/Kg	☼		12/20/22 15:53	1
Methanol	<2.0		2.0	mg/Kg	☼		12/20/22 15:53	1
n-Butanol	<5.1		5.1	mg/Kg	☼		12/20/22 15:53	1

Client Sample ID: S43533.11

Lab Sample ID: 190-30664-11

Date Collected: 12/14/22 15:50

Matrix: Solid

Date Received: 12/16/22 13:52

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	7.0		0.1	%			12/20/22 09:26	1
Percent Solids (EPA Moisture)	93.0		0.1	%			12/20/22 09:26	1
Percent Moisture (SM Moisture - 2540)	7.9		0.10	%			12/19/22 15:28	1
Percent Solids (SM Moisture - 2540)	92		0.10	%			12/19/22 15:28	1

Client Sample ID: S43533.11

Lab Sample ID: 190-30664-11

Date Collected: 12/14/22 15:50

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 92.1

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.1		5.1	mg/Kg	☼		12/20/22 16:14	1
Methanol	<2.0		2.0	mg/Kg	☼		12/20/22 16:14	1
n-Butanol	<5.1		5.1	mg/Kg	☼		12/20/22 16:14	1

Client Sample ID: S43533.11

Lab Sample ID: 190-30664-11

Date Collected: 12/14/22 15:50

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 93.0

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.81		0.20	mg/Kg	☼	12/30/22 09:03	01/03/23 17:15	2

Client Sample ID: S43533.12

Lab Sample ID: 190-30664-12

Date Collected: 12/14/22 16:00

Matrix: Solid

Date Received: 12/16/22 13:52

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	10.6		0.1	%			12/20/22 09:26	1
Percent Solids (EPA Moisture)	89.4		0.1	%			12/20/22 09:26	1
Percent Moisture (SM Moisture - 2540)	6.0		0.10	%			12/19/22 15:28	1

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Client Sample Results

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.12

Lab Sample ID: 190-30664-12

Date Collected: 12/14/22 16:00

Matrix: Solid

Date Received: 12/16/22 13:52

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM Moisture - 2540)	94		0.10	%			12/19/22 15:28	1

Client Sample ID: S43533.12

Lab Sample ID: 190-30664-12

Date Collected: 12/14/22 16:00

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 89.4

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.1		0.22	mg/Kg	☼	12/30/22 09:03	01/03/23 17:18	2

Client Sample ID: S43533.12

Lab Sample ID: 190-30664-12

Date Collected: 12/14/22 16:00

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 94.0

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.0		5.0	mg/Kg	☼		12/20/22 16:35	1
Methanol	<2.0		2.0	mg/Kg	☼		12/20/22 16:35	1
n-Butanol	<5.0		5.0	mg/Kg	☼		12/20/22 16:35	1

Client Sample ID: S43533.13

Lab Sample ID: 190-30664-13

Date Collected: 12/14/22 09:37

Matrix: Solid

Date Received: 12/16/22 13:52

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	2.6		0.1	%			12/20/22 09:26	1
Percent Solids (EPA Moisture)	97.4		0.1	%			12/20/22 09:26	1
Percent Moisture (SM Moisture - 2540)	2.6		0.10	%			12/19/22 15:28	1
Percent Solids (SM Moisture - 2540)	97		0.10	%			12/19/22 15:28	1

Client Sample ID: S43533.13

Lab Sample ID: 190-30664-13

Date Collected: 12/14/22 09:37

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 97.4

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<4.9		4.9	mg/Kg	☼		12/20/22 16:56	1
Methanol	<1.9		1.9	mg/Kg	☼		12/20/22 16:56	1
n-Butanol	<4.9		4.9	mg/Kg	☼		12/20/22 16:56	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.81		0.20	mg/Kg	☼	12/30/22 09:03	01/03/23 17:22	2

Client Sample Results

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.14

Lab Sample ID: 190-30664-14

Date Collected: 12/14/22 09:47

Matrix: Solid

Date Received: 12/16/22 13:52

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	24.3		0.1	%			12/20/22 09:26	1
Percent Solids (EPA Moisture)	75.7		0.1	%			12/20/22 09:26	1
Percent Moisture (SM Moisture - 2540)	4.5		0.10	%			12/19/22 15:28	1
Percent Solids (SM Moisture - 2540)	95		0.10	%			12/19/22 15:28	1

Client Sample ID: S43533.14

Lab Sample ID: 190-30664-14

Date Collected: 12/14/22 09:47

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 75.7

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.1		0.23	mg/Kg	☼	12/30/22 09:03	01/03/23 17:35	2

Client Sample ID: S43533.14

Lab Sample ID: 190-30664-14

Date Collected: 12/14/22 09:47

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 95.5

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.0		5.0	mg/Kg	☼		12/20/22 17:17	1
Methanol	<2.0		2.0	mg/Kg	☼		12/20/22 17:17	1
n-Butanol	<5.0		5.0	mg/Kg	☼		12/20/22 17:17	1

Client Sample ID: S43533.15

Lab Sample ID: 190-30664-15

Date Collected: 12/14/22 09:55

Matrix: Solid

Date Received: 12/16/22 13:52

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	3.6		0.1	%			12/20/22 09:26	1
Percent Solids (EPA Moisture)	96.4		0.1	%			12/20/22 09:26	1
Percent Moisture (SM Moisture - 2540)	3.6		0.10	%			12/19/22 14:56	1
Percent Solids (SM Moisture - 2540)	96		0.10	%			12/19/22 14:56	1

Client Sample ID: S43533.15

Lab Sample ID: 190-30664-15

Date Collected: 12/14/22 09:55

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 96.4

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.0		5.0	mg/Kg	☼		12/20/22 17:38	1
Methanol	<2.0		2.0	mg/Kg	☼		12/20/22 17:38	1
n-Butanol	<5.0		5.0	mg/Kg	☼		12/20/22 17:38	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.2		0.21	mg/Kg	☼	12/30/22 09:03	01/03/23 17:39	2

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Client Sample Results

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.16

Lab Sample ID: 190-30664-16

Date Collected: 12/14/22 09:55

Matrix: Solid

Date Received: 12/16/22 13:52

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	5.5		0.1	%			12/20/22 09:26	1
Percent Solids (EPA Moisture)	94.5		0.1	%			12/20/22 09:26	1
Percent Moisture (SM Moisture - 2540)	3.1		0.10	%			12/19/22 14:56	1
Percent Solids (SM Moisture - 2540)	97		0.10	%			12/19/22 14:56	1

Client Sample ID: S43533.16

Lab Sample ID: 190-30664-16

Date Collected: 12/14/22 09:55

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 94.5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.7		0.18	mg/Kg	☼	12/30/22 09:03	01/03/23 17:42	2

Client Sample ID: S43533.16

Lab Sample ID: 190-30664-16

Date Collected: 12/14/22 09:55

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 96.9

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.0		5.0	mg/Kg	☼		12/20/22 17:59	1
Methanol	<2.0		2.0	mg/Kg	☼		12/20/22 17:59	1
n-Butanol	<5.0		5.0	mg/Kg	☼		12/20/22 17:59	1

Client Sample ID: S43533.17

Lab Sample ID: 190-30664-17

Date Collected: 12/14/22 10:12

Matrix: Solid

Date Received: 12/16/22 13:52

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	15.1		0.1	%			12/20/22 09:26	1
Percent Solids (EPA Moisture)	84.9		0.1	%			12/20/22 09:26	1
Percent Moisture (SM Moisture - 2540)	15		0.10	%			12/19/22 14:56	1
Percent Solids (SM Moisture - 2540)	85		0.10	%			12/19/22 14:56	1

Client Sample ID: S43533.17

Lab Sample ID: 190-30664-17

Date Collected: 12/14/22 10:12

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 84.7

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.8		5.8	mg/Kg	☼		12/20/22 18:20	1
Methanol	<2.3		2.3	mg/Kg	☼		12/20/22 18:20	1
n-Butanol	<5.8		5.8	mg/Kg	☼		12/20/22 18:20	1

Client Sample Results

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.17

Lab Sample ID: 190-30664-17

Date Collected: 12/14/22 10:12

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 84.9

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.97		0.23	mg/Kg	☼	12/30/22 09:03	01/03/23 17:46	2

Client Sample ID: S43533.18

Lab Sample ID: 190-30664-18

Date Collected: 12/14/22 00:01

Matrix: Solid

Date Received: 12/16/22 13:52

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	2.6		0.1	%			12/20/22 09:26	1
Percent Solids (EPA Moisture)	97.4		0.1	%			12/20/22 09:26	1
Percent Moisture (SM Moisture - 2540)	2.7		0.10	%			12/19/22 14:56	1
Percent Solids (SM Moisture - 2540)	97		0.10	%			12/19/22 14:56	1

Client Sample ID: S43533.18

Lab Sample ID: 190-30664-18

Date Collected: 12/14/22 00:01

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 97.3

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.1		5.1	mg/Kg	☼		12/20/22 18:41	1
Methanol	<2.1		2.1	mg/Kg	☼		12/20/22 18:41	1
n-Butanol	<5.1		5.1	mg/Kg	☼		12/20/22 18:41	1

Client Sample ID: S43533.18

Lab Sample ID: 190-30664-18

Date Collected: 12/14/22 00:01

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 97.4

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.81		0.19	mg/Kg	☼	12/30/22 09:03	01/03/23 17:49	2

Client Sample ID: S43533.19

Lab Sample ID: 190-30664-19

Date Collected: 12/14/22 10:55

Matrix: Solid

Date Received: 12/16/22 13:52

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	22.5		0.1	%			12/20/22 09:26	1
Percent Solids (EPA Moisture)	77.5		0.1	%			12/20/22 09:26	1
Percent Moisture (SM Moisture - 2540)	6.3		0.10	%			12/19/22 14:56	1
Percent Solids (SM Moisture - 2540)	94		0.10	%			12/19/22 14:56	1

Client Sample ID: S43533.19

Lab Sample ID: 190-30664-19

Date Collected: 12/14/22 10:55

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 77.5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.9		0.25	mg/Kg	☼	12/30/22 09:03	01/03/23 17:53	2

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Client Sample Results

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.19

Lab Sample ID: 190-30664-19

Date Collected: 12/14/22 10:55

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 93.7

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.3		5.3	mg/Kg	☼		12/20/22 19:02	1
Methanol	<2.1		2.1	mg/Kg	☼		12/20/22 19:02	1
n-Butanol	<5.3		5.3	mg/Kg	☼		12/20/22 19:02	1

Client Sample ID: S43533.20

Lab Sample ID: 190-30664-20

Date Collected: 12/14/22 11:08

Matrix: Solid

Date Received: 12/16/22 13:52

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	23.5		0.1	%			12/20/22 09:26	1
Percent Solids (EPA Moisture)	76.5		0.1	%			12/20/22 09:26	1
Percent Moisture (SM Moisture - 2540)	4.8		0.10	%			12/19/22 15:28	1
Percent Solids (SM Moisture - 2540)	95		0.10	%			12/19/22 15:28	1

Client Sample ID: S43533.20

Lab Sample ID: 190-30664-20

Date Collected: 12/14/22 11:08

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 76.5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.4		0.23	mg/Kg	☼	12/30/22 09:03	01/03/23 17:56	2

Client Sample ID: S43533.20

Lab Sample ID: 190-30664-20

Date Collected: 12/14/22 11:08

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 95.2

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.1		5.1	mg/Kg	☼		12/20/22 19:23	1
Methanol	<2.0		2.0	mg/Kg	☼		12/20/22 19:23	1
n-Butanol	<5.1		5.1	mg/Kg	☼		12/20/22 19:23	1

Client Sample ID: S43533.21

Lab Sample ID: 190-30664-21

Date Collected: 12/14/22 11:15

Matrix: Solid

Date Received: 12/16/22 13:52

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	24.8		0.1	%			12/20/22 09:26	1
Percent Solids (EPA Moisture)	75.2		0.1	%			12/20/22 09:26	1
Percent Moisture (SM Moisture - 2540)	6.6		0.10	%			12/19/22 15:28	1
Percent Solids (SM Moisture - 2540)	93		0.10	%			12/19/22 15:28	1

Client Sample Results

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.21

Lab Sample ID: 190-30664-21

Date Collected: 12/14/22 11:15

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 75.2

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.6		0.24	mg/Kg	☼	12/30/22 09:03	01/03/23 17:59	2

Client Sample ID: S43533.21

Lab Sample ID: 190-30664-21

Date Collected: 12/14/22 11:15

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 93.4

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.1		5.1	mg/Kg	☼		12/20/22 19:44	1
Methanol	<2.0		2.0	mg/Kg	☼		12/20/22 19:44	1
n-Butanol	<5.1		5.1	mg/Kg	☼		12/20/22 19:44	1

Client Sample ID: S43533.22

Lab Sample ID: 190-30664-22

Date Collected: 12/14/22 11:15

Matrix: Solid

Date Received: 12/16/22 13:52

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	13.6		0.1	%			12/20/22 10:49	1
Percent Solids (EPA Moisture)	86.4		0.1	%			12/20/22 10:49	1
Percent Moisture (SM Moisture - 2540)	6.3		0.10	%			12/19/22 14:56	1
Percent Solids (SM Moisture - 2540)	94		0.10	%			12/19/22 14:56	1

Client Sample ID: S43533.22

Lab Sample ID: 190-30664-22

Date Collected: 12/14/22 11:15

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 86.4

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.5		0.19	mg/Kg	☼	12/30/22 09:08	01/03/23 18:20	2

Client Sample ID: S43533.22

Lab Sample ID: 190-30664-22

Date Collected: 12/14/22 11:15

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 93.7

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.2		5.2	mg/Kg	☼		12/20/22 20:05	1
Methanol	<2.1		2.1	mg/Kg	☼		12/20/22 20:05	1
n-Butanol	<5.2		5.2	mg/Kg	☼		12/20/22 20:05	1

Client Sample ID: S43533.23

Lab Sample ID: 190-30664-23

Date Collected: 12/14/22 11:36

Matrix: Solid

Date Received: 12/16/22 13:52

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	12.7		0.1	%			12/20/22 10:50	1
Percent Solids (EPA Moisture)	87.3		0.1	%			12/20/22 10:50	1
Percent Moisture (SM Moisture - 2540)	14		0.10	%			12/19/22 14:56	1

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Client Sample Results

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.23

Lab Sample ID: 190-30664-23

Date Collected: 12/14/22 11:36

Matrix: Solid

Date Received: 12/16/22 13:52

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM Moisture - 2540)	86		0.10	%			12/19/22 14:56	1

Client Sample ID: S43533.23

Lab Sample ID: 190-30664-23

Date Collected: 12/14/22 11:36

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 85.8

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.6		5.6	mg/Kg	☼		12/20/22 20:26	1
Methanol	<2.3		2.3	mg/Kg	☼		12/20/22 20:26	1
n-Butanol	<5.6		5.6	mg/Kg	☼		12/20/22 20:26	1

Client Sample ID: S43533.23

Lab Sample ID: 190-30664-23

Date Collected: 12/14/22 11:36

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 87.3

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.91		0.21	mg/Kg	☼	12/30/22 09:08	01/03/23 18:37	2

Client Sample ID: S43533.24

Lab Sample ID: 190-30664-24

Date Collected: 12/14/22 00:01

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 87.3

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	21.6		0.1	%			12/20/22 10:50	1
Percent Solids (EPA Moisture)	78.4		0.1	%			12/20/22 10:50	1
Percent Moisture (SM Moisture - 2540)	6.4		0.10	%			12/19/22 14:56	1
Percent Solids (SM Moisture - 2540)	94		0.10	%			12/19/22 14:56	1

Client Sample ID: S43533.24

Lab Sample ID: 190-30664-24

Date Collected: 12/14/22 00:01

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 78.4

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.7		0.24	mg/Kg	☼	12/30/22 09:08	01/03/23 18:41	2

Client Sample ID: S43533.24

Lab Sample ID: 190-30664-24

Date Collected: 12/14/22 00:01

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 93.6

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.1		5.1	mg/Kg	☼		12/20/22 20:47	1
Methanol	<2.0		2.0	mg/Kg	☼		12/20/22 20:47	1
n-Butanol	<5.1		5.1	mg/Kg	☼		12/20/22 20:47	1

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Client Sample Results

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.25

Lab Sample ID: 190-30664-25

Date Collected: 12/14/22 12:46

Matrix: Solid

Date Received: 12/16/22 13:52

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	6.2		0.1	%			12/20/22 10:50	1
Percent Solids (EPA Moisture)	93.8		0.1	%			12/20/22 10:50	1
Percent Moisture (SM Moisture - 2540)	6.5		0.10	%			12/19/22 14:56	1
Percent Solids (SM Moisture - 2540)	93		0.10	%			12/19/22 14:56	1

Client Sample ID: S43533.25

Lab Sample ID: 190-30664-25

Date Collected: 12/14/22 12:46

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 93.5

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.3		5.3	mg/Kg	☼		12/20/22 21:08	1
Methanol	<2.1		2.1	mg/Kg	☼		12/20/22 21:08	1
n-Butanol	<5.3		5.3	mg/Kg	☼		12/20/22 21:08	1

Client Sample ID: S43533.25

Lab Sample ID: 190-30664-25

Date Collected: 12/14/22 12:46

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 93.8

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.2		0.19	mg/Kg	☼	12/30/22 09:08	01/03/23 18:44	2

Client Sample ID: S43533.26

Lab Sample ID: 190-30664-26

Date Collected: 12/14/22 12:55

Matrix: Solid

Date Received: 12/16/22 13:52

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	8.3		0.1	%			12/20/22 10:50	1
Percent Solids (EPA Moisture)	91.7		0.1	%			12/20/22 10:50	1
Percent Moisture (SM Moisture - 2540)	6.5		0.10	%			12/19/22 14:56	1
Percent Solids (SM Moisture - 2540)	94		0.10	%			12/19/22 14:56	1

Client Sample ID: S43533.26

Lab Sample ID: 190-30664-26

Date Collected: 12/14/22 12:55

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 91.7

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.2		0.19	mg/Kg	☼	12/30/22 09:08	01/03/23 18:47	2

Client Sample ID: S43533.26

Lab Sample ID: 190-30664-26

Date Collected: 12/14/22 12:55

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 93.5

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.3		5.3	mg/Kg	☼		12/20/22 21:28	1

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Client Sample Results

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.26

Lab Sample ID: 190-30664-26

Date Collected: 12/14/22 12:55

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 93.5

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	3.9		2.1	mg/Kg	☼		12/20/22 21:28	1
n-Butanol	<5.3		5.3	mg/Kg	☼		12/20/22 21:28	1

Client Sample ID: S43533.27

Lab Sample ID: 190-30664-27

Date Collected: 12/14/22 13:02

Matrix: Solid

Date Received: 12/16/22 13:52

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	5.6		0.1	%			12/20/22 10:50	1
Percent Solids (EPA Moisture)	94.4		0.1	%			12/20/22 10:50	1
Percent Moisture (SM Moisture - 2540)	6.0		0.10	%			12/19/22 14:56	1
Percent Solids (SM Moisture - 2540)	94		0.10	%			12/19/22 14:56	1

Client Sample ID: S43533.27

Lab Sample ID: 190-30664-27

Date Collected: 12/14/22 13:02

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 94.0

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.3		5.3	mg/Kg	☼		12/21/22 23:32	1
Methanol	4.0		2.1	mg/Kg	☼		12/21/22 23:32	1
n-Butanol	<5.3		5.3	mg/Kg	☼		12/21/22 23:32	1

Client Sample ID: S43533.27

Lab Sample ID: 190-30664-27

Date Collected: 12/14/22 13:02

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 94.4

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.1		0.20	mg/Kg	☼	12/30/22 09:08	01/03/23 18:51	2

Client Sample ID: S43533.28

Lab Sample ID: 190-30664-28

Date Collected: 12/14/22 13:02

Matrix: Solid

Date Received: 12/16/22 13:52

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	23.8		0.1	%			12/20/22 10:50	1
Percent Solids (EPA Moisture)	76.2		0.1	%			12/20/22 10:50	1
Percent Moisture (SM Moisture - 2540)	6.6		0.10	%			12/19/22 14:56	1
Percent Solids (SM Moisture - 2540)	93		0.10	%			12/19/22 14:56	1

Client Sample Results

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.28

Lab Sample ID: 190-30664-28

Date Collected: 12/14/22 13:02

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 76.2

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.1		0.25	mg/Kg	☼	12/30/22 09:08	01/03/23 19:05	2

Client Sample ID: S43533.28

Lab Sample ID: 190-30664-28

Date Collected: 12/14/22 13:02

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 93.4

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.0		5.0	mg/Kg	☼		12/21/22 23:53	1
Methanol	4.8		2.0	mg/Kg	☼		12/21/22 23:53	1
n-Butanol	<5.0		5.0	mg/Kg	☼		12/21/22 23:53	1

Client Sample ID: S43533.29

Lab Sample ID: 190-30664-29

Date Collected: 12/14/22 13:27

Matrix: Solid

Date Received: 12/16/22 13:52

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	15.0		0.1	%			12/20/22 10:50	1
Percent Solids (EPA Moisture)	85.0		0.1	%			12/20/22 10:50	1
Percent Moisture (SM Moisture - 2540)	17		0.10	%			12/19/22 14:56	1
Percent Solids (SM Moisture - 2540)	83		0.10	%			12/19/22 14:56	1

Client Sample ID: S43533.29

Lab Sample ID: 190-30664-29

Date Collected: 12/14/22 13:27

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 82.7

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<6.0		6.0	mg/Kg	☼		12/22/22 00:14	1
Methanol	<2.4		2.4	mg/Kg	☼		12/22/22 00:14	1
n-Butanol	<6.0		6.0	mg/Kg	☼		12/22/22 00:14	1

Client Sample ID: S43533.29

Lab Sample ID: 190-30664-29

Date Collected: 12/14/22 13:27

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 85.0

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.92		0.22	mg/Kg	☼	12/30/22 09:08	01/03/23 19:08	2

Client Sample ID: S43533.30

Lab Sample ID: 190-30664-30

Date Collected: 12/14/22 00:01

Matrix: Solid

Date Received: 12/16/22 13:52

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	5.9		0.1	%			12/20/22 10:50	1
Percent Solids (EPA Moisture)	94.1		0.1	%			12/20/22 10:50	1
Percent Moisture (SM Moisture - 2540)	6.2		0.10	%			12/19/22 14:56	1

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Client Sample Results

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.30

Lab Sample ID: 190-30664-30

Date Collected: 12/14/22 00:01

Matrix: Solid

Date Received: 12/16/22 13:52

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM Moisture - 2540)	94		0.10	%			12/19/22 14:56	1

Client Sample ID: S43533.30

Lab Sample ID: 190-30664-30

Date Collected: 12/14/22 00:01

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 93.8

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.2		5.2	mg/Kg	☼		12/22/22 00:35	1
Methanol	5.7		2.1	mg/Kg	☼		12/22/22 00:35	1
n-Butanol	<5.2		5.2	mg/Kg	☼		12/22/22 00:35	1

Client Sample ID: S43533.30

Lab Sample ID: 190-30664-30

Date Collected: 12/14/22 00:01

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 94.1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.0		0.19	mg/Kg	☼	12/30/22 09:08	01/03/23 19:11	2

Client Sample ID: S43533.31

Lab Sample ID: 190-30664-31

Date Collected: 12/14/22 14:22

Matrix: Solid

Date Received: 12/16/22 13:52

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	4.3		0.1	%			12/20/22 10:50	1
Percent Solids (EPA Moisture)	95.7		0.1	%			12/20/22 10:50	1
Percent Moisture (SM Moisture - 2540)	3.9		0.10	%			12/19/22 14:56	1
Percent Solids (SM Moisture - 2540)	96		0.10	%			12/19/22 14:56	1

Client Sample ID: S43533.31

Lab Sample ID: 190-30664-31

Date Collected: 12/14/22 14:22

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 95.7

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	2.1		0.19	mg/Kg	☼	12/30/22 09:08	01/03/23 19:15	2

Client Sample ID: S43533.31

Lab Sample ID: 190-30664-31

Date Collected: 12/14/22 14:22

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 96.1

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.0		5.0	mg/Kg	☼		12/22/22 00:56	1
Methanol	3.6		2.0	mg/Kg	☼		12/22/22 00:56	1
n-Butanol	<5.0		5.0	mg/Kg	☼		12/22/22 00:56	1

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Client Sample Results

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.32

Lab Sample ID: 190-30664-32

Date Collected: 12/14/22 14:35

Matrix: Solid

Date Received: 12/16/22 13:52

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	24.7		0.1	%			12/20/22 10:50	1
Percent Solids (EPA Moisture)	75.3		0.1	%			12/20/22 10:50	1
Percent Moisture (SM Moisture - 2540)	3.2		0.10	%			12/19/22 14:56	1
Percent Solids (SM Moisture - 2540)	97		0.10	%			12/19/22 14:56	1

Client Sample ID: S43533.32

Lab Sample ID: 190-30664-32

Date Collected: 12/14/22 14:35

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 75.3

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.4		0.25	mg/Kg	✳	12/30/22 09:08	01/03/23 19:18	2

Client Sample ID: S43533.32

Lab Sample ID: 190-30664-32

Date Collected: 12/14/22 14:35

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 96.8

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.1		5.1	mg/Kg	✳		12/22/22 01:17	1
Methanol	4.6		2.1	mg/Kg	✳		12/22/22 01:17	1
n-Butanol	<5.1		5.1	mg/Kg	✳		12/22/22 01:17	1

Client Sample ID: S43533.33

Lab Sample ID: 190-30664-33

Date Collected: 12/14/22 14:40

Matrix: Solid

Date Received: 12/16/22 13:52

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	2.9		0.1	%			12/20/22 10:50	1
Percent Solids (EPA Moisture)	97.1		0.1	%			12/20/22 10:50	1
Percent Moisture (SM Moisture - 2540)	8.7		0.10	%			12/19/22 14:56	1
Percent Solids (SM Moisture - 2540)	91		0.10	%			12/19/22 14:56	1

Client Sample ID: S43533.33

Lab Sample ID: 190-30664-33

Date Collected: 12/14/22 14:40

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 91.3

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.3		5.3	mg/Kg	✳		12/22/22 01:38	1
Methanol	<2.1		2.1	mg/Kg	✳		12/22/22 01:38	1
n-Butanol	<5.3		5.3	mg/Kg	✳		12/22/22 01:38	1

Client Sample Results

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.33

Lab Sample ID: 190-30664-33

Date Collected: 12/14/22 14:40

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 97.1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.3		0.20	mg/Kg	☼	12/30/22 09:08	01/03/23 19:22	2

Client Sample ID: S43533.34

Lab Sample ID: 190-30664-34

Date Collected: 12/14/22 14:40

Matrix: Solid

Date Received: 12/16/22 13:52

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	3.9		0.1	%			12/20/22 10:50	1
Percent Solids (EPA Moisture)	96.1		0.1	%			12/20/22 10:50	1
Percent Moisture (SM Moisture - 2540)	3.3		0.10	%			12/19/22 14:56	1
Percent Solids (SM Moisture - 2540)	97		0.10	%			12/19/22 14:56	1

Client Sample ID: S43533.34

Lab Sample ID: 190-30664-34

Date Collected: 12/14/22 14:40

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 96.1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.5		0.20	mg/Kg	☼	12/30/22 09:08	01/03/23 19:25	2

Client Sample ID: S43533.34

Lab Sample ID: 190-30664-34

Date Collected: 12/14/22 14:40

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 96.7

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.1		5.1	mg/Kg	☼		12/22/22 01:59	1
Methanol	9.1		2.0	mg/Kg	☼		12/22/22 01:59	1
n-Butanol	<5.1		5.1	mg/Kg	☼		12/22/22 01:59	1

Client Sample ID: S43533.35

Lab Sample ID: 190-30664-35

Date Collected: 12/14/22 14:52

Matrix: Solid

Date Received: 12/16/22 13:52

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	13.1		0.1	%			12/20/22 10:50	1
Percent Solids (EPA Moisture)	86.9		0.1	%			12/20/22 10:50	1
Percent Moisture (SM Moisture - 2540)	10		0.10	%			12/19/22 14:56	1
Percent Solids (SM Moisture - 2540)	90		0.10	%			12/19/22 14:56	1

Client Sample ID: S43533.35

Lab Sample ID: 190-30664-35

Date Collected: 12/14/22 14:52

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 86.9

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.91		0.21	mg/Kg	☼	12/30/22 09:08	01/03/23 19:29	2

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Client Sample Results

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.35

Lab Sample ID: 190-30664-35

Date Collected: 12/14/22 14:52

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 89.8

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.4		5.4	mg/Kg	☼		12/22/22 02:20	1
Methanol	16		2.1	mg/Kg	☼		12/22/22 02:20	1
n-Butanol	<5.4		5.4	mg/Kg	☼		12/22/22 02:20	1

Client Sample ID: S43533.36

Lab Sample ID: 190-30664-36

Date Collected: 12/14/22 00:01

Matrix: Solid

Date Received: 12/16/22 13:52

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	5.1		0.1	%			12/20/22 10:50	1
Percent Solids (EPA Moisture)	94.9		0.1	%			12/20/22 10:50	1
Percent Moisture (SM Moisture - 2540)	4.4		0.10	%			12/19/22 14:56	1
Percent Solids (SM Moisture - 2540)	96		0.10	%			12/19/22 14:56	1

Client Sample ID: S43533.36

Lab Sample ID: 190-30664-36

Date Collected: 12/14/22 00:01

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 94.9

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.4		0.20	mg/Kg	☼	12/30/22 09:08	01/03/23 19:32	2

Client Sample ID: S43533.36

Lab Sample ID: 190-30664-36

Date Collected: 12/14/22 00:01

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 95.6

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<10		10	mg/Kg	☼		12/22/22 02:41	1
Methanol	<4.0		4.0	mg/Kg	☼		12/22/22 02:41	1
n-Butanol	<10		10	mg/Kg	☼		12/22/22 02:41	1

QC Sample Results

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-654152/1-A
Matrix: Solid
Analysis Batch: 654322

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 654152

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Tetraethyl lead	<990		990	ug/Kg		12/21/22 08:15	12/22/22 11:57	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	63		53 - 120			12/21/22 08:15	12/22/22 11:57	1
p-Terphenyl-d14 (Surr)	80		79 - 130			12/21/22 08:15	12/22/22 11:57	1
Phenol-d5 (Surr)	61		54 - 120			12/21/22 08:15	12/22/22 11:57	1
2-Fluorophenol (Surr)	58		52 - 120			12/21/22 08:15	12/22/22 11:57	1
2,4,6-Tribromophenol (Surr)	70		54 - 120			12/21/22 08:15	12/22/22 11:57	1
2-Fluorobiphenyl (Surr)	68		60 - 120			12/21/22 08:15	12/22/22 11:57	1

Lab Sample ID: LCS 480-654152/2-A
Matrix: Solid
Analysis Batch: 654322

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 654152

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
Nitrobenzene-d5 (Surr)	75		53 - 120
p-Terphenyl-d14 (Surr)	95		79 - 130
Phenol-d5 (Surr)	71		54 - 120
2-Fluorophenol (Surr)	68		52 - 120
2,4,6-Tribromophenol (Surr)	100		54 - 120
2-Fluorobiphenyl (Surr)	83		60 - 120

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Lab Sample ID: MB 680-755657/1-A
Matrix: Solid
Analysis Batch: 755896

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Ethanol	<4.9		4.9	mg/Kg			12/19/22 15:25	1
Methanol	<1.9		1.9	mg/Kg			12/19/22 15:25	1
n-Butanol	<4.9		4.9	mg/Kg			12/19/22 15:25	1

Lab Sample ID: LCS 680-755657/2-A
Matrix: Solid
Analysis Batch: 755896

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Methanol	19.2	18.4		mg/Kg		96	59 - 153

Lab Sample ID: LCSD 680-755657/3-A
Matrix: Solid
Analysis Batch: 755896

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
		Result	Qualifier					13	50
Methanol	20.0	20.9		mg/Kg		104	59 - 153	13	50

QC Sample Results

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) (Continued)

Lab Sample ID: MB 680-755692/1-A
Matrix: Solid
Analysis Batch: 756095

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<4.8		4.8	mg/Kg			12/20/22 14:29	1
Methanol	<1.9		1.9	mg/Kg			12/20/22 14:29	1
n-Butanol	<4.8		4.8	mg/Kg			12/20/22 14:29	1

Lab Sample ID: LCS 680-755692/2-A
Matrix: Solid
Analysis Batch: 756095

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methanol	20.0	20.8		mg/Kg		104	59 - 153

Lab Sample ID: LCSD 680-755692/3-A
Matrix: Solid
Analysis Batch: 756095

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methanol	19.8	21.3		mg/Kg		107	59 - 153	2	50

Lab Sample ID: MB 680-755693/1-A
Matrix: Solid
Analysis Batch: 756436

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.0		5.0	mg/Kg			12/21/22 22:29	1
Methanol	<2.0		2.0	mg/Kg			12/21/22 22:29	1
n-Butanol	<5.0		5.0	mg/Kg			12/21/22 22:29	1

Lab Sample ID: LCS 680-755693/2-A
Matrix: Solid
Analysis Batch: 756436

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methanol	19.0	21.7		mg/Kg		114	59 - 153

Lab Sample ID: LCSD 680-755693/3-A
Matrix: Solid
Analysis Batch: 756436

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methanol	19.7	20.2		mg/Kg		102	59 - 153	7	50

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 160-595112/1-A
Matrix: Solid
Analysis Batch: 595447

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 595112

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<0.17		0.17	mg/Kg		12/30/22 09:03	01/03/23 16:10	2

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QC Sample Results

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 160-595112/2-A
Matrix: Solid
Analysis Batch: 595447

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 595112

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Thorium	91.1	90.9		mg/Kg		100	80 - 120

Lab Sample ID: 190-30664-3 MS
Matrix: Solid
Analysis Batch: 595447

Client Sample ID: S43533.03
Prep Type: Total/NA
Prep Batch: 595112

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Thorium	1.6		109	110		mg/Kg	✱	99	75 - 125

Lab Sample ID: 190-30664-3 MSD
Matrix: Solid
Analysis Batch: 595447

Client Sample ID: S43533.03
Prep Type: Total/NA
Prep Batch: 595112

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Thorium	1.6		99.3	100		mg/Kg	✱	99	75 - 125	9	30

Lab Sample ID: MB 160-595114/1-A
Matrix: Solid
Analysis Batch: 595447

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 595114

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<0.18		0.18	mg/Kg		12/30/22 09:08	01/03/23 18:03	2

Lab Sample ID: LCS 160-595114/2-A
Matrix: Solid
Analysis Batch: 595447

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 595114

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Thorium	93.8	95.1		mg/Kg		101	80 - 120

Lab Sample ID: 190-30664-22 MS
Matrix: Solid
Analysis Batch: 595447

Client Sample ID: S43533.22
Prep Type: Total/NA
Prep Batch: 595114

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Thorium	1.5		97.5	101		mg/Kg	✱	102	75 - 125

Lab Sample ID: 190-30664-22 MSD
Matrix: Solid
Analysis Batch: 595447

Client Sample ID: S43533.22
Prep Type: Total/NA
Prep Batch: 595114

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Thorium	1.5		99.3	101		mg/Kg	✱	100	75 - 125	0	30

QC Sample Results

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Method: Moisture - Percent Moisture

Lab Sample ID: 190-30664-3 DU
Matrix: Solid
Analysis Batch: 594257

Client Sample ID: S43533.03
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Percent Moisture	11.7		10.8		%		8	30
Percent Solids	88.3		89.2		%		1	30

Lab Sample ID: 190-30664-22 DU
Matrix: Solid
Analysis Batch: 594371

Client Sample ID: S43533.22
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Percent Moisture	13.6		13.8		%		2	30
Percent Solids	86.4		86.2		%		0.3	30

Method: Moisture - 2540 - Percent Moisture

Lab Sample ID: MB 680-755934/1
Matrix: Solid
Analysis Batch: 755934

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Percent Moisture	<0.10		0.10	%			12/19/22 14:56	1
Percent Solids	100		0.10	%			12/19/22 14:56	1

Lab Sample ID: 190-30664-31 DU
Matrix: Solid
Analysis Batch: 755934

Client Sample ID: S43533.31
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Percent Moisture	3.9		5.1	F3	%		27	5
Percent Solids	96		95		%		1	

Lab Sample ID: 190-30664-36 DU
Matrix: Solid
Analysis Batch: 755934

Client Sample ID: S43533.36
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Percent Moisture	4.4		4.3		%		2	5
Percent Solids	96		96		%		0.09	

Lab Sample ID: MB 680-755944/1
Matrix: Solid
Analysis Batch: 755944

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Percent Moisture	<0.10		0.10	%			12/19/22 15:28	1
Percent Solids	100		0.10	%			12/19/22 15:28	1

QC Sample Results

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Method: Moisture - 2540 - Percent Moisture (Continued)

Lab Sample ID: 190-30664-6 DU
Matrix: Solid
Analysis Batch: 755944

Client Sample ID: S43533.06
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	RPD	Limit
	Result	Qualifier	Result	Qualifier					
Percent Moisture	9.1		7.9	F3	%		14	5	
Percent Solids	91		92		%		1		

Lab Sample ID: 190-30664-20 DU
Matrix: Solid
Analysis Batch: 755944

Client Sample ID: S43533.20
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	RPD	Limit
	Result	Qualifier	Result	Qualifier					
Percent Moisture	4.8		5.3	F3	%		9	5	
Percent Solids	95		95		%		0.5		



Definitions/Glossary

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Qualifiers

General Chemistry

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Association Summary

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

GC/MS Semi VOA

Prep Batch: 654152

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30664-3	S43533.03	Total/NA	Solid	3550C	
190-30664-4	S43533.04	Total/NA	Solid	3550C	
190-30664-5	S43533.05	Total/NA	Solid	3550C	
190-30664-6	S43533.06	Total/NA	Solid	3550C	
190-30664-7	S43533.07	Total/NA	Solid	3550C	
190-30664-8	S43533.08	Total/NA	Solid	3550C	
190-30664-9	S43533.09	Total/NA	Solid	3550C	
190-30664-10	S43533.10	Total/NA	Solid	3550C	
MB 480-654152/1-A	Method Blank	Total/NA	Solid	3550C	
LCS 480-654152/2-A	Lab Control Sample	Total/NA	Solid	3550C	

Analysis Batch: 654322

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30664-3	S43533.03	Total/NA	Solid	8270D	654152
190-30664-4	S43533.04	Total/NA	Solid	8270D	654152
190-30664-5	S43533.05	Total/NA	Solid	8270D	654152
190-30664-6	S43533.06	Total/NA	Solid	8270D	654152
190-30664-7	S43533.07	Total/NA	Solid	8270D	654152
190-30664-8	S43533.08	Total/NA	Solid	8270D	654152
190-30664-9	S43533.09	Total/NA	Solid	8270D	654152
190-30664-10	S43533.10	Total/NA	Solid	8270D	654152
MB 480-654152/1-A	Method Blank	Total/NA	Solid	8270D	654152
LCS 480-654152/2-A	Lab Control Sample	Total/NA	Solid	8270D	654152

GC Semi VOA

Leach Batch: 755657

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30664-3	S43533.03	Soluble	Solid	DI Leach	
190-30664-4	S43533.04	Soluble	Solid	DI Leach	
190-30664-5	S43533.05	Soluble	Solid	DI Leach	
190-30664-6	S43533.06	Soluble	Solid	DI Leach	
MB 680-755657/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 680-755657/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCS 680-755657/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Leach Batch: 755692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30664-7	S43533.07	Soluble	Solid	DI Leach	
190-30664-8	S43533.08	Soluble	Solid	DI Leach	
190-30664-9	S43533.09	Soluble	Solid	DI Leach	
190-30664-10	S43533.10	Soluble	Solid	DI Leach	
190-30664-11	S43533.11	Soluble	Solid	DI Leach	
190-30664-12	S43533.12	Soluble	Solid	DI Leach	
190-30664-13	S43533.13	Soluble	Solid	DI Leach	
190-30664-14	S43533.14	Soluble	Solid	DI Leach	
190-30664-15	S43533.15	Soluble	Solid	DI Leach	
190-30664-16	S43533.16	Soluble	Solid	DI Leach	
190-30664-17	S43533.17	Soluble	Solid	DI Leach	
190-30664-18	S43533.18	Soluble	Solid	DI Leach	
190-30664-19	S43533.19	Soluble	Solid	DI Leach	

QC Association Summary

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

GC Semi VOA (Continued)

Leach Batch: 755692 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30664-20	S43533.20	Soluble	Solid	DI Leach	
190-30664-21	S43533.21	Soluble	Solid	DI Leach	
190-30664-22	S43533.22	Soluble	Solid	DI Leach	
190-30664-23	S43533.23	Soluble	Solid	DI Leach	
190-30664-24	S43533.24	Soluble	Solid	DI Leach	
190-30664-25	S43533.25	Soluble	Solid	DI Leach	
190-30664-26	S43533.26	Soluble	Solid	DI Leach	
MB 680-755692/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 680-755692/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 680-755692/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Leach Batch: 755693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30664-27	S43533.27	Soluble	Solid	DI Leach	
190-30664-28	S43533.28	Soluble	Solid	DI Leach	
190-30664-29	S43533.29	Soluble	Solid	DI Leach	
190-30664-30	S43533.30	Soluble	Solid	DI Leach	
190-30664-31	S43533.31	Soluble	Solid	DI Leach	
190-30664-32	S43533.32	Soluble	Solid	DI Leach	
190-30664-33	S43533.33	Soluble	Solid	DI Leach	
190-30664-34	S43533.34	Soluble	Solid	DI Leach	
190-30664-35	S43533.35	Soluble	Solid	DI Leach	
190-30664-36	S43533.36	Soluble	Solid	DI Leach	
MB 680-755693/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 680-755693/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 680-755693/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 755896

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30664-3	S43533.03	Soluble	Solid	8015C	755657
190-30664-4	S43533.04	Soluble	Solid	8015C	755657
190-30664-5	S43533.05	Soluble	Solid	8015C	755657
190-30664-6	S43533.06	Soluble	Solid	8015C	755657
MB 680-755657/1-A	Method Blank	Soluble	Solid	8015C	755657
LCS 680-755657/2-A	Lab Control Sample	Soluble	Solid	8015C	755657
LCSD 680-755657/3-A	Lab Control Sample Dup	Soluble	Solid	8015C	755657

Analysis Batch: 756095

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30664-7	S43533.07	Soluble	Solid	8015C	755692
190-30664-8	S43533.08	Soluble	Solid	8015C	755692
190-30664-9	S43533.09	Soluble	Solid	8015C	755692
190-30664-10	S43533.10	Soluble	Solid	8015C	755692
190-30664-11	S43533.11	Soluble	Solid	8015C	755692
190-30664-12	S43533.12	Soluble	Solid	8015C	755692
190-30664-13	S43533.13	Soluble	Solid	8015C	755692
190-30664-14	S43533.14	Soluble	Solid	8015C	755692
190-30664-15	S43533.15	Soluble	Solid	8015C	755692
190-30664-16	S43533.16	Soluble	Solid	8015C	755692
190-30664-17	S43533.17	Soluble	Solid	8015C	755692
190-30664-18	S43533.18	Soluble	Solid	8015C	755692

QC Association Summary

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

GC Semi VOA (Continued)

Analysis Batch: 756095 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30664-19	S43533.19	Soluble	Solid	8015C	755692
190-30664-20	S43533.20	Soluble	Solid	8015C	755692
190-30664-21	S43533.21	Soluble	Solid	8015C	755692
190-30664-22	S43533.22	Soluble	Solid	8015C	755692
190-30664-23	S43533.23	Soluble	Solid	8015C	755692
190-30664-24	S43533.24	Soluble	Solid	8015C	755692
190-30664-25	S43533.25	Soluble	Solid	8015C	755692
190-30664-26	S43533.26	Soluble	Solid	8015C	755692
MB 680-755692/1-A	Method Blank	Soluble	Solid	8015C	755692
LCS 680-755692/2-A	Lab Control Sample	Soluble	Solid	8015C	755692
LCSD 680-755692/3-A	Lab Control Sample Dup	Soluble	Solid	8015C	755692

Analysis Batch: 756436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30664-27	S43533.27	Soluble	Solid	8015C	755693
190-30664-28	S43533.28	Soluble	Solid	8015C	755693
190-30664-29	S43533.29	Soluble	Solid	8015C	755693
190-30664-30	S43533.30	Soluble	Solid	8015C	755693
190-30664-31	S43533.31	Soluble	Solid	8015C	755693
190-30664-32	S43533.32	Soluble	Solid	8015C	755693
190-30664-33	S43533.33	Soluble	Solid	8015C	755693
190-30664-34	S43533.34	Soluble	Solid	8015C	755693
190-30664-35	S43533.35	Soluble	Solid	8015C	755693
190-30664-36	S43533.36	Soluble	Solid	8015C	755693
MB 680-755693/1-A	Method Blank	Soluble	Solid	8015C	755693
LCS 680-755693/2-A	Lab Control Sample	Soluble	Solid	8015C	755693
LCSD 680-755693/3-A	Lab Control Sample Dup	Soluble	Solid	8015C	755693

Metals

Prep Batch: 595112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30664-3	S43533.03	Total/NA	Solid	3050B	
190-30664-4	S43533.04	Total/NA	Solid	3050B	
190-30664-5	S43533.05	Total/NA	Solid	3050B	
190-30664-6	S43533.06	Total/NA	Solid	3050B	
190-30664-7	S43533.07	Total/NA	Solid	3050B	
190-30664-8	S43533.08	Total/NA	Solid	3050B	
190-30664-9	S43533.09	Total/NA	Solid	3050B	
190-30664-10	S43533.10	Total/NA	Solid	3050B	
190-30664-11	S43533.11	Total/NA	Solid	3050B	
190-30664-12	S43533.12	Total/NA	Solid	3050B	
190-30664-13	S43533.13	Total/NA	Solid	3050B	
190-30664-14	S43533.14	Total/NA	Solid	3050B	
190-30664-15	S43533.15	Total/NA	Solid	3050B	
190-30664-16	S43533.16	Total/NA	Solid	3050B	
190-30664-17	S43533.17	Total/NA	Solid	3050B	
190-30664-18	S43533.18	Total/NA	Solid	3050B	
190-30664-19	S43533.19	Total/NA	Solid	3050B	
190-30664-20	S43533.20	Total/NA	Solid	3050B	
190-30664-21	S43533.21	Total/NA	Solid	3050B	

Eurofins Michigan

QC Association Summary

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Metals (Continued)

Prep Batch: 595112 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 160-595112/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 160-595112/2-A	Lab Control Sample	Total/NA	Solid	3050B	
190-30664-3 MS	S43533.03	Total/NA	Solid	3050B	
190-30664-3 MSD	S43533.03	Total/NA	Solid	3050B	

Prep Batch: 595114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30664-22	S43533.22	Total/NA	Solid	3050B	
190-30664-23	S43533.23	Total/NA	Solid	3050B	
190-30664-24	S43533.24	Total/NA	Solid	3050B	
190-30664-25	S43533.25	Total/NA	Solid	3050B	
190-30664-26	S43533.26	Total/NA	Solid	3050B	
190-30664-27	S43533.27	Total/NA	Solid	3050B	
190-30664-28	S43533.28	Total/NA	Solid	3050B	
190-30664-29	S43533.29	Total/NA	Solid	3050B	
190-30664-30	S43533.30	Total/NA	Solid	3050B	
190-30664-31	S43533.31	Total/NA	Solid	3050B	
190-30664-32	S43533.32	Total/NA	Solid	3050B	
190-30664-33	S43533.33	Total/NA	Solid	3050B	
190-30664-34	S43533.34	Total/NA	Solid	3050B	
190-30664-35	S43533.35	Total/NA	Solid	3050B	
190-30664-36	S43533.36	Total/NA	Solid	3050B	
MB 160-595114/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 160-595114/2-A	Lab Control Sample	Total/NA	Solid	3050B	
190-30664-22 MS	S43533.22	Total/NA	Solid	3050B	
190-30664-22 MSD	S43533.22	Total/NA	Solid	3050B	

Analysis Batch: 595447

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30664-3	S43533.03	Total/NA	Solid	6020B	595112
190-30664-4	S43533.04	Total/NA	Solid	6020B	595112
190-30664-5	S43533.05	Total/NA	Solid	6020B	595112
190-30664-6	S43533.06	Total/NA	Solid	6020B	595112
190-30664-7	S43533.07	Total/NA	Solid	6020B	595112
190-30664-8	S43533.08	Total/NA	Solid	6020B	595112
190-30664-9	S43533.09	Total/NA	Solid	6020B	595112
190-30664-10	S43533.10	Total/NA	Solid	6020B	595112
190-30664-11	S43533.11	Total/NA	Solid	6020B	595112
190-30664-12	S43533.12	Total/NA	Solid	6020B	595112
190-30664-13	S43533.13	Total/NA	Solid	6020B	595112
190-30664-14	S43533.14	Total/NA	Solid	6020B	595112
190-30664-15	S43533.15	Total/NA	Solid	6020B	595112
190-30664-16	S43533.16	Total/NA	Solid	6020B	595112
190-30664-17	S43533.17	Total/NA	Solid	6020B	595112
190-30664-18	S43533.18	Total/NA	Solid	6020B	595112
190-30664-19	S43533.19	Total/NA	Solid	6020B	595112
190-30664-20	S43533.20	Total/NA	Solid	6020B	595112
190-30664-21	S43533.21	Total/NA	Solid	6020B	595112
190-30664-22	S43533.22	Total/NA	Solid	6020B	595114
190-30664-23	S43533.23	Total/NA	Solid	6020B	595114
190-30664-24	S43533.24	Total/NA	Solid	6020B	595114



QC Association Summary

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Metals (Continued)

Analysis Batch: 595447 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30664-25	S43533.25	Total/NA	Solid	6020B	595114
190-30664-26	S43533.26	Total/NA	Solid	6020B	595114
190-30664-27	S43533.27	Total/NA	Solid	6020B	595114
190-30664-28	S43533.28	Total/NA	Solid	6020B	595114
190-30664-29	S43533.29	Total/NA	Solid	6020B	595114
190-30664-30	S43533.30	Total/NA	Solid	6020B	595114
190-30664-31	S43533.31	Total/NA	Solid	6020B	595114
190-30664-32	S43533.32	Total/NA	Solid	6020B	595114
190-30664-33	S43533.33	Total/NA	Solid	6020B	595114
190-30664-34	S43533.34	Total/NA	Solid	6020B	595114
190-30664-35	S43533.35	Total/NA	Solid	6020B	595114
190-30664-36	S43533.36	Total/NA	Solid	6020B	595114
MB 160-595112/1-A	Method Blank	Total/NA	Solid	6020B	595112
MB 160-595114/1-A	Method Blank	Total/NA	Solid	6020B	595114
LCS 160-595112/2-A	Lab Control Sample	Total/NA	Solid	6020B	595112
LCS 160-595114/2-A	Lab Control Sample	Total/NA	Solid	6020B	595114
190-30664-3 MS	S43533.03	Total/NA	Solid	6020B	595112
190-30664-3 MSD	S43533.03	Total/NA	Solid	6020B	595112
190-30664-22 MS	S43533.22	Total/NA	Solid	6020B	595114
190-30664-22 MSD	S43533.22	Total/NA	Solid	6020B	595114

General Chemistry

Analysis Batch: 594257

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30664-3	S43533.03	Total/NA	Solid	Moisture	
190-30664-4	S43533.04	Total/NA	Solid	Moisture	
190-30664-5	S43533.05	Total/NA	Solid	Moisture	
190-30664-6	S43533.06	Total/NA	Solid	Moisture	
190-30664-7	S43533.07	Total/NA	Solid	Moisture	
190-30664-8	S43533.08	Total/NA	Solid	Moisture	
190-30664-9	S43533.09	Total/NA	Solid	Moisture	
190-30664-10	S43533.10	Total/NA	Solid	Moisture	
190-30664-11	S43533.11	Total/NA	Solid	Moisture	
190-30664-12	S43533.12	Total/NA	Solid	Moisture	
190-30664-13	S43533.13	Total/NA	Solid	Moisture	
190-30664-14	S43533.14	Total/NA	Solid	Moisture	
190-30664-15	S43533.15	Total/NA	Solid	Moisture	
190-30664-16	S43533.16	Total/NA	Solid	Moisture	
190-30664-17	S43533.17	Total/NA	Solid	Moisture	
190-30664-18	S43533.18	Total/NA	Solid	Moisture	
190-30664-19	S43533.19	Total/NA	Solid	Moisture	
190-30664-20	S43533.20	Total/NA	Solid	Moisture	
190-30664-21	S43533.21	Total/NA	Solid	Moisture	
190-30664-3 DU	S43533.03	Total/NA	Solid	Moisture	

Analysis Batch: 594371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30664-22	S43533.22	Total/NA	Solid	Moisture	
190-30664-23	S43533.23	Total/NA	Solid	Moisture	
190-30664-24	S43533.24	Total/NA	Solid	Moisture	

QC Association Summary

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

General Chemistry (Continued)

Analysis Batch: 594371 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30664-25	S43533.25	Total/NA	Solid	Moisture	
190-30664-26	S43533.26	Total/NA	Solid	Moisture	
190-30664-27	S43533.27	Total/NA	Solid	Moisture	
190-30664-28	S43533.28	Total/NA	Solid	Moisture	
190-30664-29	S43533.29	Total/NA	Solid	Moisture	
190-30664-30	S43533.30	Total/NA	Solid	Moisture	
190-30664-31	S43533.31	Total/NA	Solid	Moisture	
190-30664-32	S43533.32	Total/NA	Solid	Moisture	
190-30664-33	S43533.33	Total/NA	Solid	Moisture	
190-30664-34	S43533.34	Total/NA	Solid	Moisture	
190-30664-35	S43533.35	Total/NA	Solid	Moisture	
190-30664-36	S43533.36	Total/NA	Solid	Moisture	
190-30664-22 DU	S43533.22	Total/NA	Solid	Moisture	

Analysis Batch: 755934

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30664-15	S43533.15	Total/NA	Solid	Moisture - 2540	
190-30664-16	S43533.16	Total/NA	Solid	Moisture - 2540	
190-30664-17	S43533.17	Total/NA	Solid	Moisture - 2540	
190-30664-18	S43533.18	Total/NA	Solid	Moisture - 2540	
190-30664-19	S43533.19	Total/NA	Solid	Moisture - 2540	
190-30664-22	S43533.22	Total/NA	Solid	Moisture - 2540	
190-30664-23	S43533.23	Total/NA	Solid	Moisture - 2540	
190-30664-24	S43533.24	Total/NA	Solid	Moisture - 2540	
190-30664-25	S43533.25	Total/NA	Solid	Moisture - 2540	
190-30664-26	S43533.26	Total/NA	Solid	Moisture - 2540	
190-30664-27	S43533.27	Total/NA	Solid	Moisture - 2540	
190-30664-28	S43533.28	Total/NA	Solid	Moisture - 2540	
190-30664-29	S43533.29	Total/NA	Solid	Moisture - 2540	
190-30664-30	S43533.30	Total/NA	Solid	Moisture - 2540	
190-30664-31	S43533.31	Total/NA	Solid	Moisture - 2540	
190-30664-32	S43533.32	Total/NA	Solid	Moisture - 2540	
190-30664-33	S43533.33	Total/NA	Solid	Moisture - 2540	
190-30664-34	S43533.34	Total/NA	Solid	Moisture - 2540	
190-30664-35	S43533.35	Total/NA	Solid	Moisture - 2540	
190-30664-36	S43533.36	Total/NA	Solid	Moisture - 2540	
MB 680-755934/1	Method Blank	Total/NA	Solid	Moisture - 2540	
190-30664-31 DU	S43533.31	Total/NA	Solid	Moisture - 2540	
190-30664-36 DU	S43533.36	Total/NA	Solid	Moisture - 2540	

Analysis Batch: 755944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30664-3	S43533.03	Total/NA	Solid	Moisture - 2540	
190-30664-4	S43533.04	Total/NA	Solid	Moisture - 2540	
190-30664-5	S43533.05	Total/NA	Solid	Moisture - 2540	
190-30664-6	S43533.06	Total/NA	Solid	Moisture - 2540	
190-30664-7	S43533.07	Total/NA	Solid	Moisture - 2540	
190-30664-8	S43533.08	Total/NA	Solid	Moisture - 2540	
190-30664-9	S43533.09	Total/NA	Solid	Moisture - 2540	
190-30664-10	S43533.10	Total/NA	Solid	Moisture - 2540	
190-30664-11	S43533.11	Total/NA	Solid	Moisture - 2540	

QC Association Summary

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

General Chemistry (Continued)

Analysis Batch: 755944 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30664-12	S43533.12	Total/NA	Solid	Moisture - 2540	
190-30664-13	S43533.13	Total/NA	Solid	Moisture - 2540	
190-30664-14	S43533.14	Total/NA	Solid	Moisture - 2540	
190-30664-20	S43533.20	Total/NA	Solid	Moisture - 2540	
190-30664-21	S43533.21	Total/NA	Solid	Moisture - 2540	
MB 680-755944/1	Method Blank	Total/NA	Solid	Moisture - 2540	
190-30664-6 DU	S43533.06	Total/NA	Solid	Moisture - 2540	
190-30664-20 DU	S43533.20	Total/NA	Solid	Moisture - 2540	

Geotechnical

Analysis Batch: 654441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30664-3	S43533.03	Total/NA	Solid	D2216-90	
190-30664-4	S43533.04	Total/NA	Solid	D2216-90	
190-30664-5	S43533.05	Total/NA	Solid	D2216-90	
190-30664-6	S43533.06	Total/NA	Solid	D2216-90	
190-30664-7	S43533.07	Total/NA	Solid	D2216-90	
190-30664-8	S43533.08	Total/NA	Solid	D2216-90	
190-30664-9	S43533.09	Total/NA	Solid	D2216-90	
190-30664-10	S43533.10	Total/NA	Solid	D2216-90	

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.03

Lab Sample ID: 190-30664-3

Date Collected: 12/14/22 10:40

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594257	JML	EET SL	12/20/22 09:26
Total/NA	Analysis	Moisture - 2540		1	755944	PG	EET SAV	12/19/22 15:28
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 15:28

Client Sample ID: S43533.03

Lab Sample ID: 190-30664-3

Date Collected: 12/14/22 10:40

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 88.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			654152	MLK	EET BUF	12/21/22 08:15
Total/NA	Analysis	8270D		1	654322	JMM	EET BUF	12/22/22 15:11
Total/NA	Prep	3050B			595112	LKP	EET SL	12/30/22 09:03
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 16:23

Client Sample ID: S43533.03

Lab Sample ID: 190-30664-3

Date Collected: 12/14/22 10:40

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 96.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755657	GEM	EET SAV	12/17/22 17:53
Soluble	Analysis	8015C		1	755896	JCK	EET SAV	12/19/22 21:03

Client Sample ID: S43533.04

Lab Sample ID: 190-30664-4

Date Collected: 12/14/22 11:00

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594257	JML	EET SL	12/20/22 09:26
Total/NA	Analysis	Moisture - 2540		1	755944	PG	EET SAV	12/19/22 15:28
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 15:28

Client Sample ID: S43533.04

Lab Sample ID: 190-30664-4

Date Collected: 12/14/22 11:00

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 93.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			654152	MLK	EET BUF	12/21/22 08:15
Total/NA	Analysis	8270D		1	654322	JMM	EET BUF	12/22/22 15:35
Total/NA	Prep	3050B			595112	LKP	EET SL	12/30/22 09:03
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 16:51

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.04

Lab Sample ID: 190-30664-4

Date Collected: 12/14/22 11:00

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 95.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755657	GEM	EET SAV	12/17/22 17:53
Soluble	Analysis	8015C		1	755896	JCK	EET SAV	12/19/22 21:24

Client Sample ID: S43533.05

Lab Sample ID: 190-30664-5

Date Collected: 12/14/22 11:30

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594257	JML	EET SL	12/20/22 09:26
Total/NA	Analysis	Moisture - 2540		1	755944	PG	EET SAV	12/19/22 15:28
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 15:28

Client Sample ID: S43533.05

Lab Sample ID: 190-30664-5

Date Collected: 12/14/22 11:30

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 76.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			654152	MLK	EET BUF	12/21/22 08:15
Total/NA	Analysis	8270D		1	654322	JMM	EET BUF	12/22/22 15:59
Total/NA	Prep	3050B			595112	LKP	EET SL	12/30/22 09:03
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 16:54

Client Sample ID: S43533.05

Lab Sample ID: 190-30664-5

Date Collected: 12/14/22 11:30

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 94.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755657	GEM	EET SAV	12/17/22 17:53
Soluble	Analysis	8015C		1	755896	JCK	EET SAV	12/19/22 21:45

Client Sample ID: S43533.06

Lab Sample ID: 190-30664-6

Date Collected: 12/14/22 11:50

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594257	JML	EET SL	12/20/22 09:26
Total/NA	Analysis	Moisture - 2540		1	755944	PG	EET SAV	12/19/22 15:28
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 15:28

Client Sample ID: S43533.06

Lab Sample ID: 190-30664-6

Date Collected: 12/14/22 11:50

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 85.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			654152	MLK	EET BUF	12/21/22 08:15
Total/NA	Analysis	8270D		1	654322	JMM	EET BUF	12/22/22 16:23

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Lab Chronicle

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.06

Lab Sample ID: 190-30664-6

Date Collected: 12/14/22 11:50

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 85.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595112	LKP	EET SL	12/30/22 09:03
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 16:58

Client Sample ID: S43533.06

Lab Sample ID: 190-30664-6

Date Collected: 12/14/22 11:50

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 90.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755657	GEM	EET SAV	12/17/22 17:53
Soluble	Analysis	8015C		1	755896	JCK	EET SAV	12/19/22 22:06

Client Sample ID: S43533.07

Lab Sample ID: 190-30664-7

Date Collected: 12/14/22 12:50

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594257	JML	EET SL	12/20/22 09:26
Total/NA	Analysis	Moisture - 2540		1	755944	PG	EET SAV	12/19/22 15:28
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 15:28

Client Sample ID: S43533.07

Lab Sample ID: 190-30664-7

Date Collected: 12/14/22 12:50

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 84.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			654152	MLK	EET BUF	12/21/22 08:15
Total/NA	Analysis	8270D		1	654322	JMM	EET BUF	12/22/22 16:48
Total/NA	Prep	3050B			595112	LKP	EET SL	12/30/22 09:03
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 17:01

Client Sample ID: S43533.07

Lab Sample ID: 190-30664-7

Date Collected: 12/14/22 12:50

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 91.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755692	GEM	EET SAV	12/17/22 17:55
Soluble	Analysis	8015C		1	756095	JCK	EET SAV	12/20/22 14:50

Client Sample ID: S43533.08

Lab Sample ID: 190-30664-8

Date Collected: 12/14/22 13:00

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594257	JML	EET SL	12/20/22 09:26
Total/NA	Analysis	Moisture - 2540		1	755944	PG	EET SAV	12/19/22 15:28
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 15:28

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Lab Chronicle

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.08

Lab Sample ID: 190-30664-8

Date Collected: 12/14/22 13:00

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 75.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			654152	MLK	EET BUF	12/21/22 08:15
Total/NA	Analysis	8270D		1	654322	JMM	EET BUF	12/22/22 17:12
Total/NA	Prep	3050B			595112	LKP	EET SL	12/30/22 09:03
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 17:05

Client Sample ID: S43533.08

Lab Sample ID: 190-30664-8

Date Collected: 12/14/22 13:00

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 92.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755692	GEM	EET SAV	12/17/22 17:55
Soluble	Analysis	8015C		1	756095	JCK	EET SAV	12/20/22 15:11

Client Sample ID: S43533.09

Lab Sample ID: 190-30664-9

Date Collected: 12/14/22 13:30

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594257	JML	EET SL	12/20/22 09:26
Total/NA	Analysis	Moisture - 2540		1	755944	PG	EET SAV	12/19/22 15:28
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 15:28

Client Sample ID: S43533.09

Lab Sample ID: 190-30664-9

Date Collected: 12/14/22 13:30

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 83.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			654152	MLK	EET BUF	12/21/22 08:15
Total/NA	Analysis	8270D		1	654322	JMM	EET BUF	12/22/22 17:37
Total/NA	Prep	3050B			595112	LKP	EET SL	12/30/22 09:03
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 17:08

Client Sample ID: S43533.09

Lab Sample ID: 190-30664-9

Date Collected: 12/14/22 13:30

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 89.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755692	GEM	EET SAV	12/17/22 17:55
Soluble	Analysis	8015C		1	756095	JCK	EET SAV	12/20/22 15:32

Client Sample ID: S43533.10

Lab Sample ID: 190-30664-10

Date Collected: 12/14/22 13:40

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594257	JML	EET SL	12/20/22 09:26

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Lab Chronicle

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.10

Lab Sample ID: 190-30664-10

Date Collected: 12/14/22 13:40

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture - 2540		1	755944	PG	EET SAV	12/19/22 15:28
Total/NA	Analysis	D2216-90		1	654441	DLG	EET BUF	12/19/22 15:28

Client Sample ID: S43533.10

Lab Sample ID: 190-30664-10

Date Collected: 12/14/22 13:40

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 76.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3550C			654152	MLK	EET BUF	12/21/22 08:15
Total/NA	Analysis	8270D		1	654322	JMM	EET BUF	12/22/22 18:01
Total/NA	Prep	3050B			595112	LKP	EET SL	12/30/22 09:03
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 17:11

Client Sample ID: S43533.10

Lab Sample ID: 190-30664-10

Date Collected: 12/14/22 13:40

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 96.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755692	GEM	EET SAV	12/17/22 17:55
Soluble	Analysis	8015C		1	756095	JCK	EET SAV	12/20/22 15:53

Client Sample ID: S43533.11

Lab Sample ID: 190-30664-11

Date Collected: 12/14/22 15:50

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594257	JML	EET SL	12/20/22 09:26
Total/NA	Analysis	Moisture - 2540		1	755944	PG	EET SAV	12/19/22 15:28

Client Sample ID: S43533.11

Lab Sample ID: 190-30664-11

Date Collected: 12/14/22 15:50

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 92.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755692	GEM	EET SAV	12/17/22 17:55
Soluble	Analysis	8015C		1	756095	JCK	EET SAV	12/20/22 16:14

Client Sample ID: S43533.11

Lab Sample ID: 190-30664-11

Date Collected: 12/14/22 15:50

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 93.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595112	LKP	EET SL	12/30/22 09:03
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 17:15

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Lab Chronicle

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.12

Lab Sample ID: 190-30664-12

Date Collected: 12/14/22 16:00

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594257	JML	EET SL	12/20/22 09:26
Total/NA	Analysis	Moisture - 2540		1	755944	PG	EET SAV	12/19/22 15:28

Client Sample ID: S43533.12

Lab Sample ID: 190-30664-12

Date Collected: 12/14/22 16:00

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 89.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595112	LKP	EET SL	12/30/22 09:03
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 17:18

Client Sample ID: S43533.12

Lab Sample ID: 190-30664-12

Date Collected: 12/14/22 16:00

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 94.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755692	GEM	EET SAV	12/17/22 17:55
Soluble	Analysis	8015C		1	756095	JCK	EET SAV	12/20/22 16:35

Client Sample ID: S43533.13

Lab Sample ID: 190-30664-13

Date Collected: 12/14/22 09:37

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594257	JML	EET SL	12/20/22 09:26
Total/NA	Analysis	Moisture - 2540		1	755944	PG	EET SAV	12/19/22 15:28

Client Sample ID: S43533.13

Lab Sample ID: 190-30664-13

Date Collected: 12/14/22 09:37

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 97.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755692	GEM	EET SAV	12/17/22 17:55
Soluble	Analysis	8015C		1	756095	JCK	EET SAV	12/20/22 16:56
Total/NA	Prep	3050B			595112	LKP	EET SL	12/30/22 09:03
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 17:22

Client Sample ID: S43533.14

Lab Sample ID: 190-30664-14

Date Collected: 12/14/22 09:47

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594257	JML	EET SL	12/20/22 09:26
Total/NA	Analysis	Moisture - 2540		1	755944	PG	EET SAV	12/19/22 15:28

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.14

Lab Sample ID: 190-30664-14

Date Collected: 12/14/22 09:47

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 75.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595112	LKP	EET SL	12/30/22 09:03
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 17:35

Client Sample ID: S43533.14

Lab Sample ID: 190-30664-14

Date Collected: 12/14/22 09:47

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 95.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755692	GEM	EET SAV	12/17/22 17:55
Soluble	Analysis	8015C		1	756095	JCK	EET SAV	12/20/22 17:17

Client Sample ID: S43533.15

Lab Sample ID: 190-30664-15

Date Collected: 12/14/22 09:55

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594257	JML	EET SL	12/20/22 09:26
Total/NA	Analysis	Moisture - 2540		1	755934	PG	EET SAV	12/19/22 14:56

Client Sample ID: S43533.15

Lab Sample ID: 190-30664-15

Date Collected: 12/14/22 09:55

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 96.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755692	GEM	EET SAV	12/17/22 17:55
Soluble	Analysis	8015C		1	756095	JCK	EET SAV	12/20/22 17:38
Total/NA	Prep	3050B			595112	LKP	EET SL	12/30/22 09:03
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 17:39

Client Sample ID: S43533.16

Lab Sample ID: 190-30664-16

Date Collected: 12/14/22 09:55

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594257	JML	EET SL	12/20/22 09:26
Total/NA	Analysis	Moisture - 2540		1	755934	PG	EET SAV	12/19/22 14:56

Client Sample ID: S43533.16

Lab Sample ID: 190-30664-16

Date Collected: 12/14/22 09:55

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 94.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595112	LKP	EET SL	12/30/22 09:03
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 17:42

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.16

Lab Sample ID: 190-30664-16

Date Collected: 12/14/22 09:55

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 96.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755692	GEM	EET SAV	12/17/22 17:55
Soluble	Analysis	8015C		1	756095	JCK	EET SAV	12/20/22 17:59

Client Sample ID: S43533.17

Lab Sample ID: 190-30664-17

Date Collected: 12/14/22 10:12

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594257	JML	EET SL	12/20/22 09:26
Total/NA	Analysis	Moisture - 2540		1	755934	PG	EET SAV	12/19/22 14:56

Client Sample ID: S43533.17

Lab Sample ID: 190-30664-17

Date Collected: 12/14/22 10:12

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 84.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755692	GEM	EET SAV	12/17/22 17:55
Soluble	Analysis	8015C		1	756095	JCK	EET SAV	12/20/22 18:20

Client Sample ID: S43533.17

Lab Sample ID: 190-30664-17

Date Collected: 12/14/22 10:12

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 84.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595112	LKP	EET SL	12/30/22 09:03
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 17:46

Client Sample ID: S43533.18

Lab Sample ID: 190-30664-18

Date Collected: 12/14/22 00:01

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594257	JML	EET SL	12/20/22 09:26
Total/NA	Analysis	Moisture - 2540		1	755934	PG	EET SAV	12/19/22 14:56

Client Sample ID: S43533.18

Lab Sample ID: 190-30664-18

Date Collected: 12/14/22 00:01

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 97.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755692	GEM	EET SAV	12/17/22 17:55
Soluble	Analysis	8015C		1	756095	JCK	EET SAV	12/20/22 18:41

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.18

Lab Sample ID: 190-30664-18

Date Collected: 12/14/22 00:01

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 97.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595112	LKP	EET SL	12/30/22 09:03
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 17:49

Client Sample ID: S43533.19

Lab Sample ID: 190-30664-19

Date Collected: 12/14/22 10:55

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594257	JML	EET SL	12/20/22 09:26
Total/NA	Analysis	Moisture - 2540		1	755934	PG	EET SAV	12/19/22 14:56

Client Sample ID: S43533.19

Lab Sample ID: 190-30664-19

Date Collected: 12/14/22 10:55

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 77.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595112	LKP	EET SL	12/30/22 09:03
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 17:53

Client Sample ID: S43533.19

Lab Sample ID: 190-30664-19

Date Collected: 12/14/22 10:55

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 93.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755692	GEM	EET SAV	12/17/22 17:55
Soluble	Analysis	8015C		1	756095	JCK	EET SAV	12/20/22 19:02

Client Sample ID: S43533.20

Lab Sample ID: 190-30664-20

Date Collected: 12/14/22 11:08

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594257	JML	EET SL	12/20/22 09:26
Total/NA	Analysis	Moisture - 2540		1	755944	PG	EET SAV	12/19/22 15:28

Client Sample ID: S43533.20

Lab Sample ID: 190-30664-20

Date Collected: 12/14/22 11:08

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 76.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595112	LKP	EET SL	12/30/22 09:03
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 17:56

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.20

Lab Sample ID: 190-30664-20

Date Collected: 12/14/22 11:08

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 95.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755692	GEM	EET SAV	12/17/22 17:55
Soluble	Analysis	8015C		1	756095	JCK	EET SAV	12/20/22 19:23

Client Sample ID: S43533.21

Lab Sample ID: 190-30664-21

Date Collected: 12/14/22 11:15

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594257	JML	EET SL	12/20/22 09:26
Total/NA	Analysis	Moisture - 2540		1	755944	PG	EET SAV	12/19/22 15:28

Client Sample ID: S43533.21

Lab Sample ID: 190-30664-21

Date Collected: 12/14/22 11:15

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 75.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595112	LKP	EET SL	12/30/22 09:03
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 17:59

Client Sample ID: S43533.21

Lab Sample ID: 190-30664-21

Date Collected: 12/14/22 11:15

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 93.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755692	GEM	EET SAV	12/17/22 17:55
Soluble	Analysis	8015C		1	756095	JCK	EET SAV	12/20/22 19:44

Client Sample ID: S43533.22

Lab Sample ID: 190-30664-22

Date Collected: 12/14/22 11:15

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594371	JML	EET SL	12/20/22 10:49
Total/NA	Analysis	Moisture - 2540		1	755934	PG	EET SAV	12/19/22 14:56

Client Sample ID: S43533.22

Lab Sample ID: 190-30664-22

Date Collected: 12/14/22 11:15

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 86.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595114	LKP	EET SL	12/30/22 09:08
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 18:20

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.22

Lab Sample ID: 190-30664-22

Date Collected: 12/14/22 11:15

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 93.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755692	GEM	EET SAV	12/17/22 17:55
Soluble	Analysis	8015C		1	756095	JCK	EET SAV	12/20/22 20:05

Client Sample ID: S43533.23

Lab Sample ID: 190-30664-23

Date Collected: 12/14/22 11:36

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594371	JML	EET SL	12/20/22 10:50
Total/NA	Analysis	Moisture - 2540		1	755934	PG	EET SAV	12/19/22 14:56

Client Sample ID: S43533.23

Lab Sample ID: 190-30664-23

Date Collected: 12/14/22 11:36

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 85.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755692	GEM	EET SAV	12/17/22 17:55
Soluble	Analysis	8015C		1	756095	JCK	EET SAV	12/20/22 20:26

Client Sample ID: S43533.23

Lab Sample ID: 190-30664-23

Date Collected: 12/14/22 11:36

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 87.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595114	LKP	EET SL	12/30/22 09:08
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 18:37

Client Sample ID: S43533.24

Lab Sample ID: 190-30664-24

Date Collected: 12/14/22 00:01

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594371	JML	EET SL	12/20/22 10:50
Total/NA	Analysis	Moisture - 2540		1	755934	PG	EET SAV	12/19/22 14:56

Client Sample ID: S43533.24

Lab Sample ID: 190-30664-24

Date Collected: 12/14/22 00:01

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 78.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595114	LKP	EET SL	12/30/22 09:08
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 18:41

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.24

Lab Sample ID: 190-30664-24

Date Collected: 12/14/22 00:01

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 93.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755692	GEM	EET SAV	12/17/22 17:55
Soluble	Analysis	8015C		1	756095	JCK	EET SAV	12/20/22 20:47

Client Sample ID: S43533.25

Lab Sample ID: 190-30664-25

Date Collected: 12/14/22 12:46

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594371	JML	EET SL	12/20/22 10:50
Total/NA	Analysis	Moisture - 2540		1	755934	PG	EET SAV	12/19/22 14:56

Client Sample ID: S43533.25

Lab Sample ID: 190-30664-25

Date Collected: 12/14/22 12:46

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 93.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755692	GEM	EET SAV	12/17/22 17:55
Soluble	Analysis	8015C		1	756095	JCK	EET SAV	12/20/22 21:08

Client Sample ID: S43533.25

Lab Sample ID: 190-30664-25

Date Collected: 12/14/22 12:46

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 93.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595114	LKP	EET SL	12/30/22 09:08
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 18:44

Client Sample ID: S43533.26

Lab Sample ID: 190-30664-26

Date Collected: 12/14/22 12:55

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594371	JML	EET SL	12/20/22 10:50
Total/NA	Analysis	Moisture - 2540		1	755934	PG	EET SAV	12/19/22 14:56

Client Sample ID: S43533.26

Lab Sample ID: 190-30664-26

Date Collected: 12/14/22 12:55

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 91.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595114	LKP	EET SL	12/30/22 09:08
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 18:47

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.26

Lab Sample ID: 190-30664-26

Date Collected: 12/14/22 12:55

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 93.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755692	GEM	EET SAV	12/17/22 17:55
Soluble	Analysis	8015C		1	756095	JCK	EET SAV	12/20/22 21:28

Client Sample ID: S43533.27

Lab Sample ID: 190-30664-27

Date Collected: 12/14/22 13:02

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594371	JML	EET SL	12/20/22 10:50
Total/NA	Analysis	Moisture - 2540		1	755934	PG	EET SAV	12/19/22 14:56

Client Sample ID: S43533.27

Lab Sample ID: 190-30664-27

Date Collected: 12/14/22 13:02

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 94.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755693	GEM	EET SAV	12/17/22 18:00
Soluble	Analysis	8015C		1	756436	JCK	EET SAV	12/21/22 23:32

Client Sample ID: S43533.27

Lab Sample ID: 190-30664-27

Date Collected: 12/14/22 13:02

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 94.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595114	LKP	EET SL	12/30/22 09:08
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 18:51

Client Sample ID: S43533.28

Lab Sample ID: 190-30664-28

Date Collected: 12/14/22 13:02

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594371	JML	EET SL	12/20/22 10:50
Total/NA	Analysis	Moisture - 2540		1	755934	PG	EET SAV	12/19/22 14:56

Client Sample ID: S43533.28

Lab Sample ID: 190-30664-28

Date Collected: 12/14/22 13:02

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 76.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595114	LKP	EET SL	12/30/22 09:08
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 19:05

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.28

Lab Sample ID: 190-30664-28

Date Collected: 12/14/22 13:02

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 93.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755693	GEM	EET SAV	12/17/22 18:00
Soluble	Analysis	8015C		1	756436	JCK	EET SAV	12/21/22 23:53

Client Sample ID: S43533.29

Lab Sample ID: 190-30664-29

Date Collected: 12/14/22 13:27

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594371	JML	EET SL	12/20/22 10:50
Total/NA	Analysis	Moisture - 2540		1	755934	PG	EET SAV	12/19/22 14:56

Client Sample ID: S43533.29

Lab Sample ID: 190-30664-29

Date Collected: 12/14/22 13:27

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 82.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755693	GEM	EET SAV	12/17/22 18:00
Soluble	Analysis	8015C		1	756436	JCK	EET SAV	12/22/22 00:14

Client Sample ID: S43533.29

Lab Sample ID: 190-30664-29

Date Collected: 12/14/22 13:27

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 85.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595114	LKP	EET SL	12/30/22 09:08
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 19:08

Client Sample ID: S43533.30

Lab Sample ID: 190-30664-30

Date Collected: 12/14/22 00:01

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594371	JML	EET SL	12/20/22 10:50
Total/NA	Analysis	Moisture - 2540		1	755934	PG	EET SAV	12/19/22 14:56

Client Sample ID: S43533.30

Lab Sample ID: 190-30664-30

Date Collected: 12/14/22 00:01

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 93.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755693	GEM	EET SAV	12/17/22 18:00
Soluble	Analysis	8015C		1	756436	JCK	EET SAV	12/22/22 00:35

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.30

Lab Sample ID: 190-30664-30

Date Collected: 12/14/22 00:01

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 94.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595114	LKP	EET SL	12/30/22 09:08
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 19:11

Client Sample ID: S43533.31

Lab Sample ID: 190-30664-31

Date Collected: 12/14/22 14:22

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594371	JML	EET SL	12/20/22 10:50
Total/NA	Analysis	Moisture - 2540		1	755934	PG	EET SAV	12/19/22 14:56

Client Sample ID: S43533.31

Lab Sample ID: 190-30664-31

Date Collected: 12/14/22 14:22

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 95.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595114	LKP	EET SL	12/30/22 09:08
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 19:15

Client Sample ID: S43533.31

Lab Sample ID: 190-30664-31

Date Collected: 12/14/22 14:22

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 96.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755693	GEM	EET SAV	12/17/22 18:00
Soluble	Analysis	8015C		1	756436	JCK	EET SAV	12/22/22 00:56

Client Sample ID: S43533.32

Lab Sample ID: 190-30664-32

Date Collected: 12/14/22 14:35

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594371	JML	EET SL	12/20/22 10:50
Total/NA	Analysis	Moisture - 2540		1	755934	PG	EET SAV	12/19/22 14:56

Client Sample ID: S43533.32

Lab Sample ID: 190-30664-32

Date Collected: 12/14/22 14:35

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 75.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595114	LKP	EET SL	12/30/22 09:08
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 19:18

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.32

Lab Sample ID: 190-30664-32

Date Collected: 12/14/22 14:35

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 96.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755693	GEM	EET SAV	12/17/22 18:00
Soluble	Analysis	8015C		1	756436	JCK	EET SAV	12/22/22 01:17

Client Sample ID: S43533.33

Lab Sample ID: 190-30664-33

Date Collected: 12/14/22 14:40

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594371	JML	EET SL	12/20/22 10:50
Total/NA	Analysis	Moisture - 2540		1	755934	PG	EET SAV	12/19/22 14:56

Client Sample ID: S43533.33

Lab Sample ID: 190-30664-33

Date Collected: 12/14/22 14:40

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 91.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755693	GEM	EET SAV	12/17/22 18:00
Soluble	Analysis	8015C		1	756436	JCK	EET SAV	12/22/22 01:38

Client Sample ID: S43533.33

Lab Sample ID: 190-30664-33

Date Collected: 12/14/22 14:40

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 97.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595114	LKP	EET SL	12/30/22 09:08
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 19:22

Client Sample ID: S43533.34

Lab Sample ID: 190-30664-34

Date Collected: 12/14/22 14:40

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594371	JML	EET SL	12/20/22 10:50
Total/NA	Analysis	Moisture - 2540		1	755934	PG	EET SAV	12/19/22 14:56

Client Sample ID: S43533.34

Lab Sample ID: 190-30664-34

Date Collected: 12/14/22 14:40

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 96.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595114	LKP	EET SL	12/30/22 09:08
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 19:25

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.34

Lab Sample ID: 190-30664-34

Date Collected: 12/14/22 14:40

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 96.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755693	GEM	EET SAV	12/17/22 18:00
Soluble	Analysis	8015C		1	756436	JCK	EET SAV	12/22/22 01:59

Client Sample ID: S43533.35

Lab Sample ID: 190-30664-35

Date Collected: 12/14/22 14:52

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594371	JML	EET SL	12/20/22 10:50
Total/NA	Analysis	Moisture - 2540		1	755934	PG	EET SAV	12/19/22 14:56

Client Sample ID: S43533.35

Lab Sample ID: 190-30664-35

Date Collected: 12/14/22 14:52

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 86.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595114	LKP	EET SL	12/30/22 09:08
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 19:29

Client Sample ID: S43533.35

Lab Sample ID: 190-30664-35

Date Collected: 12/14/22 14:52

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 89.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755693	GEM	EET SAV	12/17/22 18:00
Soluble	Analysis	8015C		1	756436	JCK	EET SAV	12/22/22 02:20

Client Sample ID: S43533.36

Lab Sample ID: 190-30664-36

Date Collected: 12/14/22 00:01

Matrix: Solid

Date Received: 12/16/22 13:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594371	JML	EET SL	12/20/22 10:50
Total/NA	Analysis	Moisture - 2540		1	755934	PG	EET SAV	12/19/22 14:56

Client Sample ID: S43533.36

Lab Sample ID: 190-30664-36

Date Collected: 12/14/22 00:01

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 94.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595114	LKP	EET SL	12/30/22 09:08
Total/NA	Analysis	6020B		2	595447	CGB	EET SL	01/03/23 19:32

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Client Sample ID: S43533.36

Lab Sample ID: 190-30664-36

Date Collected: 12/14/22 00:01

Matrix: Solid

Date Received: 12/16/22 13:52

Percent Solids: 95.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			755693	GEM	EET SAV	12/17/22 18:00
Soluble	Analysis	8015C		1	756436	JCK	EET SAV	12/22/22 02:41

Laboratory References:

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Analyst References:

Lab: EET BUF

Batch Type: Prep

MLK = Marissa Kordal

Batch Type: Analysis

DLG = Denise Giglia

JMM = Joseph Marshall

Lab: EET SAV

Batch Type: Leach

GEM = Griffin Meincke

Batch Type: Analysis

JCK = Joshua Kellar

PG = Patrick Gardner

Lab: EET SL

Batch Type: Prep

LKP = Laura Pemberton

Batch Type: Analysis

CGB = Cory Buffington

JML = Jessica LaDuron

Accreditation/Certification Summary

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Laboratory: Eurofins Buffalo

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-0686	07-06-22 *
Connecticut	State	PH-0568	03-31-24
Florida	NELAP	E87672	06-30-23
Georgia	State	10026 (NY)	04-01-23
Georgia	State Program	N/A	03-31-09 *
Georgia (DW)	State	956	03-31-23
Illinois	NELAP	200003	09-30-23
Iowa	State	374	03-01-23
Iowa	State Program	374	03-01-09 *
Kansas	NELAP	E-10187	01-31-23
Kentucky (DW)	State	90029	12-31-22
Kentucky (UST)	State	30	04-01-23
Kentucky (WW)	State	KY90029	12-31-22
Louisiana	NELAP	02031	06-30-23
Louisiana (All)	NELAP	02031	06-30-23
Maine	State	NY00044	12-04-22 *
Maryland	State	294	03-31-23
Massachusetts	State	M-NY044	06-30-23
Michigan	State	9937	03-31-23
Michigan	State Program	9937	04-01-09 *
New Hampshire	NELAP	2973	09-11-19 *
New Hampshire	NELAP	2337	11-17-22 *
New Jersey	NELAP	NY455	06-30-23
New York	NELAP	10026	03-31-23
Pennsylvania	NELAP	68-00281	07-31-23
Rhode Island	State	LAO00328	12-30-22
Tennessee	State	02970	04-01-23
Texas	NELAP	T104704412-18-10	07-31-23
USDA	US Federal Programs	P330-18-00039	03-25-24
Virginia	NELAP	460185	09-14-23
Washington	State	C784	02-10-23
Wisconsin	State	998310390	08-31-23

Laboratory: Eurofins Savannah

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	SAVLAB	
Alabama	State	41450	06-30-23
ANAB	Dept. of Defense ELAP	L2463	09-22-24
Arkansas DEQ	State	19-015-0	02-01-23
California	State	2939	06-30-22 *
Connecticut	State	PH-0161	03-31-23
Florida	NELAP	E87052	06-23-23
Georgia	State	E87052	06-30-23
Georgia (DW)	State	803	06-30-23
Guam	State	19-007R	04-17-23
Hawaii	State	<cert No.>	06-30-23
Illinois	NELAP	200022	11-30-22 *
Indiana	State	C-GA-02	06-30-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Michigan

Accreditation/Certification Summary

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Laboratory: Eurofins Savannah (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Iowa	State	353	07-01-23
Kentucky (UST)	State	NA	06-30-23
Louisiana	NELAP	30690	06-30-23
Louisiana (All)	NELAP	30690	06-30-23
Louisiana (DW)	State	LA009	12-31-22
Maine	State	GA00006	12-27-22
Maryland	State	250	12-31-23
Massachusetts	State	M-GA006	07-30-23
Michigan	State	9925	06-30-23
Mississippi	State	<cert No.>	06-30-23
Nebraska	State	NE-OS-7-04	06-30-23
New Jersey	NELAP	GA769	06-30-23
New Mexico	State	GA00006	06-30-23
New York	NELAP	10842	04-01-23
North Carolina (DW)	State	13701	07-31-23
North Carolina (WW/SW)	State	269	12-31-22
Pennsylvania	NELAP	68-00474	06-30-23
Puerto Rico	State	GA00006	12-30-22
South Carolina	State	98001	06-30-23
Tennessee	State	TN02961	06-30-23
Texas	NELAP	T1047004185-19-14	11-30-23
Texas	TCEQ Water Supply	T104704185	06-30-23
USDA	US Federal Programs	P330-18-00313	09-03-24
Virginia	NELAP	460161	06-14-23
Wisconsin	State	999819810	08-31-23
Wyoming	State	8TMS-L	06-30-23

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-23
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-23
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-23
HI - RadChem Recognition	State	n/a	06-30-23
Illinois	NELAP	200023	11-30-23
Iowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-23
Kentucky (DW)	State	KY90125	12-31-22 *
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-23
Louisiana (All)	NELAP	04080	06-30-23
Louisiana (DW)	State	LA011	12-31-23
Maryland	State	310	09-30-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Michigan

Accreditation/Certification Summary

Client: Merit Laboratories
 Project/Site: S43533

Job ID: 190-30664-1

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
MI - RadChem Recognition	State	9005	06-30-23
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-23
New Jersey	NELAP	MO002	06-30-23
New York	NELAP	11616	04-01-23
North Dakota	State	R-207	06-30-23
Oklahoma	NELAP	9997	08-31-23
Oregon	NELAP	4157	09-01-23
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-23
Texas	NELAP	T104704193	07-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-24
Washington	State	C592	08-30-23
West Virginia DEP	State	381	12-31-22 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.



Method Summary

Client: Merit Laboratories
Project/Site: S43533

Job ID: 190-30664-1

Method	Method Description	Protocol	Laboratory
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	EET BUF
8015C	Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)	SW846	EET SAV
6020B	Metals (ICP/MS)	SW846	EET SL
Moisture	Percent Moisture	EPA	EET SL
Moisture - 2540	Percent Moisture	SM	EET SAV
D2216-90	Water (Moisture) Content	ASTM	EET BUF
3050B	Preparation, Metals	SW846	EET SL
3550C	Ultrasonic Extraction	SW846	EET BUF
DI Leach	Deionized Water Leaching Procedure	ASTM	EET SAV

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Environment Testing
TestAmerica

- SDS or Known Hazard Information Supplied by Client
 - Discrepancies
 - Short Hold
 - Rush 24 Hr 2-Day 3-Day 5-Day Other: _____
- Client ID: Merit
Work Order #: 30664
Receipt Evaluation Performed by: Initials: JH Date: 12/16/22 Time: 1433

Cooler / Sample Receipt

After hours receipt: complete gray areas. Place cooler in walk-in, place form in Receiving box. Date: _____ Time: _____

Method of Shipment:

Walk-In Client Eurofins TA Field/Courier
 Other Client / 3rd Party Courier: _____
 Fed Ex Tracking #: _____
 UPS Tracking #: _____
 Other: _____

Shipping Container Type:

Cooler Box
 None Other: _____

Packing Materials:

Plastic Bags Foam
 Bubble Wrap Paper
 Packing Peanuts None
 Other: _____

Custody Seals Intact:

Yes No
 NA (not used or required)

Cooling Materials:

Ice (Solid) Ice (Melted)
 Blue Ice None
 Other: _____

Bacteriological Samples	Temp Corrected (°C)	Frozen?		Rec'd Within 2 Hrs?		Sample Flagged?	
		Yes	No	Yes	No	Yes	No

Received on same day sampled? Yes No

Additional Sheets Required? Yes No

Receipt Temperatures

Thermometer ID	Observed (°C)	Corrected (°C)	Temp Blank	Sample Temp	Acceptable	Cooler ID	Affected Samples
<u>CP313207</u>	<u>10.5</u>	<u>10.5</u>		<u>X</u>	<u>X</u> Y <u>—</u> N		
					— Y <u>—</u> N		
					— Y <u>—</u> N		

Receipt Questions**	Y	N	NA	"No" answers require additional comment
CoC present and ETA receipt signature, date, and time properly documented?	<input checked="" type="checkbox"/>			
Containers and Labels in good condition? (unbroken, not leaking, appropriately filled, labels legible & attached)	<input checked="" type="checkbox"/>			
Appropriate containers used and adequate volume provided?	<input checked="" type="checkbox"/>			Preserved bottles checked for pH? Yes No
Number of sample containers match CoC?	<input checked="" type="checkbox"/>			pH strip lot # _____
Samples received within hold?	<input checked="" type="checkbox"/>			
Samples submitted for GRO and Volatiles analysis (8260, 624, 524) received without headspace?	<input checked="" type="checkbox"/>			
Was a Trip Blank received with VOA samples?			<input checked="" type="checkbox"/>	
Were the samples free of any questionable physical conformities? (i.e.: field duplicates or multiple bottles of the same sample do not significantly vary in appearance - color, solid proportions, etc.)	<input checked="" type="checkbox"/>			
Were the CoC bottle labels and all other items free of all other discrepancies or issues that would need to be addressed with the Project Manager and/or Client?	<input checked="" type="checkbox"/>			
**May not be applicable if samples are not for compliance testing				*Excludes FOG, VOAs, TOC Vials, HEM

Client Contact Record

Contact Via: Phone Email Other: _____ Person Contacted: _____ Date/Time: _____
 Discrepancy allowance agreement is on record in the client project file

Discussion / Resolution

Any additional documentation and clarification from the client must be noted in the narrative and/or scanned into the CoC directory.

Reviewed by [Signature] Date: 12/16/22

WI-MI-010_020720

Chain of Custody Record



Client Information (Sub Contract Lab)		Lab PM: Schafer, Sue	Carrier Tracking No(s): 190-34944.1	
Client Contact: Shipping/Receiving		E-Mail: Sue.Schafer@et.eurofinsus.com	State of Origin: Michigan	
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):	Page: Page 1 of 4	
Address: 13715 Rider Trail North,		Job #: 190-30664-1		
City: Earth City		Analysis Requested		
State, Zip: MO, 63045		Total Number of Containers		
Phone: 314-298-8566(Tel) 314-298-8757(Fax)		Moisture		
Email:		6020B/3060B, 2% (MOD) Specialty Metals		
Project Name: S43533		Perform MS/MSD (Yes or No)		
Site: S43533		Field Filled Sample (Yes or No)		
		Preservation Code:		
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (W=water, S=solid, O=soil, BT=Trasus, AA=)
S43533.03 (190-30664-3)	12/14/22	10:40 Eastern		Solid
S43533.04 (190-30664-4)	12/14/22	11:00 Eastern	X	Solid
S43533.05 (190-30664-5)	12/14/22	11:30 Eastern	X	Solid
S43533.06 (190-30664-6)	12/14/22	11:50 Eastern	X	Solid
S43533.07 (190-30664-7)	12/14/22	12:50 Eastern	X	Solid
S43533.08 (190-30664-8)	12/14/22	13:00 Eastern	X	Solid
S43533.09 (190-30664-9)	12/14/22	13:30 Eastern	X	Solid
S43533.10 (190-30664-10)	12/14/22	13:40 Eastern	X	Solid
S43533.11 (190-30664-11)	12/14/22	15:50 Eastern	X	Solid
<p>Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.</p>				
Possible Hazard Identification				
Unconfirmed				
Deliverable Requested: I, II, III, IV, Other (specify) _____				
Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____				
Relinquished by: <i>[Signature]</i> Date/Time: 12/16/2022 15:30 Company: ETI				
Relinquished by: FED EX Date/Time: _____ Company: _____				
Relinquished by: _____ Date/Time: _____ Company: _____				
Custody Seals Intact: _____ Custody Seal No.: _____				
Cooler Temperature(s) °C and Other Remarks: _____				
<p>Special Instructions/Note:</p> <p>Special Instructions/Note: _____</p>				
<p>Preservation Codes:</p> <p>A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: _____</p> <p>M - Hexane N - None O - AshNaO2 P - Na2OAS Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)</p>				



Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler:		Lab PM:		Carrier Tracking No(s):		COC No:			
Client Contact:		Schafer, Sue		Schafer, Sue				190-34944.3			
Shipping/Receiving		E-Mail:		Sue.Schafer@et.eurofins.com		State of Origin:		Page			
Company:		TetraAmerica Laboratories, Inc.		Sue.Schafer@et.eurofins.com		Michigan		Page 3 of 4			
Address:		13715 Rider Trail North,		Accreditations Required (See note):		Job #:		190-30664-1			
City:		Earth City		Analysis Requested		Preservation Codes:		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)			
State, Zip:		MO, 63045		Due Date Requested:		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:					
Phone:		314-298-8566(Tel) 314-298-8757(Fax)		TAT Requested (days):							
Email:				PO #:							
Project Name:		S43533		WO #:							
Site:		19001249		Project #:							
		SSOW#:									
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=solid, O=organic, BT=Trace, Analy)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B/3060B_2% (MOD) Specialty Metals	Moisture	Total Number of Containers	Special Instructions/Note:
S43533.21 (190-30664-21)	12/14/22	11:15 Eastern	Solid		X	X	X			1	
S43533.22 (190-30664-22)	12/14/22	11:15 Eastern	Solid		X	X	X			1	
S43533.23 (190-30664-23)	12/14/22	11:36 Eastern	Solid		X	X	X			1	
S43533.24 (190-30664-24)	12/14/22	00:01 Eastern	Solid		X	X	X			1	
S43533.25 (190-30664-25)	12/14/22	12:46 Eastern	Solid		X	X	X			1	
S43533.26 (190-30664-26)	12/14/22	12:55 Eastern	Solid		X	X	X			1	
S43533.27 (190-30664-27)	12/14/22	13:02 Eastern	Solid		X	X	X			1	
S43533.28 (190-30664-28)	12/14/22	13:02 Eastern	Solid		X	X	X			1	
S43533.29 (190-30664-29)	12/14/22	13:27 Eastern	Solid		X	X	X			1	
<p>Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyze & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC</p>											
Possible Hazard Identification											
Unconfirmed											
Deliverable Requested: I, II, III, IV, Other (specify)											
Primary Deliverable Rank: 2											
Empty Kit Relinquished by:											
Date: Time: Method of Shipment:											
Relinquished by: <i>[Signature]</i> Date/Time: 12/16/22 15:30 Company: EEA Company											
Relinquished by: FED EX Date/Time: 12/19/22 8:25 AM Company: ECATL Company											
Relinquished by: Date/Time: Company:											
Custody Seals Intact: Custody Seal No.:											
Δ Yes Δ No Cooler Temperature(s) °C and Other Remarks:											



ICOC No:
190-34944

Containers

Count
34

Container Type

Clear Glass 4oz Wide - unpreserved

Preservative

None



ICOC No:
190-34944

Containers

Count
34

Container Type

Clear Glass 4oz Wide - unpreserved

Preservative

None



Chain of Custody Record



Client Information (Sub Contract Lab)		Lab PM: Schafer, Sue	Sampler:	Camer Tracking No(s):		COC No: 190-34942.1
Client Contact: Shipping/Receiving		E-Mail: Sue.Schafer@et.eurofins.com	Phone:	State of Origin: Michigan		Page: Page 1 of 1
Company: Eurofins Environment Testing Northeast, 10 Hazelwood Drive, Amherst NY, 14228-2288		Address:	Accreditations Required (See note):		Job #: 190-30664-1	
Phone: 716-691-2600(Tel) 716-691-7991(Fax)		City:	Due Date Requested: 1/3/2023		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Email:		State:	TAT Requested (days):		M - Hexane N - None O - AsNeO2 P - Na2OAS Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Y - Trizma Z - other (specify)	
Project # 19001249		PO #:	WO #:		Analysis Requested	
Site:		Matrix (W=water, B=solid, O=soil, G=grab, B=Plasma, A=As)		Field Filtered Sample (Yes or No)		Special Instructions/Note:
Sample Identification - Client ID (Lab ID)		Sample Type (C=Comp, G=grab)		Perform MS/MSD (Yes or No)		
S43533.03 (190-30664-3)		Sample Time		8270D/3560C Tetraethyl Lead		
S43533.04 (190-30664-4)		Sample Date		D2216.90		
S43533.05 (190-30664-5)		Sample Time		X		
S43533.06 (190-30664-6)		Sample Date		X		
S43533.07 (190-30664-7)		Sample Time		X		
S43533.08 (190-30664-8)		Sample Date		X		
S43533.09 (190-30664-9)		Sample Time		X		
S43533.10 (190-30664-10)		Sample Date		X		
<p>Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.</p>						
<p>Possible Hazard Identification Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2</p>						
<p>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months</p>						
<p>Special Instructions/QC Requirements:</p>						
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:
Relinquished by: <i>[Signature]</i>		Date/Time: 12/16/22 11:00		Company: EET		Received by: <i>[Signature]</i>
Relinquished by:		Date/Time:		Company:		Received by:
Relinquished by:		Date/Time:		Company:		Received by:
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 20°C		Company: <i>[Signature]</i>





Analytical Laboratory Report

Report ID: S43534.01(02)
Generated on 01/17/2023
Replaces report S43534.01(01) generated on 01/17/2023

Report to
Attention: Kelly Cratsenburg
TRC
1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: 734-412-5424 FAX:
Email: KCratsenburg@trccompanies.com

Report produced by
Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Additional Contacts: Vince Buening

Report Summary
Lab Sample ID(s): S43534.01-S43534.36
Project: Det. Axle South. Bound.
Collected Date(s): 12/14/2022
Submitted Date/Time: 12/15/2022 16:00
Sampled by: B. Yelen / H. Schnaidt
P.O. #: 193431

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Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
ASTM D7968-17M	ASTM Method D7968 - 17 Modified (Isotopic Dilution)
SM2540B	Standard Method 2540 B 2015

Parameter Summary

Parameter	Synonym	Cas #
PFBA	Perfluorobutanoic Acid	375-22-4
PFPeA	Perfluoropentanoic Acid	2706-90-3
4:2 FTSA	4:2 Fluorotelomer Sulfonic Acid	757124-72-4
PFHxA	Perfluorohexanoic Acid	307-24-4
PFBS	Perfluorobutane sulfonic Acid	375-73-5
PFHpA	Perfluoroheptanoic Acid	375-85-9
PFPeS	Perfluoropentane Sulfonic Acid	2706-91-4
6:2 FTSA	6:2 Fluorotelomer Sulfonic Acid	27619-97-2
PFOA	Perfluorooctanoic Acid	335-67-1
PFHxS	Perfluorohexane Sulfonic Acid	355-46-4
PFHxS-LN	Perfluorohexane Sulfonic Acid - LN	355-46-4-LN
PFHxS-BR	Perfluorohexane Sulfonic Acid - BR	355-46-4-BR
PFNA	Perfluorononanoic Acid	375-95-1
8:2 FTSA	8:2 Fluorotelomer Sulfonic Acid	39108-34-4
PFHpS	Perfluoroheptane Sulfonic Acid	375-92-8
PFDA	Perfluorodecanoic Acid	335-76-2
N-MeFOSAA	N-methyl perfluorooctanesulfonamidoacetic acid	2355-31-9
EtFOSAA	N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	2991-50-6
PFOS	Perfluorooctane Sulfonic Acid	1763-23-1
PFOS-LN	Perfluorooctane Sulfonic Acid - LN	1763-23-1-LN
PFOS-BR	Perfluorooctane Sulfonic Acid - BR	1763-23-1-BR
PFUnDA	Perfluoroundecanoic Acid	2058-94-8
PFNS	Perfluorononane Sulfonic Acid	68259-12-1
PFDoDA	Perfluorododecanoic Acid	307-55-1
PFDS	Perfluorodecane Sulfonic Acid	335-77-3
PFTTrDA	Perfluorotridecanoic Acid	72629-94-8
FOSA	Perfluorooctane Sulfonamide	754-91-6
PFTeDA	Perfluorotetradecanoic Acid	376-06-7
11Cl-PF3OUdS	11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	763051-92-9
9Cl-PF3ONS	9-chlorohexadecafluoro-3-oxanone1-sulfonic acid	756426-58-1
ADONA	4,8-dioxa-3H-perfluorononanoic acid	919005-14-4
HFPO-DA	Hexafluoropropylene oxide dimer	13252-13-6
PFECBS	Perfluoro-4-ethylcyclohexanesulfonate	67584-42-3
PFBSA	Perfluorobutanesulfonamide	30334-69-1
PFHxSA	Perfluorohexanesulfonamide	41997-13-1



Analytical Laboratory Report

Sample Summary (36 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S43534.01	AOC9-MW-22-13 (2-4)	Soil	12/14/22 09:30
S43534.02	AOC9-MW-22-13 (8-10)	Soil	12/14/22 09:40
S43534.03	AOC9-SB-01 (2-4)	Soil	12/14/22 10:40
S43534.04	AOC9-SB-01 (8-10)	Soil	12/14/22 11:00
S43534.05	AOC9-MW-22-14 (2-4)	Soil	12/14/22 11:30
S43534.06	AOC9-MW-22-14 (8-10)	Soil	12/14/22 11:50
S43534.07	AOC9-SB-02 (2-4)	Soil	12/14/22 12:50
S43534.08	AOC9-SB-02 (8-10)	Soil	12/14/22 13:00
S43534.09	AOC9-MW-22-15 (2-4)	Soil	12/14/22 13:30
S43534.10	AOC9-MW-22-15 (8-10)	Soil	12/14/22 13:40
S43534.11	AOC9-MW-22-16 (2-4)	Soil	12/14/22 15:50
S43534.12	AOC9-MW-22-16 (8-10)	Soil	12/14/22 16:00
S43534.13	AOC3-TP01-W	Soil	12/14/22 09:37
S43534.14	AOC3-TP01-E	Soil	12/14/22 09:47
S43534.15	AOC3-TP01-N	Soil	12/14/22 09:55
S43534.16	AOC3-TP01-S	Soil	12/14/22 09:55
S43534.17	AOC3-TP01-B	Soil	12/14/22 10:12
S43534.18	Dup-07s	Soil	12/14/22 00:01
S43534.19	AOC3-TP02-N	Soil	12/14/22 10:55
S43534.20	AOC3-TP02-S	Soil	12/14/22 11:08
S43534.21	AOC3-TP02-E	Soil	12/14/22 11:15
S43534.22	AOC3-TP02-W	Soil	12/14/22 11:15
S43534.23	AOC3-TP02-B	Soil	12/14/22 11:36
S43534.24	Dup-08s	Soil	12/14/22 00:01
S43534.25	AOC3-TP03-N	Soil	12/14/22 12:46
S43534.26	AOC3-TP03-S	Soil	12/14/22 12:55
S43534.27	AOC3-TP03-E	Soil	12/14/22 13:02
S43534.28	AOC3-TP03-W	Soil	12/14/22 13:02
S43534.29	AOC3-TP03-B	Soil	12/14/22 13:27
S43534.30	Dup-09s	Soil	12/14/22 00:01
S43534.31	AOC3-TP04-W	Soil	12/14/22 14:22
S43534.32	AOC3-TP04-E	Soil	12/14/22 14:35
S43534.33	AOC3-TP04-N	Soil	12/14/22 14:40
S43534.34	AOC3-TP04-S	Soil	12/14/22 14:40
S43534.35	AOC3-TP04-B	Soil	12/14/22 14:52
S43534.36	Dup-10s	Soil	12/14/22 00:01



Analytical Laboratory Report

Lab Sample ID: S43534.01

Sample Tag: AOC9-MW-22-13 (2-4)

Collected Date/Time: 12/14/2022 09:30

Matrix: Soil

COC Reference: 158678

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	n/a	n/a	No	n/a	n/a

Other / Misc.

Method: , Run Date: 12/16/22 15:35, Analyst: JRM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
No Analyses*	Completed				1			



Analytical Laboratory Report

Lab Sample ID: S43534.02

Sample Tag: AOC9-MW-22-13 (8-10)

Collected Date/Time: 12/14/2022 09:40

Matrix: Soil

COC Reference: 158678

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	n/a	n/a	No	n/a	n/a

Other / Misc.

Method: , Run Date: 12/16/22 15:35, Analyst: JRM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
No Analyses*	Completed				1			



Analytical Laboratory Report

Lab Sample ID: S43534.03

Sample Tag: AOC9-SB-01 (2-4)

Collected Date/Time: 12/14/2022 10:40

Matrix: Soil

COC Reference: 158678

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.61/6.56/10	ASTM D7968-17M	01/05/23 12:00	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	96	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/05/23 20:58, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	100		ng/kg	5.08	375-22-4		
PFPeA*	Not detected	51		ng/kg	5.08	2706-90-3		
4:2 FTSA*	Not detected	51		ng/kg	5.08	757124-72-4		
PFHxA*	Not detected	51		ng/kg	5.08	307-24-4		
PFBS*	Not detected	51		ng/kg	5.08	375-73-5		
PFHpA*	Not detected	51		ng/kg	5.08	375-85-9		
PFPeS*	Not detected	51		ng/kg	5.08	2706-91-4		
6:2 FTSA*	Not detected	51		ng/kg	5.08	27619-97-2		
PFOA*	Not detected	51		ng/kg	5.08	335-67-1		
PFHxS*	Not detected	51		ng/kg	5.08	355-46-4		
PFHxS-LN*	Not detected	51		ng/kg	5.08	355-46-4-LN		
PFHxS-BR*	Not detected	51		ng/kg	5.08	355-46-4-BR		
PFNA*	Not detected	51		ng/kg	5.08	375-95-1		
8:2 FTSA*	Not detected	51		ng/kg	5.08	39108-34-4		
PFHpS*	Not detected	51		ng/kg	5.08	375-92-8		
PFDA*	Not detected	51		ng/kg	5.08	335-76-2		
N-MeFOSAA*	Not detected	51		ng/kg	5.08	2355-31-9		
EtFOSAA*	Not detected	51		ng/kg	5.08	2991-50-6		
PFOS*	Not detected	51		ng/kg	5.08	1763-23-1		
PFOS-LN*	Not detected	51		ng/kg	5.08	1763-23-1-LN		
PFOS-BR*	Not detected	51		ng/kg	5.08	1763-23-1-BR		
PFUnDA*	Not detected	51		ng/kg	5.08	2058-94-8		
PFNS*	Not detected	51		ng/kg	5.08	68259-12-1		
PFDODA*	Not detected	51		ng/kg	5.08	307-55-1		
PFDS*	Not detected	51		ng/kg	5.08	335-77-3		
PFTTrDA*	Not detected	51		ng/kg	5.08	72629-94-8		
FOSA*	Not detected	51		ng/kg	5.08	754-91-6		
PFTeDA*	Not detected	51		ng/kg	5.08	376-06-7		
11Cl-PF3OUdS*	Not detected	51		ng/kg	5.08	763051-92-9		
9Cl-PF3ONS*	Not detected	51		ng/kg	5.08	756426-58-1		
ADONA*	Not detected	51		ng/kg	5.08	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.03 (continued)

Sample Tag: AOC9-SB-01 (2-4)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/05/23 20:58, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	51		ng/kg	5.08	13252-13-6		
PFECHS*	Not detected	51		ng/kg	5.08	67584-42-3		
PFBSA*	Not detected	51		ng/kg	5.08	30334-69-1		
PFHxSA*	Not detected	51		ng/kg	5.08	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.04

Sample Tag: AOC9-SB-01 (8-10)

Collected Date/Time: 12/14/2022 11:00

Matrix: Soil

COC Reference: 158678

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.41/6.49/10	ASTM D7968-17M	01/05/23 12:00	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/05/23 21:37, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	110		ng/kg	5.48	375-22-4		
PFPeA*	Not detected	55		ng/kg	5.48	2706-90-3		
4:2 FTSA*	Not detected	55		ng/kg	5.48	757124-72-4		
PFHxA*	Not detected	55		ng/kg	5.48	307-24-4		
PFBS*	Not detected	55		ng/kg	5.48	375-73-5		
PFHpA*	Not detected	55		ng/kg	5.48	375-85-9		
PFPeS*	Not detected	55		ng/kg	5.48	2706-91-4		
6:2 FTSA*	Not detected	55		ng/kg	5.48	27619-97-2		
PFOA*	Not detected	55		ng/kg	5.48	335-67-1		
PFHxS*	Not detected	55		ng/kg	5.48	355-46-4		
PFHxS-LN*	Not detected	55		ng/kg	5.48	355-46-4-LN		
PFHxS-BR*	Not detected	55		ng/kg	5.48	355-46-4-BR		
PFNA*	Not detected	55		ng/kg	5.48	375-95-1		
8:2 FTSA*	Not detected	55		ng/kg	5.48	39108-34-4		
PFHpS*	Not detected	55		ng/kg	5.48	375-92-8		
PFDA*	Not detected	55		ng/kg	5.48	335-76-2		
N-MeFOSAA*	Not detected	55		ng/kg	5.48	2355-31-9		
EtFOSAA*	Not detected	55		ng/kg	5.48	2991-50-6		
PFOS*	Not detected	55		ng/kg	5.48	1763-23-1		
PFOS-LN*	Not detected	55		ng/kg	5.48	1763-23-1-LN		
PFOS-BR*	Not detected	55		ng/kg	5.48	1763-23-1-BR		
PFUnDA*	Not detected	55		ng/kg	5.48	2058-94-8		
PFNS*	Not detected	55		ng/kg	5.48	68259-12-1		
PFDODA*	Not detected	55		ng/kg	5.48	307-55-1		
PFDS*	Not detected	55		ng/kg	5.48	335-77-3		
PFTTrDA*	Not detected	55		ng/kg	5.48	72629-94-8		
FOSA*	Not detected	55		ng/kg	5.48	754-91-6		
PFTeDA*	Not detected	55		ng/kg	5.48	376-06-7		
11Cl-PF3OUdS*	Not detected	55		ng/kg	5.48	763051-92-9		
9Cl-PF3ONS*	Not detected	55		ng/kg	5.48	756426-58-1		
ADONA*	Not detected	55		ng/kg	5.48	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.04 (continued)

Sample Tag: AOC9-SB-01 (8-10)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/05/23 21:37, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	55		ng/kg	5.48	13252-13-6		
PFECHS*	Not detected	55		ng/kg	5.48	67584-42-3		
PFBSA*	Not detected	55		ng/kg	5.48	30334-69-1		
PFHxSA*	Not detected	55		ng/kg	5.48	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.05

Sample Tag: AOC9-MW-22-14 (2-4)

Collected Date/Time: 12/14/2022 11:30

Matrix: Soil

COC Reference: 158678

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.90/6.53/10	ASTM D7968-17M	01/05/23 12:00	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/05/23 22:16, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	89		ng/kg	4.44	375-22-4		
PFPeA*	Not detected	44		ng/kg	4.44	2706-90-3		
4:2 FTSA*	Not detected	44		ng/kg	4.44	757124-72-4		
PFHxA*	Not detected	44		ng/kg	4.44	307-24-4		
PFBS*	Not detected	44		ng/kg	4.44	375-73-5		
PFHpA*	Not detected	44		ng/kg	4.44	375-85-9		
PFPeS*	Not detected	44		ng/kg	4.44	2706-91-4		
6:2 FTSA*	Not detected	44		ng/kg	4.44	27619-97-2		
PFOA*	Not detected	44		ng/kg	4.44	335-67-1		
PFHxS*	Not detected	44		ng/kg	4.44	355-46-4		
PFHxS-LN*	Not detected	44		ng/kg	4.44	355-46-4-LN		
PFHxS-BR*	Not detected	44		ng/kg	4.44	355-46-4-BR		
PFNA*	Not detected	44		ng/kg	4.44	375-95-1		
8:2 FTSA*	Not detected	44		ng/kg	4.44	39108-34-4		
PFHpS*	Not detected	44		ng/kg	4.44	375-92-8		
PFDA*	Not detected	44		ng/kg	4.44	335-76-2		
N-MeFOSAA*	Not detected	44		ng/kg	4.44	2355-31-9		
EtFOSAA*	Not detected	44		ng/kg	4.44	2991-50-6		
PFOS*	120	44		ng/kg	4.44	1763-23-1		
PFOS-LN*	Not detected	44		ng/kg	4.44	1763-23-1-LN		
PFOS-BR*	120	44		ng/kg	4.44	1763-23-1-BR		
PFUnDA*	Not detected	44		ng/kg	4.44	2058-94-8		
PFNS*	Not detected	44		ng/kg	4.44	68259-12-1		
PFDODA*	Not detected	44		ng/kg	4.44	307-55-1		
PFDS*	Not detected	44		ng/kg	4.44	335-77-3		
PFTTrDA*	Not detected	44		ng/kg	4.44	72629-94-8		
FOSA*	Not detected	44		ng/kg	4.44	754-91-6		
PFTeDA*	Not detected	44		ng/kg	4.44	376-06-7		
11Cl-PF3OUdS*	Not detected	44		ng/kg	4.44	763051-92-9		
9Cl-PF3ONS*	Not detected	44		ng/kg	4.44	756426-58-1		
ADONA*	Not detected	44		ng/kg	4.44	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.05 (continued)

Sample Tag: AOC9-MW-22-14 (2-4)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/05/23 22:16, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	44		ng/kg	4.44	13252-13-6		
PFECHS*	Not detected	44		ng/kg	4.44	67584-42-3		
PFBSA*	Not detected	44		ng/kg	4.44	30334-69-1		
PFHxSA*	Not detected	44		ng/kg	4.44	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.06

Sample Tag: AOC9-MW-22-14 (8-10)

Collected Date/Time: 12/14/2022 11:50

Matrix: Soil

COC Reference: 158678

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.10/6.54/10	ASTM D7968-17M	01/05/23 12:00	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:08, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/05/23 22:36, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	82		ng/kg	4.11	375-22-4		
PFPeA*	Not detected	41		ng/kg	4.11	2706-90-3		
4:2 FTSA*	Not detected	41		ng/kg	4.11	757124-72-4		
PFHxA*	Not detected	41		ng/kg	4.11	307-24-4		
PFBS*	Not detected	41		ng/kg	4.11	375-73-5		
PFHpA*	Not detected	41		ng/kg	4.11	375-85-9		
PFPeS*	Not detected	41		ng/kg	4.11	2706-91-4		
6:2 FTSA*	Not detected	41		ng/kg	4.11	27619-97-2		
PFOA*	61	41		ng/kg	4.11	335-67-1		
PFHxS*	Not detected	41		ng/kg	4.11	355-46-4		
PFHxS-LN*	Not detected	41		ng/kg	4.11	355-46-4-LN		
PFHxS-BR*	Not detected	41		ng/kg	4.11	355-46-4-BR		
PFNA*	Not detected	41		ng/kg	4.11	375-95-1		
8:2 FTSA*	Not detected	41		ng/kg	4.11	39108-34-4		
PFHpS*	Not detected	41		ng/kg	4.11	375-92-8		
PFDA*	Not detected	41		ng/kg	4.11	335-76-2		
N-MeFOSAA*	Not detected	41		ng/kg	4.11	2355-31-9		
EtFOSAA*	Not detected	41		ng/kg	4.11	2991-50-6		
PFOS*	63	41		ng/kg	4.11	1763-23-1		
PFOS-LN*	Not detected	41		ng/kg	4.11	1763-23-1-LN		
PFOS-BR*	Not detected	41		ng/kg	4.11	1763-23-1-BR		
PFUnDA*	Not detected	41		ng/kg	4.11	2058-94-8		
PFNS*	Not detected	41		ng/kg	4.11	68259-12-1		
PFDODA*	Not detected	41		ng/kg	4.11	307-55-1		
PFDS*	Not detected	41		ng/kg	4.11	335-77-3		
PFTTrDA*	Not detected	41		ng/kg	4.11	72629-94-8		
FOSA*	Not detected	41		ng/kg	4.11	754-91-6		
PFTeDA*	Not detected	41		ng/kg	4.11	376-06-7		
11Cl-PF3OUdS*	Not detected	41		ng/kg	4.11	763051-92-9		
9Cl-PF3ONS*	Not detected	41		ng/kg	4.11	756426-58-1		
ADONA*	Not detected	41		ng/kg	4.11	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.06 (continued)

Sample Tag: AOC9-MW-22-14 (8-10)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/05/23 22:36, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	41		ng/kg	4.11	13252-13-6		
PFECHS*	Not detected	41		ng/kg	4.11	67584-42-3		
PFBSA*	Not detected	41		ng/kg	4.11	30334-69-1		
PFHxSA*	Not detected	41		ng/kg	4.11	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.07

Sample Tag: AOC9-SB-02 (2-4)

Collected Date/Time: 12/14/2022 12:50

Matrix: Soil

COC Reference: 158678

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.14/6.50/10	ASTM D7968-17M	01/05/23 12:00	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	92	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/05/23 22:55, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	130		ng/kg	6.63	375-22-4		
PFPeA*	Not detected	66		ng/kg	6.63	2706-90-3		
4:2 FTSA*	Not detected	66		ng/kg	6.63	757124-72-4		
PFHxA*	Not detected	66		ng/kg	6.63	307-24-4		
PFBS*	Not detected	66		ng/kg	6.63	375-73-5		
PFHpA*	Not detected	66		ng/kg	6.63	375-85-9		
PFPeS*	Not detected	66		ng/kg	6.63	2706-91-4		
6:2 FTSA*	Not detected	66		ng/kg	6.63	27619-97-2		
PFOA*	Not detected	66		ng/kg	6.63	335-67-1		
PFHxS*	Not detected	66		ng/kg	6.63	355-46-4		
PFHxS-LN*	Not detected	66		ng/kg	6.63	355-46-4-LN		
PFHxS-BR*	Not detected	66		ng/kg	6.63	355-46-4-BR		
PFNA*	Not detected	66		ng/kg	6.63	375-95-1		
8:2 FTSA*	Not detected	66		ng/kg	6.63	39108-34-4		
PFHpS*	Not detected	66		ng/kg	6.63	375-92-8		
PFDA*	Not detected	66		ng/kg	6.63	335-76-2		
N-MeFOSAA*	Not detected	66		ng/kg	6.63	2355-31-9		
EtFOSAA*	Not detected	66		ng/kg	6.63	2991-50-6		
PFOS*	Not detected	66		ng/kg	6.63	1763-23-1		
PFOS-LN*	Not detected	66		ng/kg	6.63	1763-23-1-LN		
PFOS-BR*	Not detected	66		ng/kg	6.63	1763-23-1-BR		
PFUnDA*	Not detected	66		ng/kg	6.63	2058-94-8		
PFNS*	Not detected	66		ng/kg	6.63	68259-12-1		
PFDODA*	Not detected	66		ng/kg	6.63	307-55-1		
PFDS*	Not detected	66		ng/kg	6.63	335-77-3		
PFTTrDA*	Not detected	66		ng/kg	6.63	72629-94-8		
FOSA*	Not detected	66		ng/kg	6.63	754-91-6		
PFTeDA*	Not detected	66		ng/kg	6.63	376-06-7		
11Cl-PF3OUdS*	Not detected	66		ng/kg	6.63	763051-92-9		
9Cl-PF3ONS*	Not detected	66		ng/kg	6.63	756426-58-1		
ADONA*	Not detected	66		ng/kg	6.63	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.07 (continued)

Sample Tag: AOC9-SB-02 (2-4)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/05/23 22:55, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	66		ng/kg	6.63	13252-13-6		
PFECHS*	Not detected	66		ng/kg	6.63	67584-42-3		
PFBSA*	Not detected	66		ng/kg	6.63	30334-69-1		
PFHxSA*	Not detected	66		ng/kg	6.63	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.08

Sample Tag: AOC9-SB-02 (8-10)

Collected Date/Time: 12/14/2022 13:00

Matrix: Soil

COC Reference: 158678

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.21/6.48/10	ASTM D7968-17M	01/05/23 12:00	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/05/23 23:15, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	120		ng/kg	6.15	375-22-4		
PFPeA*	Not detected	62		ng/kg	6.15	2706-90-3		
4:2 FTSA*	Not detected	62		ng/kg	6.15	757124-72-4		
PFHxA*	Not detected	62		ng/kg	6.15	307-24-4		
PFBS*	Not detected	62		ng/kg	6.15	375-73-5		
PFHpA*	Not detected	62		ng/kg	6.15	375-85-9		
PFPeS*	Not detected	62		ng/kg	6.15	2706-91-4		
6:2 FTSA*	Not detected	62		ng/kg	6.15	27619-97-2		
PFOA*	Not detected	62		ng/kg	6.15	335-67-1		
PFHxS*	Not detected	62		ng/kg	6.15	355-46-4		
PFHxS-LN*	Not detected	62		ng/kg	6.15	355-46-4-LN		
PFHxS-BR*	Not detected	62		ng/kg	6.15	355-46-4-BR		
PFNA*	Not detected	62		ng/kg	6.15	375-95-1		
8:2 FTSA*	Not detected	62		ng/kg	6.15	39108-34-4		
PFHpS*	Not detected	62		ng/kg	6.15	375-92-8		
PFDA*	Not detected	62		ng/kg	6.15	335-76-2		
N-MeFOSAA*	Not detected	62		ng/kg	6.15	2355-31-9		
EtFOSAA*	Not detected	62		ng/kg	6.15	2991-50-6		
PFOS*	Not detected	62		ng/kg	6.15	1763-23-1		
PFOS-LN*	Not detected	62		ng/kg	6.15	1763-23-1-LN		
PFOS-BR*	Not detected	62		ng/kg	6.15	1763-23-1-BR		
PFUnDA*	Not detected	62		ng/kg	6.15	2058-94-8		
PFNS*	Not detected	62		ng/kg	6.15	68259-12-1		
PFDODA*	Not detected	62		ng/kg	6.15	307-55-1		
PFDS*	Not detected	62		ng/kg	6.15	335-77-3		
PFTTrDA*	Not detected	62		ng/kg	6.15	72629-94-8		
FOSA*	Not detected	62		ng/kg	6.15	754-91-6		
PFTeDA*	Not detected	62		ng/kg	6.15	376-06-7		
11Cl-PF3OUdS*	Not detected	62		ng/kg	6.15	763051-92-9		
9Cl-PF3ONS*	Not detected	62		ng/kg	6.15	756426-58-1		
ADONA*	Not detected	62		ng/kg	6.15	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.08 (continued)

Sample Tag: AOC9-SB-02 (8-10)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/05/23 23:15, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	62		ng/kg	6.15	13252-13-6		
PFECHS*	Not detected	62		ng/kg	6.15	67584-42-3		
PFBSA*	Not detected	62		ng/kg	6.15	30334-69-1		
PFHxSA*	Not detected	62		ng/kg	6.15	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.09

Sample Tag: AOC9-MW-22-15 (2-4)

Collected Date/Time: 12/14/2022 13:30

Matrix: Soil

COC Reference: 158678

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.73/6.59/10	ASTM D7968-17M	01/05/23 12:00	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	91	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 15:00, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	100		ng/kg	5.14	375-22-4		
PFPeA*	Not detected	51		ng/kg	5.14	2706-90-3		
4:2 FTSA*	Not detected	51		ng/kg	5.14	757124-72-4		
PFHxA*	Not detected	51		ng/kg	5.14	307-24-4		
PFBS*	Not detected	51		ng/kg	5.14	375-73-5		
PFHpA*	73	51		ng/kg	5.14	375-85-9		
PFPeS*	Not detected	51		ng/kg	5.14	2706-91-4		
6:2 FTSA*	Not detected	51		ng/kg	5.14	27619-97-2		
PFOA*	850	51		ng/kg	5.14	335-67-1		
PFHxS*	Not detected	51		ng/kg	5.14	355-46-4		
PFHxS-LN*	Not detected	51		ng/kg	5.14	355-46-4-LN		
PFHxS-BR*	Not detected	51		ng/kg	5.14	355-46-4-BR		
PFNA*	Not detected	51		ng/kg	5.14	375-95-1		
8:2 FTSA*	Not detected	51		ng/kg	5.14	39108-34-4		
PFHpS*	Not detected	51		ng/kg	5.14	375-92-8		
PFDA*	Not detected	51		ng/kg	5.14	335-76-2		
N-MeFOSAA*	Not detected	51		ng/kg	5.14	2355-31-9		
EtFOSAA*	Not detected	51		ng/kg	5.14	2991-50-6		
PFOS*	110	51		ng/kg	5.14	1763-23-1		
PFOS-LN*	Not detected	51		ng/kg	5.14	1763-23-1-LN		
PFOS-BR*	110	51		ng/kg	5.14	1763-23-1-BR		
PFUnDA*	Not detected	51		ng/kg	5.14	2058-94-8		
PFNS*	Not detected	51		ng/kg	5.14	68259-12-1		
PFDODA*	Not detected	51		ng/kg	5.14	307-55-1		
PFDS*	Not detected	51		ng/kg	5.14	335-77-3		
PFTTrDA*	Not detected	51		ng/kg	5.14	72629-94-8		
FOSA*	Not detected	51		ng/kg	5.14	754-91-6		
PFTeDA*	Not detected	51		ng/kg	5.14	376-06-7		
11Cl-PF3OUdS*	Not detected	51		ng/kg	5.14	763051-92-9		
9Cl-PF3ONS*	Not detected	51		ng/kg	5.14	756426-58-1		
ADONA*	Not detected	51		ng/kg	5.14	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.09 (continued)

Sample Tag: AOC9-MW-22-15 (2-4)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 15:00, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	51		ng/kg	5.14	13252-13-6		
PFECHS*	Not detected	51		ng/kg	5.14	67584-42-3		
PFBSA*	Not detected	51		ng/kg	5.14	30334-69-1		
PFHxSA*	Not detected	51		ng/kg	5.14	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.10

Sample Tag: AOC9-MW-22-15 (8-10)

Collected Date/Time: 12/14/2022 13:40

Matrix: Soil

COC Reference: 158678

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.37/6.58/10	ASTM D7968-17M	01/05/23 12:00	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/05/23 23:54, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	120		ng/kg	5.88	375-22-4		
PFPeA*	Not detected	59		ng/kg	5.88	2706-90-3		
4:2 FTSA*	Not detected	59		ng/kg	5.88	757124-72-4		
PFHxA*	Not detected	59		ng/kg	5.88	307-24-4		
PFBS*	Not detected	59		ng/kg	5.88	375-73-5		
PFHpA*	Not detected	59		ng/kg	5.88	375-85-9		
PFPeS*	Not detected	59		ng/kg	5.88	2706-91-4		
6:2 FTSA*	Not detected	59		ng/kg	5.88	27619-97-2		
PFOA*	Not detected	59		ng/kg	5.88	335-67-1		
PFHxS*	Not detected	59		ng/kg	5.88	355-46-4		
PFHxS-LN*	Not detected	59		ng/kg	5.88	355-46-4-LN		
PFHxS-BR*	Not detected	59		ng/kg	5.88	355-46-4-BR		
PFNA*	Not detected	59		ng/kg	5.88	375-95-1		
8:2 FTSA*	Not detected	59		ng/kg	5.88	39108-34-4		
PFHpS*	Not detected	59		ng/kg	5.88	375-92-8		
PFDA*	Not detected	59		ng/kg	5.88	335-76-2		
N-MeFOSAA*	Not detected	59		ng/kg	5.88	2355-31-9		
EtFOSAA*	Not detected	59		ng/kg	5.88	2991-50-6		
PFOS*	Not detected	59		ng/kg	5.88	1763-23-1		
PFOS-LN*	Not detected	59		ng/kg	5.88	1763-23-1-LN		
PFOS-BR*	Not detected	59		ng/kg	5.88	1763-23-1-BR		
PFUnDA*	Not detected	59		ng/kg	5.88	2058-94-8		
PFNS*	Not detected	59		ng/kg	5.88	68259-12-1		
PFDODA*	Not detected	59		ng/kg	5.88	307-55-1		
PFDS*	Not detected	59		ng/kg	5.88	335-77-3		
PFTTrDA*	Not detected	59		ng/kg	5.88	72629-94-8		
FOSA*	Not detected	59		ng/kg	5.88	754-91-6		
PFTeDA*	Not detected	59		ng/kg	5.88	376-06-7		
11Cl-PF3OUdS*	Not detected	59		ng/kg	5.88	763051-92-9		
9Cl-PF3ONS*	Not detected	59		ng/kg	5.88	756426-58-1		
ADONA*	Not detected	59		ng/kg	5.88	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.10 (continued)

Sample Tag: AOC9-MW-22-15 (8-10)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/05/23 23:54, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	59		ng/kg	5.88	13252-13-6		
PFECHS*	Not detected	59		ng/kg	5.88	67584-42-3		
PFBSA*	Not detected	59		ng/kg	5.88	30334-69-1		
PFHxSA*	Not detected	59		ng/kg	5.88	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.11

Sample Tag: AOC9-MW-22-16 (2-4)

Collected Date/Time: 12/14/2022 15:50

Matrix: Soil

COC Reference: 158678

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.00/6.48/10	ASTM D7968-17M	01/05/23 12:00	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	93	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 15:20, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	140		ng/kg	7.07	375-22-4		
PFPeA*	Not detected	71		ng/kg	7.07	2706-90-3		
4:2 FTSA*	Not detected	71		ng/kg	7.07	757124-72-4		
PFHxA*	Not detected	71		ng/kg	7.07	307-24-4		
PFBS*	Not detected	71		ng/kg	7.07	375-73-5		
PFHpA*	Not detected	71		ng/kg	7.07	375-85-9		
PFPeS*	Not detected	71		ng/kg	7.07	2706-91-4		
6:2 FTSA*	Not detected	71		ng/kg	7.07	27619-97-2		
PFOA*	Not detected	71		ng/kg	7.07	335-67-1		
PFHxS*	Not detected	71		ng/kg	7.07	355-46-4		
PFHxS-LN*	Not detected	71		ng/kg	7.07	355-46-4-LN		
PFHxS-BR*	Not detected	71		ng/kg	7.07	355-46-4-BR		
PFNA*	Not detected	71		ng/kg	7.07	375-95-1		
8:2 FTSA*	Not detected	71		ng/kg	7.07	39108-34-4		
PFHpS*	Not detected	71		ng/kg	7.07	375-92-8		
PFDA*	Not detected	71		ng/kg	7.07	335-76-2		
N-MeFOSAA*	Not detected	71		ng/kg	7.07	2355-31-9		
EtFOSAA*	Not detected	71		ng/kg	7.07	2991-50-6		
PFOS*	Not detected	71		ng/kg	7.07	1763-23-1		
PFOS-LN*	Not detected	71		ng/kg	7.07	1763-23-1-LN		
PFOS-BR*	Not detected	71		ng/kg	7.07	1763-23-1-BR		
PFUnDA*	Not detected	71		ng/kg	7.07	2058-94-8		
PFNS*	Not detected	71		ng/kg	7.07	68259-12-1		
PFDODA*	Not detected	71		ng/kg	7.07	307-55-1		
PFDS*	Not detected	71		ng/kg	7.07	335-77-3		
PFTTrDA*	Not detected	71		ng/kg	7.07	72629-94-8		
FOSA*	Not detected	71		ng/kg	7.07	754-91-6		
PFTeDA*	Not detected	71		ng/kg	7.07	376-06-7		
11Cl-PF3OUdS*	Not detected	71		ng/kg	7.07	763051-92-9		
9Cl-PF3ONS*	Not detected	71		ng/kg	7.07	756426-58-1		
ADONA*	Not detected	71		ng/kg	7.07	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.11 (continued)

Sample Tag: AOC9-MW-22-16 (2-4)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 15:20, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	71		ng/kg	7.07	13252-13-6		
PFECHS*	Not detected	71		ng/kg	7.07	67584-42-3		
PFBSA*	Not detected	71		ng/kg	7.07	30334-69-1		
PFHxSA*	Not detected	71		ng/kg	7.07	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.12

Sample Tag: AOC9-MW-22-16 (8-10)

Collected Date/Time: 12/14/2022 16:00

Matrix: Soil

COC Reference: 158678

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.67/6.49/10	ASTM D7968-17M	01/05/23 12:00	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	96	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 00:33, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	96		ng/kg	4.78	375-22-4		
PFPeA*	Not detected	48		ng/kg	4.78	2706-90-3		
4:2 FTSA*	Not detected	48		ng/kg	4.78	757124-72-4		
PFHxA*	Not detected	48		ng/kg	4.78	307-24-4		
PFBS*	Not detected	48		ng/kg	4.78	375-73-5		
PFHpA*	Not detected	48		ng/kg	4.78	375-85-9		
PFPeS*	Not detected	48		ng/kg	4.78	2706-91-4		
6:2 FTSA*	Not detected	48		ng/kg	4.78	27619-97-2		
PFOA*	Not detected	48		ng/kg	4.78	335-67-1		
PFHxS*	Not detected	48		ng/kg	4.78	355-46-4		
PFHxS-LN*	Not detected	48		ng/kg	4.78	355-46-4-LN		
PFHxS-BR*	Not detected	48		ng/kg	4.78	355-46-4-BR		
PFNA*	Not detected	48		ng/kg	4.78	375-95-1		
8:2 FTSA*	Not detected	48		ng/kg	4.78	39108-34-4		
PFHpS*	Not detected	48		ng/kg	4.78	375-92-8		
PFDA*	Not detected	48		ng/kg	4.78	335-76-2		
N-MeFOSAA*	Not detected	48		ng/kg	4.78	2355-31-9		
EtFOSAA*	Not detected	48		ng/kg	4.78	2991-50-6		
PFOS*	Not detected	48		ng/kg	4.78	1763-23-1		
PFOS-LN*	Not detected	48		ng/kg	4.78	1763-23-1-LN		
PFOS-BR*	Not detected	48		ng/kg	4.78	1763-23-1-BR		
PFUnDA*	Not detected	48		ng/kg	4.78	2058-94-8		
PFNS*	Not detected	48		ng/kg	4.78	68259-12-1		
PFDaDA*	Not detected	48		ng/kg	4.78	307-55-1		
PFDS*	Not detected	48		ng/kg	4.78	335-77-3		
PFTDA*	Not detected	48		ng/kg	4.78	72629-94-8		
FOSA*	Not detected	48		ng/kg	4.78	754-91-6		
PFTeDA*	Not detected	48		ng/kg	4.78	376-06-7		
11Cl-PF3OUdS*	Not detected	48		ng/kg	4.78	763051-92-9		
9Cl-PF3ONS*	Not detected	48		ng/kg	4.78	756426-58-1		
ADONA*	Not detected	48		ng/kg	4.78	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.12 (continued)

Sample Tag: AOC9-MW-22-16 (8-10)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 00:33, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	48		ng/kg	4.78	13252-13-6		
PFECHS*	Not detected	48		ng/kg	4.78	67584-42-3		
PFBSA*	Not detected	48		ng/kg	4.78	30334-69-1		
PFHxSA*	Not detected	48		ng/kg	4.78	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.13

Sample Tag: AOC3-TP01-W

Collected Date/Time: 12/14/2022 09:37

Matrix: Soil

COC Reference: 158676

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.53/6.50/10	ASTM D7968-17M	01/05/23 12:00	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	97	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 00:52, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	100		ng/kg	5.08	375-22-4		
PFPeA*	Not detected	51		ng/kg	5.08	2706-90-3		
4:2 FTSA*	Not detected	51		ng/kg	5.08	757124-72-4		
PFHxA*	Not detected	51		ng/kg	5.08	307-24-4		
PFBS*	Not detected	51		ng/kg	5.08	375-73-5		
PFHpA*	Not detected	51		ng/kg	5.08	375-85-9		
PFPeS*	Not detected	51		ng/kg	5.08	2706-91-4		
6:2 FTSA*	Not detected	51		ng/kg	5.08	27619-97-2		
PFOA*	Not detected	51		ng/kg	5.08	335-67-1		
PFHxS*	Not detected	51		ng/kg	5.08	355-46-4		
PFHxS-LN*	Not detected	51		ng/kg	5.08	355-46-4-LN		
PFHxS-BR*	Not detected	51		ng/kg	5.08	355-46-4-BR		
PFNA*	Not detected	51		ng/kg	5.08	375-95-1		
8:2 FTSA*	Not detected	51		ng/kg	5.08	39108-34-4		
PFHpS*	Not detected	51		ng/kg	5.08	375-92-8		
PFDA*	Not detected	51		ng/kg	5.08	335-76-2		
N-MeFOSAA*	Not detected	51		ng/kg	5.08	2355-31-9		
EtFOSAA*	Not detected	51		ng/kg	5.08	2991-50-6		
PFOS*	Not detected	51		ng/kg	5.08	1763-23-1		
PFOS-LN*	Not detected	51		ng/kg	5.08	1763-23-1-LN		
PFOS-BR*	Not detected	51		ng/kg	5.08	1763-23-1-BR		
PFUnDA*	Not detected	51		ng/kg	5.08	2058-94-8		
PFNS*	Not detected	51		ng/kg	5.08	68259-12-1		
PFDODA*	Not detected	51		ng/kg	5.08	307-55-1		
PFDS*	Not detected	51		ng/kg	5.08	335-77-3		
PFTTrDA*	Not detected	51		ng/kg	5.08	72629-94-8		
FOSA*	Not detected	51		ng/kg	5.08	754-91-6		
PFTeDA*	Not detected	51		ng/kg	5.08	376-06-7		
11Cl-PF3OUdS*	Not detected	51		ng/kg	5.08	763051-92-9		
9Cl-PF3ONS*	Not detected	51		ng/kg	5.08	756426-58-1		
ADONA*	Not detected	51		ng/kg	5.08	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.13 (continued)

Sample Tag: AOC3-TP01-W

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 00:52, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	51		ng/kg	5.08	13252-13-6		
PFECHS*	Not detected	51		ng/kg	5.08	67584-42-3		
PFBSA*	Not detected	51		ng/kg	5.08	30334-69-1		
PFHxSA*	Not detected	51		ng/kg	5.08	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.14

Sample Tag: AOC3-TP01-E

Collected Date/Time: 12/14/2022 09:47

Matrix: Soil

COC Reference: 158676

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.56/6.51/10	ASTM D7968-17M	01/05/23 12:00	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	96	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 01:12, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	100		ng/kg	5.08	375-22-4		
PFPeA*	Not detected	51		ng/kg	5.08	2706-90-3		
4:2 FTSA*	Not detected	51		ng/kg	5.08	757124-72-4		
PFHxA*	Not detected	51		ng/kg	5.08	307-24-4		
PFBS*	Not detected	51		ng/kg	5.08	375-73-5		
PFHpA*	Not detected	51		ng/kg	5.08	375-85-9		
PFPeS*	Not detected	51		ng/kg	5.08	2706-91-4		
6:2 FTSA*	Not detected	51		ng/kg	5.08	27619-97-2		
PFOA*	Not detected	51		ng/kg	5.08	335-67-1		
PFHxS*	Not detected	51		ng/kg	5.08	355-46-4		
PFHxS-LN*	Not detected	51		ng/kg	5.08	355-46-4-LN		
PFHxS-BR*	Not detected	51		ng/kg	5.08	355-46-4-BR		
PFNA*	Not detected	51		ng/kg	5.08	375-95-1		
8:2 FTSA*	Not detected	51		ng/kg	5.08	39108-34-4		
PFHpS*	Not detected	51		ng/kg	5.08	375-92-8		
PFDA*	Not detected	51		ng/kg	5.08	335-76-2		
N-MeFOSAA*	Not detected	51		ng/kg	5.08	2355-31-9		
EtFOSAA*	Not detected	51		ng/kg	5.08	2991-50-6		
PFOS*	Not detected	51		ng/kg	5.08	1763-23-1		
PFOS-LN*	Not detected	51		ng/kg	5.08	1763-23-1-LN		
PFOS-BR*	Not detected	51		ng/kg	5.08	1763-23-1-BR		
PFUnDA*	Not detected	51		ng/kg	5.08	2058-94-8		
PFNS*	Not detected	51		ng/kg	5.08	68259-12-1		
PFDODA*	Not detected	51		ng/kg	5.08	307-55-1		
PFDS*	Not detected	51		ng/kg	5.08	335-77-3		
PFTTrDA*	Not detected	51		ng/kg	5.08	72629-94-8		
FOSA*	Not detected	51		ng/kg	5.08	754-91-6		
PFTeDA*	Not detected	51		ng/kg	5.08	376-06-7		
11Cl-PF3OUdS*	Not detected	51		ng/kg	5.08	763051-92-9		
9Cl-PF3ONS*	Not detected	51		ng/kg	5.08	756426-58-1		
ADONA*	Not detected	51		ng/kg	5.08	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.14 (continued)

Sample Tag: AOC3-TP01-E

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 01:12, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	51		ng/kg	5.08	13252-13-6		
PFECHS*	Not detected	51		ng/kg	5.08	67584-42-3		
PFBSA*	Not detected	51		ng/kg	5.08	30334-69-1		
PFHxSA*	Not detected	51		ng/kg	5.08	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.15

Sample Tag: AOC3-TP01-N

Collected Date/Time: 12/14/2022 09:55

Matrix: Soil

COC Reference: 158676

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.51/6.50/10	ASTM D7968-17M	01/05/23 12:00	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	96	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 01:31, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	100		ng/kg	5.18	375-22-4		
PFPeA*	Not detected	52		ng/kg	5.18	2706-90-3		
4:2 FTSA*	Not detected	52		ng/kg	5.18	757124-72-4		
PFHxA*	Not detected	52		ng/kg	5.18	307-24-4		
PFBS*	Not detected	52		ng/kg	5.18	375-73-5		
PFHpA*	Not detected	52		ng/kg	5.18	375-85-9		
PFPeS*	Not detected	52		ng/kg	5.18	2706-91-4		
6:2 FTSA*	Not detected	52		ng/kg	5.18	27619-97-2		
PFOA*	Not detected	52		ng/kg	5.18	335-67-1		
PFHxS*	Not detected	52		ng/kg	5.18	355-46-4		
PFHxS-LN*	Not detected	52		ng/kg	5.18	355-46-4-LN		
PFHxS-BR*	Not detected	52		ng/kg	5.18	355-46-4-BR		
PFNA*	Not detected	52		ng/kg	5.18	375-95-1		
8:2 FTSA*	Not detected	52		ng/kg	5.18	39108-34-4		
PFHpS*	Not detected	52		ng/kg	5.18	375-92-8		
PFDA*	Not detected	52		ng/kg	5.18	335-76-2		
N-MeFOSAA*	Not detected	52		ng/kg	5.18	2355-31-9		
EtFOSAA*	Not detected	52		ng/kg	5.18	2991-50-6		
PFOS*	Not detected	52		ng/kg	5.18	1763-23-1		
PFOS-LN*	Not detected	52		ng/kg	5.18	1763-23-1-LN		
PFOS-BR*	Not detected	52		ng/kg	5.18	1763-23-1-BR		
PFUnDA*	Not detected	52		ng/kg	5.18	2058-94-8		
PFNS*	Not detected	52		ng/kg	5.18	68259-12-1		
PFDODA*	Not detected	52		ng/kg	5.18	307-55-1		
PFDS*	Not detected	52		ng/kg	5.18	335-77-3		
PFTTrDA*	Not detected	52		ng/kg	5.18	72629-94-8		
FOSA*	Not detected	52		ng/kg	5.18	754-91-6		
PFTeDA*	Not detected	52		ng/kg	5.18	376-06-7		
11Cl-PF3OUdS*	Not detected	52		ng/kg	5.18	763051-92-9		
9Cl-PF3ONS*	Not detected	52		ng/kg	5.18	756426-58-1		
ADONA*	Not detected	52		ng/kg	5.18	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.15 (continued)

Sample Tag: AOC3-TP01-N

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 01:31, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	52		ng/kg	5.18	13252-13-6		
PFECHS*	Not detected	52		ng/kg	5.18	67584-42-3		
PFBSA*	Not detected	52		ng/kg	5.18	30334-69-1		
PFHxSA*	Not detected	52		ng/kg	5.18	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.16

Sample Tag: AOC3-TP01-S

Collected Date/Time: 12/14/2022 09:55

Matrix: Soil

COC Reference: 158676

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	7.89/6.49/10	ASTM D7968-17M	01/05/23 12:00	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	97	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 01:51, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	150		ng/kg	7.36	375-22-4		
PFPeA*	Not detected	74		ng/kg	7.36	2706-90-3		
4:2 FTSA*	Not detected	74		ng/kg	7.36	757124-72-4		
PFHxA*	Not detected	74		ng/kg	7.36	307-24-4		
PFBS*	Not detected	74		ng/kg	7.36	375-73-5		
PFHpA*	Not detected	74		ng/kg	7.36	375-85-9		
PFPeS*	Not detected	74		ng/kg	7.36	2706-91-4		
6:2 FTSA*	Not detected	74		ng/kg	7.36	27619-97-2		
PFOA*	Not detected	74		ng/kg	7.36	335-67-1		
PFHxS*	Not detected	74		ng/kg	7.36	355-46-4		
PFHxS-LN*	Not detected	74		ng/kg	7.36	355-46-4-LN		
PFHxS-BR*	Not detected	74		ng/kg	7.36	355-46-4-BR		
PFNA*	Not detected	74		ng/kg	7.36	375-95-1		
8:2 FTSA*	Not detected	74		ng/kg	7.36	39108-34-4		
PFHpS*	Not detected	74		ng/kg	7.36	375-92-8		
PFDA*	Not detected	74		ng/kg	7.36	335-76-2		
N-MeFOSAA*	Not detected	74		ng/kg	7.36	2355-31-9		
EtFOSAA*	Not detected	74		ng/kg	7.36	2991-50-6		
PFOS*	Not detected	74		ng/kg	7.36	1763-23-1		
PFOS-LN*	Not detected	74		ng/kg	7.36	1763-23-1-LN		
PFOS-BR*	Not detected	74		ng/kg	7.36	1763-23-1-BR		
PFUnDA*	Not detected	74		ng/kg	7.36	2058-94-8		
PFNS*	Not detected	74		ng/kg	7.36	68259-12-1		
PFDODA*	Not detected	74		ng/kg	7.36	307-55-1		
PFDS*	Not detected	74		ng/kg	7.36	335-77-3		
PFTTrDA*	Not detected	74		ng/kg	7.36	72629-94-8		
FOSA*	Not detected	74		ng/kg	7.36	754-91-6		
PFTeDA*	Not detected	74		ng/kg	7.36	376-06-7		
11Cl-PF3OUdS*	Not detected	74		ng/kg	7.36	763051-92-9		
9Cl-PF3ONS*	Not detected	74		ng/kg	7.36	756426-58-1		
ADONA*	Not detected	74		ng/kg	7.36	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.16 (continued)

Sample Tag: AOC3-TP01-S

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 01:51, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	74		ng/kg	7.36	13252-13-6		
PFECHS*	Not detected	74		ng/kg	7.36	67584-42-3		
PFBSA*	Not detected	74		ng/kg	7.36	30334-69-1		
PFHxSA*	Not detected	74		ng/kg	7.36	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.17

Sample Tag: AOC3-TP01-B

Collected Date/Time: 12/14/2022 10:12

Matrix: Soil

COC Reference: 158676

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.13/6.53/10	ASTM D7968-17M	01/05/23 15:15	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	85	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 20:34, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	90		ng/kg	4.52	375-22-4		
PFPeA*	Not detected	45		ng/kg	4.52	2706-90-3		
4:2 FTSA*	Not detected	45		ng/kg	4.52	757124-72-4		
PFHxA*	Not detected	45		ng/kg	4.52	307-24-4		
PFBS*	Not detected	45		ng/kg	4.52	375-73-5		
PFHpA*	Not detected	45		ng/kg	4.52	375-85-9		
PFPeS*	Not detected	45		ng/kg	4.52	2706-91-4		
6:2 FTSA*	Not detected	45		ng/kg	4.52	27619-97-2		
PFOA*	Not detected	45		ng/kg	4.52	335-67-1		
PFHxS*	Not detected	45		ng/kg	4.52	355-46-4		
PFHxS-LN*	Not detected	45		ng/kg	4.52	355-46-4-LN		
PFHxS-BR*	Not detected	45		ng/kg	4.52	355-46-4-BR		
PFNA*	Not detected	45		ng/kg	4.52	375-95-1		
8:2 FTSA*	Not detected	45		ng/kg	4.52	39108-34-4		
PFHpS*	Not detected	45		ng/kg	4.52	375-92-8		
PFDA*	Not detected	45		ng/kg	4.52	335-76-2		
N-MeFOSAA*	Not detected	45		ng/kg	4.52	2355-31-9		
EtFOSAA*	Not detected	45		ng/kg	4.52	2991-50-6		
PFOS*	Not detected	45		ng/kg	4.52	1763-23-1		
PFOS-LN*	Not detected	45		ng/kg	4.52	1763-23-1-LN		
PFOS-BR*	Not detected	45		ng/kg	4.52	1763-23-1-BR		
PFUnDA*	Not detected	45		ng/kg	4.52	2058-94-8		
PFNS*	Not detected	45		ng/kg	4.52	68259-12-1		
PFDODA*	Not detected	45		ng/kg	4.52	307-55-1		
PFDS*	Not detected	45		ng/kg	4.52	335-77-3		
PFTTrDA*	Not detected	45		ng/kg	4.52	72629-94-8		
FOSA*	Not detected	45		ng/kg	4.52	754-91-6		
PFTeDA*	Not detected	45		ng/kg	4.52	376-06-7		
11Cl-PF3OUdS*	Not detected	45		ng/kg	4.52	763051-92-9		
9Cl-PF3ONS*	Not detected	45		ng/kg	4.52	756426-58-1		
ADONA*	Not detected	45		ng/kg	4.52	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.17 (continued)

Sample Tag: AOC3-TP01-B

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 20:34, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	45		ng/kg	4.52	13252-13-6		
PFECHS*	Not detected	45		ng/kg	4.52	67584-42-3		
PFBSA*	Not detected	45		ng/kg	4.52	30334-69-1		
PFHxSA*	Not detected	45		ng/kg	4.52	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.18

Sample Tag: Dup-07s

Collected Date/Time: 12/14/2022 00:01

Matrix: Soil

COC Reference: 158676

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.25/6.53/10	ASTM D7968-17M	01/05/23 15:15	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	97	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 21:13, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	120		ng/kg	5.99	375-22-4		
PFPeA*	Not detected	60		ng/kg	5.99	2706-90-3		
4:2 FTSA*	Not detected	60		ng/kg	5.99	757124-72-4		
PFHxA*	Not detected	60		ng/kg	5.99	307-24-4		
PFBS*	Not detected	60		ng/kg	5.99	375-73-5		
PFHpA*	Not detected	60		ng/kg	5.99	375-85-9		
PFPeS*	Not detected	60		ng/kg	5.99	2706-91-4		
6:2 FTSA*	Not detected	60		ng/kg	5.99	27619-97-2		
PFOA*	Not detected	60		ng/kg	5.99	335-67-1		
PFHxS*	Not detected	60		ng/kg	5.99	355-46-4		
PFHxS-LN*	Not detected	60		ng/kg	5.99	355-46-4-LN		
PFHxS-BR*	Not detected	60		ng/kg	5.99	355-46-4-BR		
PFNA*	Not detected	60		ng/kg	5.99	375-95-1		
8:2 FTSA*	Not detected	60		ng/kg	5.99	39108-34-4		
PFHpS*	Not detected	60		ng/kg	5.99	375-92-8		
PFDA*	Not detected	60		ng/kg	5.99	335-76-2		
N-MeFOSAA*	Not detected	60		ng/kg	5.99	2355-31-9		
EtFOSAA*	Not detected	60		ng/kg	5.99	2991-50-6		
PFOS*	Not detected	60		ng/kg	5.99	1763-23-1		
PFOS-LN*	Not detected	60		ng/kg	5.99	1763-23-1-LN		
PFOS-BR*	Not detected	60		ng/kg	5.99	1763-23-1-BR		
PFUnDA*	Not detected	60		ng/kg	5.99	2058-94-8		
PFNS*	Not detected	60		ng/kg	5.99	68259-12-1		
PFDODA*	Not detected	60		ng/kg	5.99	307-55-1		
PFDS*	Not detected	60		ng/kg	5.99	335-77-3		
PFTTrDA*	Not detected	60		ng/kg	5.99	72629-94-8		
FOSA*	Not detected	60		ng/kg	5.99	754-91-6		
PFTeDA*	Not detected	60		ng/kg	5.99	376-06-7		
11Cl-PF3OUdS*	Not detected	60		ng/kg	5.99	763051-92-9		
9Cl-PF3ONS*	Not detected	60		ng/kg	5.99	756426-58-1		
ADONA*	Not detected	60		ng/kg	5.99	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.18 (continued)

Sample Tag: Dup-07s

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 21:13, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	60		ng/kg	5.99	13252-13-6		
PFECHS*	Not detected	60		ng/kg	5.99	67584-42-3		
PFBSA*	Not detected	60		ng/kg	5.99	30334-69-1		
PFHxSA*	Not detected	60		ng/kg	5.99	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.19

Sample Tag: AOC3-TP02-N

Collected Date/Time: 12/14/2022 10:55

Matrix: Soil

COC Reference: 158676

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	7.61/6.54/10	ASTM D7968-17M	01/05/23 15:15	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	93	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 21:52, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	200		ng/kg	10	375-22-4		
PFPeA*	Not detected	100		ng/kg	10	2706-90-3		
4:2 FTSA*	Not detected	100		ng/kg	10	757124-72-4		
PFHxA*	Not detected	100		ng/kg	10	307-24-4		
PFBS*	Not detected	100		ng/kg	10	375-73-5		
PFHpA*	Not detected	100		ng/kg	10	375-85-9		
PFPeS*	Not detected	100		ng/kg	10	2706-91-4		
6:2 FTSA*	Not detected	100		ng/kg	10	27619-97-2		
PFOA*	Not detected	100		ng/kg	10	335-67-1		
PFHxS*	Not detected	100		ng/kg	10	355-46-4		
PFHxS-LN*	Not detected	100		ng/kg	10	355-46-4-LN		
PFHxS-BR*	Not detected	100		ng/kg	10	355-46-4-BR		
PFNA*	Not detected	100		ng/kg	10	375-95-1		
8:2 FTSA*	Not detected	100		ng/kg	10	39108-34-4		
PFHpS*	Not detected	100		ng/kg	10	375-92-8		
PFDA*	Not detected	100		ng/kg	10	335-76-2		
N-MeFOSAA*	Not detected	100		ng/kg	10	2355-31-9		
EtFOSAA*	Not detected	100		ng/kg	10	2991-50-6		
PFOS*	Not detected	100		ng/kg	10	1763-23-1		
PFOS-LN*	Not detected	100		ng/kg	10	1763-23-1-LN		
PFOS-BR*	Not detected	100		ng/kg	10	1763-23-1-BR		
PFUnDA*	Not detected	100		ng/kg	10	2058-94-8		
PFNS*	Not detected	100		ng/kg	10	68259-12-1		
PFDODA*	Not detected	100		ng/kg	10	307-55-1		
PFDS*	Not detected	100		ng/kg	10	335-77-3		
PFTTrDA*	Not detected	100		ng/kg	10	72629-94-8		
FOSA*	Not detected	100		ng/kg	10	754-91-6		
PFTeDA*	Not detected	100		ng/kg	10	376-06-7		
11Cl-PF3OUdS*	Not detected	100		ng/kg	10	763051-92-9		
9Cl-PF3ONS*	Not detected	100		ng/kg	10	756426-58-1		
ADONA*	Not detected	100		ng/kg	10	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.19 (continued)

Sample Tag: AOC3-TP02-N

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 21:52, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	100		ng/kg	10	13252-13-6		
PFECHS*	Not detected	100		ng/kg	10	67584-42-3		
PFBSA*	Not detected	100		ng/kg	10	30334-69-1		
PFHxSA*	Not detected	100		ng/kg	10	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.20

Sample Tag: AOC3-TP02-S

Collected Date/Time: 12/14/2022 11:08

Matrix: Soil

COC Reference: 158676

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.96/6.55/10	ASTM D7968-17M	01/05/23 15:15	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 22:12, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	87		ng/kg	4.37	375-22-4		
PFPeA*	Not detected	44		ng/kg	4.37	2706-90-3		
4:2 FTSA*	Not detected	44		ng/kg	4.37	757124-72-4		
PFHxA*	Not detected	44		ng/kg	4.37	307-24-4		
PFBS*	Not detected	44		ng/kg	4.37	375-73-5		
PFHpA*	Not detected	44		ng/kg	4.37	375-85-9		
PFPeS*	Not detected	44		ng/kg	4.37	2706-91-4		
6:2 FTSA*	Not detected	44		ng/kg	4.37	27619-97-2		
PFOA*	Not detected	44		ng/kg	4.37	335-67-1		
PFHxS*	Not detected	44		ng/kg	4.37	355-46-4		
PFHxS-LN*	Not detected	44		ng/kg	4.37	355-46-4-LN		
PFHxS-BR*	Not detected	44		ng/kg	4.37	355-46-4-BR		
PFNA*	Not detected	44		ng/kg	4.37	375-95-1		
8:2 FTSA*	Not detected	44		ng/kg	4.37	39108-34-4		
PFHpS*	Not detected	44		ng/kg	4.37	375-92-8		
PFDA*	Not detected	44		ng/kg	4.37	335-76-2		
N-MeFOSAA*	Not detected	44		ng/kg	4.37	2355-31-9		
EtFOSAA*	Not detected	44		ng/kg	4.37	2991-50-6		
PFOS*	Not detected	44		ng/kg	4.37	1763-23-1		
PFOS-LN*	Not detected	44		ng/kg	4.37	1763-23-1-LN		
PFOS-BR*	Not detected	44		ng/kg	4.37	1763-23-1-BR		
PFUnDA*	Not detected	44		ng/kg	4.37	2058-94-8		
PFNS*	Not detected	44		ng/kg	4.37	68259-12-1		
PFDODA*	Not detected	44		ng/kg	4.37	307-55-1		
PFDS*	Not detected	44		ng/kg	4.37	335-77-3		
PFTTrDA*	Not detected	44		ng/kg	4.37	72629-94-8		
FOSA*	Not detected	44		ng/kg	4.37	754-91-6		
PFTeDA*	Not detected	44		ng/kg	4.37	376-06-7		
11Cl-PF3OUdS*	Not detected	44		ng/kg	4.37	763051-92-9		
9Cl-PF3ONS*	Not detected	44		ng/kg	4.37	756426-58-1		
ADONA*	Not detected	44		ng/kg	4.37	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.20 (continued)

Sample Tag: AOC3-TP02-S

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 22:12, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	44		ng/kg	4.37	13252-13-6		
PFECHS*	Not detected	44		ng/kg	4.37	67584-42-3		
PFBSA*	Not detected	44		ng/kg	4.37	30334-69-1		
PFHxSA*	Not detected	44		ng/kg	4.37	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.21

Sample Tag: AOC3-TP02-E

Collected Date/Time: 12/14/2022 11:15

Matrix: Soil

COC Reference: 158676

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.83/6.57/10	ASTM D7968-17M	01/05/23 15:15	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 22:31, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	94		ng/kg	4.71	375-22-4		
PFPeA*	Not detected	47		ng/kg	4.71	2706-90-3		
4:2 FTSA*	Not detected	47		ng/kg	4.71	757124-72-4		
PFHxA*	Not detected	47		ng/kg	4.71	307-24-4		
PFBS*	Not detected	47		ng/kg	4.71	375-73-5		
PFHpA*	Not detected	47		ng/kg	4.71	375-85-9		
PFPeS*	Not detected	47		ng/kg	4.71	2706-91-4		
6:2 FTSA*	Not detected	47		ng/kg	4.71	27619-97-2		
PFOA*	Not detected	47		ng/kg	4.71	335-67-1		
PFHxS*	Not detected	47		ng/kg	4.71	355-46-4		
PFHxS-LN*	Not detected	47		ng/kg	4.71	355-46-4-LN		
PFHxS-BR*	Not detected	47		ng/kg	4.71	355-46-4-BR		
PFNA*	Not detected	47		ng/kg	4.71	375-95-1		
8:2 FTSA*	Not detected	47		ng/kg	4.71	39108-34-4		
PFHpS*	Not detected	47		ng/kg	4.71	375-92-8		
PFDA*	Not detected	47		ng/kg	4.71	335-76-2		
N-MeFOSAA*	Not detected	47		ng/kg	4.71	2355-31-9		
EtFOSAA*	Not detected	47		ng/kg	4.71	2991-50-6		
PFOS*	Not detected	47		ng/kg	4.71	1763-23-1		
PFOS-LN*	Not detected	47		ng/kg	4.71	1763-23-1-LN		
PFOS-BR*	Not detected	47		ng/kg	4.71	1763-23-1-BR		
PFUnDA*	Not detected	47		ng/kg	4.71	2058-94-8		
PFNS*	Not detected	47		ng/kg	4.71	68259-12-1		
PFDaDA*	Not detected	47		ng/kg	4.71	307-55-1		
PFDS*	Not detected	47		ng/kg	4.71	335-77-3		
PFTTrDA*	Not detected	47		ng/kg	4.71	72629-94-8		
FOSA*	Not detected	47		ng/kg	4.71	754-91-6		
PFTeDA*	Not detected	47		ng/kg	4.71	376-06-7		
11Cl-PF3OUdS*	Not detected	47		ng/kg	4.71	763051-92-9		
9Cl-PF3ONS*	Not detected	47		ng/kg	4.71	756426-58-1		
ADONA*	Not detected	47		ng/kg	4.71	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.21 (continued)

Sample Tag: AOC3-TP02-E

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 22:31, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	47		ng/kg	4.71	13252-13-6		
PFECHS*	Not detected	47		ng/kg	4.71	67584-42-3		
PFBSA*	Not detected	47		ng/kg	4.71	30334-69-1		
PFHxSA*	Not detected	47		ng/kg	4.71	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.22

Sample Tag: AOC3-TP02-W

Collected Date/Time: 12/14/2022 11:15

Matrix: Soil

COC Reference: 158676

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	7.87/6.58/10	ASTM D7968-17M	01/05/23 15:15	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 22:51, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	170		ng/kg	8.25	375-22-4		
PFPeA*	Not detected	83		ng/kg	8.25	2706-90-3		
4:2 FTSA*	Not detected	83		ng/kg	8.25	757124-72-4		
PFHxA*	Not detected	83		ng/kg	8.25	307-24-4		
PFBS*	Not detected	83		ng/kg	8.25	375-73-5		
PFHpA*	Not detected	83		ng/kg	8.25	375-85-9		
PFPeS*	Not detected	83		ng/kg	8.25	2706-91-4		
6:2 FTSA*	Not detected	83		ng/kg	8.25	27619-97-2		
PFOA*	Not detected	83		ng/kg	8.25	335-67-1		
PFHxS*	Not detected	83		ng/kg	8.25	355-46-4		
PFHxS-LN*	Not detected	83		ng/kg	8.25	355-46-4-LN		
PFHxS-BR*	Not detected	83		ng/kg	8.25	355-46-4-BR		
PFNA*	Not detected	83		ng/kg	8.25	375-95-1		
8:2 FTSA*	Not detected	83		ng/kg	8.25	39108-34-4		
PFHpS*	Not detected	83		ng/kg	8.25	375-92-8		
PFDA*	Not detected	83		ng/kg	8.25	335-76-2		
N-MeFOSAA*	Not detected	83		ng/kg	8.25	2355-31-9		
EtFOSAA*	Not detected	83		ng/kg	8.25	2991-50-6		
PFOS*	Not detected	83		ng/kg	8.25	1763-23-1		
PFOS-LN*	Not detected	83		ng/kg	8.25	1763-23-1-LN		
PFOS-BR*	Not detected	83		ng/kg	8.25	1763-23-1-BR		
PFUnDA*	Not detected	83		ng/kg	8.25	2058-94-8		
PFNS*	Not detected	83		ng/kg	8.25	68259-12-1		
PFDODA*	Not detected	83		ng/kg	8.25	307-55-1		
PFDS*	Not detected	83		ng/kg	8.25	335-77-3		
PFTTrDA*	Not detected	83		ng/kg	8.25	72629-94-8		
FOSA*	Not detected	83		ng/kg	8.25	754-91-6		
PFTeDA*	Not detected	83		ng/kg	8.25	376-06-7		
11Cl-PF3OUdS*	Not detected	83		ng/kg	8.25	763051-92-9		
9Cl-PF3ONS*	Not detected	83		ng/kg	8.25	756426-58-1		
ADONA*	Not detected	83		ng/kg	8.25	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.22 (continued)

Sample Tag: AOC3-TP02-W

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 22:51, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	83		ng/kg	8.25	13252-13-6		
PFECHS*	Not detected	83		ng/kg	8.25	67584-42-3		
PFBSA*	Not detected	83		ng/kg	8.25	30334-69-1		
PFHxSA*	Not detected	83		ng/kg	8.25	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.23

Sample Tag: AOC3-TP02-B

Collected Date/Time: 12/14/2022 11:36

Matrix: Soil

COC Reference: 158676

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.33/6.49/10	ASTM D7968-17M	01/05/23 15:15	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	85	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 23:10, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	130		ng/kg	6.39	375-22-4		
PFPeA*	Not detected	64		ng/kg	6.39	2706-90-3		
4:2 FTSA*	Not detected	64		ng/kg	6.39	757124-72-4		
PFHxA*	Not detected	64		ng/kg	6.39	307-24-4		
PFBS*	Not detected	64		ng/kg	6.39	375-73-5		
PFHpA*	Not detected	64		ng/kg	6.39	375-85-9		
PFPeS*	Not detected	64		ng/kg	6.39	2706-91-4		
6:2 FTSA*	Not detected	64		ng/kg	6.39	27619-97-2		
PFOA*	Not detected	64		ng/kg	6.39	335-67-1		
PFHxS*	Not detected	64		ng/kg	6.39	355-46-4		
PFHxS-LN*	Not detected	64		ng/kg	6.39	355-46-4-LN		
PFHxS-BR*	Not detected	64		ng/kg	6.39	355-46-4-BR		
PFNA*	Not detected	64		ng/kg	6.39	375-95-1		
8:2 FTSA*	Not detected	64		ng/kg	6.39	39108-34-4		
PFHpS*	Not detected	64		ng/kg	6.39	375-92-8		
PFDA*	Not detected	64		ng/kg	6.39	335-76-2		
N-MeFOSAA*	Not detected	64		ng/kg	6.39	2355-31-9		
EtFOSAA*	Not detected	64		ng/kg	6.39	2991-50-6		
PFOS*	Not detected	64		ng/kg	6.39	1763-23-1		
PFOS-LN*	Not detected	64		ng/kg	6.39	1763-23-1-LN		
PFOS-BR*	Not detected	64		ng/kg	6.39	1763-23-1-BR		
PFUnDA*	Not detected	64		ng/kg	6.39	2058-94-8		
PFNS*	Not detected	64		ng/kg	6.39	68259-12-1		
PFDODA*	Not detected	64		ng/kg	6.39	307-55-1		
PFDS*	Not detected	64		ng/kg	6.39	335-77-3		
PFTTrDA*	Not detected	64		ng/kg	6.39	72629-94-8		
FOSA*	Not detected	64		ng/kg	6.39	754-91-6		
PFTeDA*	Not detected	64		ng/kg	6.39	376-06-7		
11Cl-PF3OUdS*	Not detected	64		ng/kg	6.39	763051-92-9		
9Cl-PF3ONS*	Not detected	64		ng/kg	6.39	756426-58-1		
ADONA*	Not detected	64		ng/kg	6.39	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.23 (continued)

Sample Tag: AOC3-TP02-B

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 23:10, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	64		ng/kg	6.39	13252-13-6		
PFECHS*	Not detected	64		ng/kg	6.39	67584-42-3		
PFBSA*	Not detected	64		ng/kg	6.39	30334-69-1		
PFHxSA*	Not detected	64		ng/kg	6.39	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.24

Sample Tag: Dup-08s

Collected Date/Time: 12/14/2022 00:01

Matrix: Soil

COC Reference: 158676

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.05/6.50/10	ASTM D7968-17M	01/05/23 15:15	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 23:30, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	140		ng/kg	6.86	375-22-4		
PFPeA*	Not detected	69		ng/kg	6.86	2706-90-3		
4:2 FTSA*	Not detected	69		ng/kg	6.86	757124-72-4		
PFHxA*	Not detected	69		ng/kg	6.86	307-24-4		
PFBS*	Not detected	69		ng/kg	6.86	375-73-5		
PFHpA*	Not detected	69		ng/kg	6.86	375-85-9		
PFPeS*	Not detected	69		ng/kg	6.86	2706-91-4		
6:2 FTSA*	Not detected	69		ng/kg	6.86	27619-97-2		
PFOA*	Not detected	69		ng/kg	6.86	335-67-1		
PFHxS*	Not detected	69		ng/kg	6.86	355-46-4		
PFHxS-LN*	Not detected	69		ng/kg	6.86	355-46-4-LN		
PFHxS-BR*	Not detected	69		ng/kg	6.86	355-46-4-BR		
PFNA*	Not detected	69		ng/kg	6.86	375-95-1		
8:2 FTSA*	Not detected	69		ng/kg	6.86	39108-34-4		
PFHpS*	Not detected	69		ng/kg	6.86	375-92-8		
PFDA*	Not detected	69		ng/kg	6.86	335-76-2		
N-MeFOSAA*	Not detected	69		ng/kg	6.86	2355-31-9		
EtFOSAA*	Not detected	69		ng/kg	6.86	2991-50-6		
PFOS*	Not detected	69		ng/kg	6.86	1763-23-1		
PFOS-LN*	Not detected	69		ng/kg	6.86	1763-23-1-LN		
PFOS-BR*	Not detected	69		ng/kg	6.86	1763-23-1-BR		
PFUnDA*	Not detected	69		ng/kg	6.86	2058-94-8		
PFNS*	Not detected	69		ng/kg	6.86	68259-12-1		
PFDODA*	Not detected	69		ng/kg	6.86	307-55-1		
PFDS*	Not detected	69		ng/kg	6.86	335-77-3		
PFTTrDA*	Not detected	69		ng/kg	6.86	72629-94-8		
FOSA*	Not detected	69		ng/kg	6.86	754-91-6		
PFTeDA*	Not detected	69		ng/kg	6.86	376-06-7		
11Cl-PF3OUdS*	Not detected	69		ng/kg	6.86	763051-92-9		
9Cl-PF3ONS*	Not detected	69		ng/kg	6.86	756426-58-1		
ADONA*	Not detected	69		ng/kg	6.86	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.24 (continued)

Sample Tag: Dup-08s

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 23:30, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	69		ng/kg	6.86	13252-13-6		
PFECHS*	Not detected	69		ng/kg	6.86	67584-42-3		
PFBSA*	Not detected	69		ng/kg	6.86	30334-69-1		
PFHxSA*	Not detected	69		ng/kg	6.86	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.25

Sample Tag: AOC3-TP03-N

Collected Date/Time: 12/14/2022 12:46

Matrix: Soil

COC Reference: 158677

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.53/6.52/10	ASTM D7968-17M	01/05/23 15:15	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 23:49, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	110		ng/kg	5.29	375-22-4		
PFPeA*	Not detected	53		ng/kg	5.29	2706-90-3		
4:2 FTSA*	Not detected	53		ng/kg	5.29	757124-72-4		
PFHxA*	Not detected	53		ng/kg	5.29	307-24-4		
PFBS*	Not detected	53		ng/kg	5.29	375-73-5		
PFHpA*	Not detected	53		ng/kg	5.29	375-85-9		
PFPeS*	Not detected	53		ng/kg	5.29	2706-91-4		
6:2 FTSA*	Not detected	53		ng/kg	5.29	27619-97-2		
PFOA*	Not detected	53		ng/kg	5.29	335-67-1		
PFHxS*	Not detected	53		ng/kg	5.29	355-46-4		
PFHxS-LN*	Not detected	53		ng/kg	5.29	355-46-4-LN		
PFHxS-BR*	Not detected	53		ng/kg	5.29	355-46-4-BR		
PFNA*	Not detected	53		ng/kg	5.29	375-95-1		
8:2 FTSA*	Not detected	53		ng/kg	5.29	39108-34-4		
PFHpS*	Not detected	53		ng/kg	5.29	375-92-8		
PFDA*	Not detected	53		ng/kg	5.29	335-76-2		
N-MeFOSAA*	Not detected	53		ng/kg	5.29	2355-31-9		
EtFOSAA*	Not detected	53		ng/kg	5.29	2991-50-6		
PFOS*	Not detected	53		ng/kg	5.29	1763-23-1		
PFOS-LN*	Not detected	53		ng/kg	5.29	1763-23-1-LN		
PFOS-BR*	Not detected	53		ng/kg	5.29	1763-23-1-BR		
PFUnDA*	Not detected	53		ng/kg	5.29	2058-94-8		
PFNS*	Not detected	53		ng/kg	5.29	68259-12-1		
PFDODA*	Not detected	53		ng/kg	5.29	307-55-1		
PFDS*	Not detected	53		ng/kg	5.29	335-77-3		
PFTTrDA*	Not detected	53		ng/kg	5.29	72629-94-8		
FOSA*	Not detected	53		ng/kg	5.29	754-91-6		
PFTeDA*	Not detected	53		ng/kg	5.29	376-06-7		
11Cl-PF3OUdS*	Not detected	53		ng/kg	5.29	763051-92-9		
9Cl-PF3ONS*	Not detected	53		ng/kg	5.29	756426-58-1		
ADONA*	Not detected	53		ng/kg	5.29	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.25 (continued)

Sample Tag: AOC3-TP03-N

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/06/23 23:49, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	53		ng/kg	5.29	13252-13-6		
PFECHS*	Not detected	53		ng/kg	5.29	67584-42-3		
PFBSA*	Not detected	53		ng/kg	5.29	30334-69-1		
PFHxSA*	Not detected	53		ng/kg	5.29	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.26

Sample Tag: AOC3-TP03-S

Collected Date/Time: 12/14/2022 12:55

Matrix: Soil

COC Reference: 158677

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.30/6.49/10	ASTM D7968-17M	01/05/23 15:15	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	92	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/07/23 00:09, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	120		ng/kg	6.01	375-22-4		
PFPeA*	Not detected	60		ng/kg	6.01	2706-90-3		
4:2 FTSA*	Not detected	60		ng/kg	6.01	757124-72-4		
PFHxA*	Not detected	60		ng/kg	6.01	307-24-4		
PFBS*	Not detected	60		ng/kg	6.01	375-73-5		
PFHpA*	Not detected	60		ng/kg	6.01	375-85-9		
PFPeS*	Not detected	60		ng/kg	6.01	2706-91-4		
6:2 FTSA*	Not detected	60		ng/kg	6.01	27619-97-2		
PFOA*	Not detected	60		ng/kg	6.01	335-67-1		
PFHxS*	Not detected	60		ng/kg	6.01	355-46-4		
PFHxS-LN*	Not detected	60		ng/kg	6.01	355-46-4-LN		
PFHxS-BR*	Not detected	60		ng/kg	6.01	355-46-4-BR		
PFNA*	Not detected	60		ng/kg	6.01	375-95-1		
8:2 FTSA*	Not detected	60		ng/kg	6.01	39108-34-4		
PFHpS*	Not detected	60		ng/kg	6.01	375-92-8		
PFDA*	Not detected	60		ng/kg	6.01	335-76-2		
N-MeFOSAA*	Not detected	60		ng/kg	6.01	2355-31-9		
EtFOSAA*	Not detected	60		ng/kg	6.01	2991-50-6		
PFOS*	Not detected	60		ng/kg	6.01	1763-23-1		
PFOS-LN*	Not detected	60		ng/kg	6.01	1763-23-1-LN		
PFOS-BR*	Not detected	60		ng/kg	6.01	1763-23-1-BR		
PFUnDA*	Not detected	60		ng/kg	6.01	2058-94-8		
PFNS*	Not detected	60		ng/kg	6.01	68259-12-1		
PFDODA*	Not detected	60		ng/kg	6.01	307-55-1		
PFDS*	Not detected	60		ng/kg	6.01	335-77-3		
PFTTrDA*	Not detected	60		ng/kg	6.01	72629-94-8		
FOSA*	Not detected	60		ng/kg	6.01	754-91-6		
PFTeDA*	Not detected	60		ng/kg	6.01	376-06-7		
11Cl-PF3OUdS*	Not detected	60		ng/kg	6.01	763051-92-9		
9Cl-PF3ONS*	Not detected	60		ng/kg	6.01	756426-58-1		
ADONA*	Not detected	60		ng/kg	6.01	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.26 (continued)

Sample Tag: AOC3-TP03-S

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/07/23 00:09, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	60		ng/kg	6.01	13252-13-6		
PFECHS*	Not detected	60		ng/kg	6.01	67584-42-3		
PFBSA*	Not detected	60		ng/kg	6.01	30334-69-1		
PFHxSA*	Not detected	60		ng/kg	6.01	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.27

Sample Tag: AOC3-TP03-E

Collected Date/Time: 12/14/2022 13:02

Matrix: Soil

COC Reference: 158677

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	7.75/6.49/10	ASTM D7968-17M	01/05/23 15:15	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/07/23 00:29, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	170		ng/kg	8.44	375-22-4		
PFPeA*	Not detected	84		ng/kg	8.44	2706-90-3		
4:2 FTSA*	Not detected	84		ng/kg	8.44	757124-72-4		
PFHxA*	Not detected	84		ng/kg	8.44	307-24-4		
PFBS*	Not detected	84		ng/kg	8.44	375-73-5		
PFHpA*	Not detected	84		ng/kg	8.44	375-85-9		
PFPeS*	Not detected	84		ng/kg	8.44	2706-91-4		
6:2 FTSA*	Not detected	84		ng/kg	8.44	27619-97-2		
PFOA*	Not detected	84		ng/kg	8.44	335-67-1		
PFHxS*	Not detected	84		ng/kg	8.44	355-46-4		
PFHxS-LN*	Not detected	84		ng/kg	8.44	355-46-4-LN		
PFHxS-BR*	Not detected	84		ng/kg	8.44	355-46-4-BR		
PFNA*	Not detected	84		ng/kg	8.44	375-95-1		
8:2 FTSA*	Not detected	84		ng/kg	8.44	39108-34-4		
PFHpS*	Not detected	84		ng/kg	8.44	375-92-8		
PFDA*	Not detected	84		ng/kg	8.44	335-76-2		
N-MeFOSAA*	Not detected	84		ng/kg	8.44	2355-31-9		
EtFOSAA*	Not detected	84		ng/kg	8.44	2991-50-6		
PFOS*	Not detected	84		ng/kg	8.44	1763-23-1		
PFOS-LN*	Not detected	84		ng/kg	8.44	1763-23-1-LN		
PFOS-BR*	Not detected	84		ng/kg	8.44	1763-23-1-BR		
PFUnDA*	Not detected	84		ng/kg	8.44	2058-94-8		
PFNS*	Not detected	84		ng/kg	8.44	68259-12-1		
PFDODA*	Not detected	84		ng/kg	8.44	307-55-1		
PFDS*	Not detected	84		ng/kg	8.44	335-77-3		
PFTTrDA*	Not detected	84		ng/kg	8.44	72629-94-8		
FOSA*	Not detected	84		ng/kg	8.44	754-91-6		
PFTeDA*	Not detected	84		ng/kg	8.44	376-06-7		
11Cl-PF3OUdS*	Not detected	84		ng/kg	8.44	763051-92-9		
9Cl-PF3ONS*	Not detected	84		ng/kg	8.44	756426-58-1		
ADONA*	Not detected	84		ng/kg	8.44	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.27 (continued)

Sample Tag: AOC3-TP03-E

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/07/23 00:29, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	84		ng/kg	8.44	13252-13-6		
PFECHS*	Not detected	84		ng/kg	8.44	67584-42-3		
PFBSA*	Not detected	84		ng/kg	8.44	30334-69-1		
PFHxSA*	Not detected	84		ng/kg	8.44	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.28

Sample Tag: AOC3-TP03-W

Collected Date/Time: 12/14/2022 13:02

Matrix: Soil

COC Reference: 158677

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.15/6.49/10	ASTM D7968-17M	01/05/23 15:15	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	93	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/07/23 00:48, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	81		ng/kg	4.04	375-22-4		
PFPeA*	Not detected	40		ng/kg	4.04	2706-90-3		
4:2 FTSA*	Not detected	40		ng/kg	4.04	757124-72-4		
PFHxA*	Not detected	40		ng/kg	4.04	307-24-4		
PFBS*	Not detected	40		ng/kg	4.04	375-73-5		
PFHpA*	Not detected	40		ng/kg	4.04	375-85-9		
PFPeS*	Not detected	40		ng/kg	4.04	2706-91-4		
6:2 FTSA*	Not detected	40		ng/kg	4.04	27619-97-2		
PFOA*	Not detected	40		ng/kg	4.04	335-67-1		
PFHxS*	Not detected	40		ng/kg	4.04	355-46-4		
PFHxS-LN*	Not detected	40		ng/kg	4.04	355-46-4-LN		
PFHxS-BR*	Not detected	40		ng/kg	4.04	355-46-4-BR		
PFNA*	Not detected	40		ng/kg	4.04	375-95-1		
8:2 FTSA*	Not detected	40		ng/kg	4.04	39108-34-4		
PFHpS*	Not detected	40		ng/kg	4.04	375-92-8		
PFDA*	Not detected	40		ng/kg	4.04	335-76-2		
N-MeFOSAA*	Not detected	40		ng/kg	4.04	2355-31-9		
EtFOSAA*	Not detected	40		ng/kg	4.04	2991-50-6		
PFOS*	Not detected	40		ng/kg	4.04	1763-23-1		
PFOS-LN*	Not detected	40		ng/kg	4.04	1763-23-1-LN		
PFOS-BR*	Not detected	40		ng/kg	4.04	1763-23-1-BR		
PFUnDA*	Not detected	40		ng/kg	4.04	2058-94-8		
PFNS*	Not detected	40		ng/kg	4.04	68259-12-1		
PFDODA*	Not detected	40		ng/kg	4.04	307-55-1		
PFDS*	Not detected	40		ng/kg	4.04	335-77-3		
PFTTrDA*	Not detected	40		ng/kg	4.04	72629-94-8		
FOSA*	Not detected	40		ng/kg	4.04	754-91-6		
PFTeDA*	Not detected	40		ng/kg	4.04	376-06-7		
11Cl-PF3OUdS*	Not detected	40		ng/kg	4.04	763051-92-9		
9Cl-PF3ONS*	Not detected	40		ng/kg	4.04	756426-58-1		
ADONA*	Not detected	40		ng/kg	4.04	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.28 (continued)

Sample Tag: AOC3-TP03-W

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/07/23 00:48, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	40		ng/kg	4.04	13252-13-6		
PFECHS*	Not detected	40		ng/kg	4.04	67584-42-3		
PFBSA*	Not detected	40		ng/kg	4.04	30334-69-1		
PFHxSA*	Not detected	40		ng/kg	4.04	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.29

Sample Tag: AOC3-TP03-B

Collected Date/Time: 12/14/2022 13:27

Matrix: Soil

COC Reference: 158677

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.57/6.50/10	ASTM D7968-17M	01/05/23 15:15	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	88	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/07/23 01:08, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	74		ng/kg	3.7	375-22-4		
PFPeA*	Not detected	37		ng/kg	3.7	2706-90-3		
4:2 FTSA*	Not detected	37		ng/kg	3.7	757124-72-4		
PFHxA*	Not detected	37		ng/kg	3.7	307-24-4		
PFBS*	Not detected	37		ng/kg	3.7	375-73-5		
PFHpA*	Not detected	37		ng/kg	3.7	375-85-9		
PFPeS*	Not detected	37		ng/kg	3.7	2706-91-4		
6:2 FTSA*	Not detected	37		ng/kg	3.7	27619-97-2		
PFOA*	Not detected	37		ng/kg	3.7	335-67-1		
PFHxS*	Not detected	37		ng/kg	3.7	355-46-4		
PFHxS-LN*	Not detected	37		ng/kg	3.7	355-46-4-LN		
PFHxS-BR*	Not detected	37		ng/kg	3.7	355-46-4-BR		
PFNA*	Not detected	37		ng/kg	3.7	375-95-1		
8:2 FTSA*	Not detected	37		ng/kg	3.7	39108-34-4		
PFHpS*	Not detected	37		ng/kg	3.7	375-92-8		
PFDA*	Not detected	37		ng/kg	3.7	335-76-2		
N-MeFOSAA*	Not detected	37		ng/kg	3.7	2355-31-9		
EtFOSAA*	Not detected	37		ng/kg	3.7	2991-50-6		
PFOS*	Not detected	37		ng/kg	3.7	1763-23-1		
PFOS-LN*	Not detected	37		ng/kg	3.7	1763-23-1-LN		
PFOS-BR*	Not detected	37		ng/kg	3.7	1763-23-1-BR		
PFUnDA*	Not detected	37		ng/kg	3.7	2058-94-8		
PFNS*	Not detected	37		ng/kg	3.7	68259-12-1		
PFDODA*	Not detected	37		ng/kg	3.7	307-55-1		
PFDS*	Not detected	37		ng/kg	3.7	335-77-3		
PFTTrDA*	Not detected	37		ng/kg	3.7	72629-94-8		
FOSA*	Not detected	37		ng/kg	3.7	754-91-6		
PFTeDA*	Not detected	37		ng/kg	3.7	376-06-7		
11Cl-PF3OUdS*	Not detected	37		ng/kg	3.7	763051-92-9		
9Cl-PF3ONS*	Not detected	37		ng/kg	3.7	756426-58-1		
ADONA*	Not detected	37		ng/kg	3.7	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.29 (continued)

Sample Tag: AOC3-TP03-B

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/07/23 01:08, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	37		ng/kg	3.7	13252-13-6		
PFECHS*	Not detected	37		ng/kg	3.7	67584-42-3		
PFBSA*	Not detected	37		ng/kg	3.7	30334-69-1		
PFHxSA*	Not detected	37		ng/kg	3.7	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.30

Sample Tag: Dup-09s

Collected Date/Time: 12/14/2022 00:01

Matrix: Soil

COC Reference: 158677

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.14/6.49/10	ASTM D7968-17M	01/05/23 15:15	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	93	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/07/23 01:27, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	81		ng/kg	4.06	375-22-4		
PFPeA*	Not detected	41		ng/kg	4.06	2706-90-3		
4:2 FTSA*	Not detected	41		ng/kg	4.06	757124-72-4		
PFHxA*	Not detected	41		ng/kg	4.06	307-24-4		
PFBS*	Not detected	41		ng/kg	4.06	375-73-5		
PFHpA*	Not detected	41		ng/kg	4.06	375-85-9		
PFPeS*	Not detected	41		ng/kg	4.06	2706-91-4		
6:2 FTSA*	Not detected	41		ng/kg	4.06	27619-97-2		
PFOA*	Not detected	41		ng/kg	4.06	335-67-1		
PFHxS*	Not detected	41		ng/kg	4.06	355-46-4		
PFHxS-LN*	Not detected	41		ng/kg	4.06	355-46-4-LN		
PFHxS-BR*	Not detected	41		ng/kg	4.06	355-46-4-BR		
PFNA*	Not detected	41		ng/kg	4.06	375-95-1		
8:2 FTSA*	Not detected	41		ng/kg	4.06	39108-34-4		
PFHpS*	Not detected	41		ng/kg	4.06	375-92-8		
PFDA*	Not detected	41		ng/kg	4.06	335-76-2		
N-MeFOSAA*	Not detected	41		ng/kg	4.06	2355-31-9		
EtFOSAA*	Not detected	41		ng/kg	4.06	2991-50-6		
PFOS*	Not detected	41		ng/kg	4.06	1763-23-1		
PFOS-LN*	Not detected	41		ng/kg	4.06	1763-23-1-LN		
PFOS-BR*	Not detected	41		ng/kg	4.06	1763-23-1-BR		
PFUnDA*	Not detected	41		ng/kg	4.06	2058-94-8		
PFNS*	Not detected	41		ng/kg	4.06	68259-12-1		
PFDaDA*	Not detected	41		ng/kg	4.06	307-55-1		
PFDS*	Not detected	41		ng/kg	4.06	335-77-3		
PFTTrDA*	Not detected	41		ng/kg	4.06	72629-94-8		
FOSA*	Not detected	41		ng/kg	4.06	754-91-6		
PFTeDA*	Not detected	41		ng/kg	4.06	376-06-7		
11Cl-PF3OUdS*	Not detected	41		ng/kg	4.06	763051-92-9		
9Cl-PF3ONS*	Not detected	41		ng/kg	4.06	756426-58-1		
ADONA*	Not detected	41		ng/kg	4.06	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.30 (continued)

Sample Tag: Dup-09s

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/07/23 01:27, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	41		ng/kg	4.06	13252-13-6		
PFECHS*	Not detected	41		ng/kg	4.06	67584-42-3		
PFBSA*	Not detected	41		ng/kg	4.06	30334-69-1		
PFHxSA*	Not detected	41		ng/kg	4.06	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.31

Sample Tag: AOC3-TP04-W

Collected Date/Time: 12/14/2022 14:22

Matrix: Soil

COC Reference: 158677

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.10/6.48/10	ASTM D7968-17M	01/05/23 15:15	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	96	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/07/23 01:47, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	130		ng/kg	6.43	375-22-4		
PFPeA*	Not detected	64		ng/kg	6.43	2706-90-3		
4:2 FTSA*	Not detected	64		ng/kg	6.43	757124-72-4		
PFHxA*	Not detected	64		ng/kg	6.43	307-24-4		
PFBS*	Not detected	64		ng/kg	6.43	375-73-5		
PFHpA*	Not detected	64		ng/kg	6.43	375-85-9		
PFPeS*	Not detected	64		ng/kg	6.43	2706-91-4		
6:2 FTSA*	Not detected	64		ng/kg	6.43	27619-97-2		
PFOA*	Not detected	64		ng/kg	6.43	335-67-1		
PFHxS*	Not detected	64		ng/kg	6.43	355-46-4		
PFHxS-LN*	Not detected	64		ng/kg	6.43	355-46-4-LN		
PFHxS-BR*	Not detected	64		ng/kg	6.43	355-46-4-BR		
PFNA*	Not detected	64		ng/kg	6.43	375-95-1		
8:2 FTSA*	Not detected	64		ng/kg	6.43	39108-34-4		
PFHpS*	Not detected	64		ng/kg	6.43	375-92-8		
PFDA*	Not detected	64		ng/kg	6.43	335-76-2		
N-MeFOSAA*	Not detected	64		ng/kg	6.43	2355-31-9		
EtFOSAA*	Not detected	64		ng/kg	6.43	2991-50-6		
PFOS*	Not detected	64		ng/kg	6.43	1763-23-1		
PFOS-LN*	Not detected	64		ng/kg	6.43	1763-23-1-LN		
PFOS-BR*	Not detected	64		ng/kg	6.43	1763-23-1-BR		
PFUnDA*	Not detected	64		ng/kg	6.43	2058-94-8		
PFNS*	Not detected	64		ng/kg	6.43	68259-12-1		
PFDODA*	Not detected	64		ng/kg	6.43	307-55-1		
PFDS*	Not detected	64		ng/kg	6.43	335-77-3		
PFTTrDA*	Not detected	64		ng/kg	6.43	72629-94-8		
FOSA*	Not detected	64		ng/kg	6.43	754-91-6		
PFTeDA*	Not detected	64		ng/kg	6.43	376-06-7		
11Cl-PF3OUdS*	Not detected	64		ng/kg	6.43	763051-92-9		
9Cl-PF3ONS*	Not detected	64		ng/kg	6.43	756426-58-1		
ADONA*	Not detected	64		ng/kg	6.43	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.31 (continued)

Sample Tag: AOC3-TP04-W

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/07/23 01:47, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	64		ng/kg	6.43	13252-13-6		
PFECHS*	Not detected	64		ng/kg	6.43	67584-42-3		
PFBSA*	Not detected	64		ng/kg	6.43	30334-69-1		
PFHxSA*	Not detected	64		ng/kg	6.43	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.32

Sample Tag: AOC3-TP04-E

Collected Date/Time: 12/14/2022 14:35

Matrix: Soil

COC Reference: 158677

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.11/6.51/10	ASTM D7968-17M	01/05/23 15:15	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	98	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/07/23 02:06, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	130		ng/kg	6.38	375-22-4		
PFPeA*	Not detected	64		ng/kg	6.38	2706-90-3		
4:2 FTSA*	Not detected	64		ng/kg	6.38	757124-72-4	I	
PFHxA*	Not detected	64		ng/kg	6.38	307-24-4		
PFBS*	Not detected	64		ng/kg	6.38	375-73-5		
PFHpA*	Not detected	64		ng/kg	6.38	375-85-9		
PFPeS*	Not detected	64		ng/kg	6.38	2706-91-4		
6:2 FTSA*	Not detected	64		ng/kg	6.38	27619-97-2	I	
PFOA*	Not detected	64		ng/kg	6.38	335-67-1		
PFHxS*	Not detected	64		ng/kg	6.38	355-46-4		
PFHxS-LN*	Not detected	64		ng/kg	6.38	355-46-4-LN		
PFHxS-BR*	Not detected	64		ng/kg	6.38	355-46-4-BR		
PFNA*	Not detected	64		ng/kg	6.38	375-95-1		
8:2 FTSA*	Not detected	64		ng/kg	6.38	39108-34-4	I	
PFHpS*	Not detected	64		ng/kg	6.38	375-92-8		
PFDA*	Not detected	64		ng/kg	6.38	335-76-2		
N-MeFOSAA*	Not detected	64		ng/kg	6.38	2355-31-9		
EtFOSAA*	Not detected	64		ng/kg	6.38	2991-50-6		
PFOS*	Not detected	64		ng/kg	6.38	1763-23-1		
PFOS-LN*	Not detected	64		ng/kg	6.38	1763-23-1-LN		
PFOS-BR*	Not detected	64		ng/kg	6.38	1763-23-1-BR		
PFUnDA*	Not detected	64		ng/kg	6.38	2058-94-8		
PFNS*	Not detected	64		ng/kg	6.38	68259-12-1		
PFDODA*	Not detected	64		ng/kg	6.38	307-55-1		
PFDS*	Not detected	64		ng/kg	6.38	335-77-3		
PFTTrDA*	Not detected	64		ng/kg	6.38	72629-94-8		
FOSA*	Not detected	64		ng/kg	6.38	754-91-6		
PFTeDA*	Not detected	64		ng/kg	6.38	376-06-7		
11Cl-PF3OUdS*	Not detected	64		ng/kg	6.38	763051-92-9		
9Cl-PF3ONS*	Not detected	64		ng/kg	6.38	756426-58-1		

I-Matrix interference with internal standard



Analytical Laboratory Report

Lab Sample ID: S43534.32 (continued)

Sample Tag: AOC3-TP04-E

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/07/23 02:06, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
ADONA*	Not detected	64		ng/kg	6.38	919005-14-4		
HFPO-DA*	Not detected	64		ng/kg	6.38	13252-13-6		
PFECHS*	Not detected	64		ng/kg	6.38	67584-42-3		
PFBSA*	Not detected	64		ng/kg	6.38	30334-69-1		
PFHxSA*	Not detected	64		ng/kg	6.38	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.33

Sample Tag: AOC3-TP04-N

Collected Date/Time: 12/14/2022 14:40

Matrix: Soil

COC Reference: 158677

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.51/6.52/10	ASTM D7968-17M	01/05/23 15:15	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	96	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/07/23 02:26, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	100		ng/kg	5.23	375-22-4		
PFPeA*	Not detected	52		ng/kg	5.23	2706-90-3		
4:2 FTSA*	Not detected	52		ng/kg	5.23	757124-72-4		
PFHxA*	Not detected	52		ng/kg	5.23	307-24-4		
PFBS*	Not detected	52		ng/kg	5.23	375-73-5		
PFHpA*	Not detected	52		ng/kg	5.23	375-85-9		
PFPeS*	Not detected	52		ng/kg	5.23	2706-91-4		
6:2 FTSA*	Not detected	52		ng/kg	5.23	27619-97-2		
PFOA*	Not detected	52		ng/kg	5.23	335-67-1		
PFHxS*	Not detected	52		ng/kg	5.23	355-46-4		
PFHxS-LN*	Not detected	52		ng/kg	5.23	355-46-4-LN		
PFHxS-BR*	Not detected	52		ng/kg	5.23	355-46-4-BR		
PFNA*	Not detected	52		ng/kg	5.23	375-95-1		
8:2 FTSA*	Not detected	52		ng/kg	5.23	39108-34-4		
PFHpS*	Not detected	52		ng/kg	5.23	375-92-8		
PFDA*	Not detected	52		ng/kg	5.23	335-76-2		
N-MeFOSAA*	Not detected	52		ng/kg	5.23	2355-31-9		
EtFOSAA*	Not detected	52		ng/kg	5.23	2991-50-6		
PFOS*	Not detected	52		ng/kg	5.23	1763-23-1		
PFOS-LN*	Not detected	52		ng/kg	5.23	1763-23-1-LN		
PFOS-BR*	Not detected	52		ng/kg	5.23	1763-23-1-BR		
PFUnDA*	Not detected	52		ng/kg	5.23	2058-94-8		
PFNS*	Not detected	52		ng/kg	5.23	68259-12-1		
PFDODA*	Not detected	52		ng/kg	5.23	307-55-1		
PFDS*	Not detected	52		ng/kg	5.23	335-77-3		
PFTTrDA*	Not detected	52		ng/kg	5.23	72629-94-8		
FOSA*	Not detected	52		ng/kg	5.23	754-91-6		
PFTeDA*	Not detected	52		ng/kg	5.23	376-06-7		
11Cl-PF3OUdS*	Not detected	52		ng/kg	5.23	763051-92-9		
9Cl-PF3ONS*	Not detected	52		ng/kg	5.23	756426-58-1		
ADONA*	Not detected	52		ng/kg	5.23	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.33 (continued)

Sample Tag: AOC3-TP04-N

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/07/23 02:26, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	52		ng/kg	5.23	13252-13-6		
PFECHS*	Not detected	52		ng/kg	5.23	67584-42-3		
PFBSA*	Not detected	52		ng/kg	5.23	30334-69-1		
PFHxSA*	Not detected	52		ng/kg	5.23	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.34

Sample Tag: AOC3-TP04-S

Collected Date/Time: 12/14/2022 14:40

Matrix: Soil

COC Reference: 158677

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.60/6.54/10	ASTM D7968-17M	01/05/23 15:15	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	96	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/07/23 02:45, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	100		ng/kg	5.06	375-22-4		
PFPeA*	Not detected	51		ng/kg	5.06	2706-90-3		
4:2 FTSA*	Not detected	51		ng/kg	5.06	757124-72-4		
PFHxA*	Not detected	51		ng/kg	5.06	307-24-4		
PFBS*	Not detected	51		ng/kg	5.06	375-73-5		
PFHpA*	Not detected	51		ng/kg	5.06	375-85-9		
PFPeS*	Not detected	51		ng/kg	5.06	2706-91-4		
6:2 FTSA*	Not detected	51		ng/kg	5.06	27619-97-2		
PFOA*	Not detected	51		ng/kg	5.06	335-67-1		
PFHxS*	Not detected	51		ng/kg	5.06	355-46-4		
PFHxS-LN*	Not detected	51		ng/kg	5.06	355-46-4-LN		
PFHxS-BR*	Not detected	51		ng/kg	5.06	355-46-4-BR		
PFNA*	Not detected	51		ng/kg	5.06	375-95-1		
8:2 FTSA*	Not detected	51		ng/kg	5.06	39108-34-4		
PFHpS*	Not detected	51		ng/kg	5.06	375-92-8		
PFDA*	Not detected	51		ng/kg	5.06	335-76-2		
N-MeFOSAA*	Not detected	51		ng/kg	5.06	2355-31-9		
EtFOSAA*	Not detected	51		ng/kg	5.06	2991-50-6		
PFOS*	Not detected	51		ng/kg	5.06	1763-23-1		
PFOS-LN*	Not detected	51		ng/kg	5.06	1763-23-1-LN		
PFOS-BR*	Not detected	51		ng/kg	5.06	1763-23-1-BR		
PFUnDA*	Not detected	51		ng/kg	5.06	2058-94-8		
PFNS*	Not detected	51		ng/kg	5.06	68259-12-1		
PFDODA*	Not detected	51		ng/kg	5.06	307-55-1		
PFDS*	Not detected	51		ng/kg	5.06	335-77-3		
PFTTrDA*	Not detected	51		ng/kg	5.06	72629-94-8		
FOSA*	Not detected	51		ng/kg	5.06	754-91-6		
PFTeDA*	Not detected	51		ng/kg	5.06	376-06-7		
11Cl-PF3OUdS*	Not detected	51		ng/kg	5.06	763051-92-9		
9Cl-PF3ONS*	Not detected	51		ng/kg	5.06	756426-58-1		
ADONA*	Not detected	51		ng/kg	5.06	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.34 (continued)

Sample Tag: AOC3-TP04-S

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/07/23 02:45, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	51		ng/kg	5.06	13252-13-6		
PFECHS*	Not detected	51		ng/kg	5.06	67584-42-3		
PFBSA*	Not detected	51		ng/kg	5.06	30334-69-1		
PFHxSA*	Not detected	51		ng/kg	5.06	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.35

Sample Tag: AOC3-TP04-B

Collected Date/Time: 12/14/2022 14:52

Matrix: Soil

COC Reference: 158677

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.33/6.50/10	ASTM D7968-17M	01/05/23 15:15	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	90	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/07/23 03:05, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	120		ng/kg	6.07	375-22-4		
PFPeA*	Not detected	61		ng/kg	6.07	2706-90-3		
4:2 FTSA*	Not detected	61		ng/kg	6.07	757124-72-4		
PFHxA*	Not detected	61		ng/kg	6.07	307-24-4		
PFBS*	Not detected	61		ng/kg	6.07	375-73-5		
PFHpA*	Not detected	61		ng/kg	6.07	375-85-9		
PFPeS*	Not detected	61		ng/kg	6.07	2706-91-4		
6:2 FTSA*	Not detected	61		ng/kg	6.07	27619-97-2		
PFOA*	Not detected	61		ng/kg	6.07	335-67-1		
PFHxS*	Not detected	61		ng/kg	6.07	355-46-4		
PFHxS-LN*	Not detected	61		ng/kg	6.07	355-46-4-LN		
PFHxS-BR*	Not detected	61		ng/kg	6.07	355-46-4-BR		
PFNA*	Not detected	61		ng/kg	6.07	375-95-1		
8:2 FTSA*	Not detected	61		ng/kg	6.07	39108-34-4		
PFHpS*	Not detected	61		ng/kg	6.07	375-92-8		
PFDA*	Not detected	61		ng/kg	6.07	335-76-2		
N-MeFOSAA*	Not detected	61		ng/kg	6.07	2355-31-9		
EtFOSAA*	Not detected	61		ng/kg	6.07	2991-50-6		
PFOS*	Not detected	61		ng/kg	6.07	1763-23-1		
PFOS-LN*	Not detected	61		ng/kg	6.07	1763-23-1-LN		
PFOS-BR*	Not detected	61		ng/kg	6.07	1763-23-1-BR		
PFUnDA*	Not detected	61		ng/kg	6.07	2058-94-8		
PFNS*	Not detected	61		ng/kg	6.07	68259-12-1		
PFDODA*	Not detected	61		ng/kg	6.07	307-55-1		
PFDS*	Not detected	61		ng/kg	6.07	335-77-3		
PFTTrDA*	Not detected	61		ng/kg	6.07	72629-94-8		
FOSA*	Not detected	61		ng/kg	6.07	754-91-6		
PFTeDA*	Not detected	61		ng/kg	6.07	376-06-7		
11Cl-PF3OUdS*	Not detected	61		ng/kg	6.07	763051-92-9		
9Cl-PF3ONS*	Not detected	61		ng/kg	6.07	756426-58-1		
ADONA*	Not detected	61		ng/kg	6.07	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.35 (continued)

Sample Tag: AOC3-TP04-B

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/07/23 03:05, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	61		ng/kg	6.07	13252-13-6		
PFECHS*	Not detected	61		ng/kg	6.07	67584-42-3		
PFBSA*	Not detected	61		ng/kg	6.07	30334-69-1		
PFHxSA*	Not detected	61		ng/kg	6.07	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43534.36

Sample Tag: Dup-10s

Collected Date/Time: 12/14/2022 00:01

Matrix: Soil

COC Reference: 158677

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR
1	250ml Plastic	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.93/6.54/10	ASTM D7968-17M	01/05/23 15:15	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 15:54, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	96	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/07/23 03:24, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	87		ng/kg	4.36	375-22-4		
PFPeA*	Not detected	44		ng/kg	4.36	2706-90-3		
4:2 FTSA*	Not detected	44		ng/kg	4.36	757124-72-4		
PFHxA*	Not detected	44		ng/kg	4.36	307-24-4		
PFBS*	Not detected	44		ng/kg	4.36	375-73-5		
PFHpA*	Not detected	44		ng/kg	4.36	375-85-9		
PFPeS*	Not detected	44		ng/kg	4.36	2706-91-4		
6:2 FTSA*	Not detected	44		ng/kg	4.36	27619-97-2		
PFOA*	Not detected	44		ng/kg	4.36	335-67-1		
PFHxS*	Not detected	44		ng/kg	4.36	355-46-4		
PFHxS-LN*	Not detected	44		ng/kg	4.36	355-46-4-LN		
PFHxS-BR*	Not detected	44		ng/kg	4.36	355-46-4-BR		
PFNA*	Not detected	44		ng/kg	4.36	375-95-1		
8:2 FTSA*	Not detected	44		ng/kg	4.36	39108-34-4		
PFHpS*	Not detected	44		ng/kg	4.36	375-92-8		
PFDA*	Not detected	44		ng/kg	4.36	335-76-2		
N-MeFOSAA*	Not detected	44		ng/kg	4.36	2355-31-9		
EtFOSAA*	Not detected	44		ng/kg	4.36	2991-50-6		
PFOS*	Not detected	44		ng/kg	4.36	1763-23-1		
PFOS-LN*	Not detected	44		ng/kg	4.36	1763-23-1-LN		
PFOS-BR*	Not detected	44		ng/kg	4.36	1763-23-1-BR		
PFUnDA*	Not detected	44		ng/kg	4.36	2058-94-8		
PFNS*	Not detected	44		ng/kg	4.36	68259-12-1		
PFDODA*	Not detected	44		ng/kg	4.36	307-55-1		
PFDS*	Not detected	44		ng/kg	4.36	335-77-3		
PFTDA*	Not detected	44		ng/kg	4.36	72629-94-8		
FOSA*	Not detected	44		ng/kg	4.36	754-91-6		
PFTeDA*	Not detected	44		ng/kg	4.36	376-06-7		
11Cl-PF3OUdS*	Not detected	44		ng/kg	4.36	763051-92-9		
9Cl-PF3ONS*	Not detected	44		ng/kg	4.36	756426-58-1		
ADONA*	Not detected	44		ng/kg	4.36	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43534.36 (continued)

Sample Tag: Dup-10s

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/07/23 03:24, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	44		ng/kg	4.36	13252-13-6		
PFECHS*	Not detected	44		ng/kg	4.36	67584-42-3		
PFBSA*	Not detected	44		ng/kg	4.36	30334-69-1		
PFHxSA*	Not detected	44		ng/kg	4.36	41997-13-1		

Merit Laboratories Login Checklist

Lab Set ID:S43534

Client:TRC (TRC)

Project: Det. Axle South. Bound.

Submitted: 12/15/2022 16:00 Login User: MMC

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place

Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Selection	Description	Note
Sample Receiving		
01.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples are received at 4C +/- 2C Thermometer # IR 4.0
02.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Received on ice/ cooling process begun
03.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples shipped
04.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples left in 24 hr. drop box
05.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Are there custody seals/tape or is the drop box locked
Chain of Custody		
06.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC adequately filled out
07.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC signed and relinquished to the lab
08.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sample tag on bottles match COC
09.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Subcontracting needed? Subcontracted to:
Preservation		
10.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Do sample have correct chemical preservation
11.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Completed pH checks on preserved samples? (no VOAs)
12.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Did any samples need to be preserved in the lab?
Bottle Conditions		
13.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	All bottles intact
14.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Appropriate analytical bottles are used
15.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Merit bottles used
16.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sufficient sample volume received
17.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples require laboratory filtration
18.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples submitted within holding time
19.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Do water VOC or TOX bottles contain headspace

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____



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 www.meritlabs.com

C.O.C. PAGE # _____ OF _____ 158678

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME **K CRATSENBURG**
 COMPANY **TRC**
 ADDRESS **1540 EISENHOWER**
 CITY **ANN ARBOR** STATE **MI** ZIP CODE **48108**
 PHONE NO. _____ CELL NO. _____ P.O. NO. **193431**
 E-MAIL ADDRESS **Kcratsenburg@trccompanies.com** QUOTE NO. _____

CONTACT NAME _____ SAME
 COMPANY _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP CODE _____
 PHONE NO. _____ E-MAIL ADDRESS _____

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME **DET. AXLE SOUTH BOUND.** SAMPLER(S) - PLEASE PRINT SIGN NAME **B. YELEN**
 TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____
 DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER **TRC EDD**
 MATRIX W=WATER GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 CODE: SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR WS=WASTE

MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER
VOLATILES, 1,4 Diox								
SUBC + TICs								
METALS *								
3 ALCOHOLS								
PCB								
THORIUM								
TETRAETHYL Pb								
31 PFAS								

Certifications
 OHIO VAP Drinking Water
 DoD NPDES
 Project Locations
 Detroit New York
 Other _____
 Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	COLLECTION		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER
	DATE	TIME										
43533/43534	12.14.22	0930	A009-MW-22-13(2-4)	S	9	7					2	
		0940	A009-MW-22-13(8-10)									
		1040	A009-SB-01(2-4)									
		1100	A009-SB-01(8-10)									
		1130	A009-MW-22-14(2-4)									
		1150	A009-MW-22-14(8-10)									
		1230	A009-SB-02(2-4)									
		1300	A009-SB-02(8-10)									
		1330	A009-MW-22-15(2-4)									
		1340	A009-MW-22-15(8-10)									
		1550	A0010-MW-22-16(2-4)		8	6						
		1600	A0010-MW-22-16(8-10)		8	6						

* SEE PROJECT SCOPE FOR SOUTHERN BOUNDARY SOILS

RELINQUISHED BY: **B. Yelen** (Sampler) DATE **12/15/22** TIME **1400**
 RECEIVED BY: _____ DATE _____ TIME _____
 RELINQUISHED BY: _____ DATE _____ TIME _____
 RECEIVED BY: **M. Chilcote** DATE **12/15/22** TIME **1600**

RELINQUISHED BY: _____ DATE _____ TIME _____
 RECEIVED BY: _____ DATE _____ TIME _____
 SEAL NO. SEAL INTACT YES NO INITIALS _____
 SEAL NO. SEAL INTACT YES NO INITIALS _____
 NOTES: TEMP. ON ARRIVAL **4.0**



Analytical Laboratory Report

Report ID: S43599.01(01)
Generated on 02/23/2023

Report to
Attention: Kelly Cratsenburg
TRC
1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: 734-412-5424 FAX:
Email: KCratsenburg@trccompanies.com

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Merit Laboratories, Inc.
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Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Additional Contacts: Vince Buening

Report Summary
Lab Sample ID(s): S43599.01-S43599.31
Project: Det. Axle Southern Bound.
Collected Date(s): 12/15/2022 - 12/16/2022
Submitted Date/Time: 12/16/2022 12:00
Sampled by: B. Yelen / H. Schnaidt
P.O. #: 193431

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Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

Subcontracted Alcohols and Thorium. Received results back for all alcohols except for .13.

Did not receive Thorium results for .13 or .17.

Contacted subcontracting lab who said they believe samples were lost in their possession.

We removed the alcohols and Thorium from this set but will add them back and send a revised report if the subcontracting lab can find and run the missing samples.



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
SM2540B	Standard Method 2540 B 2015
SW1311	SW 846 Method 1311 Revision 0 July 1992
SW3015A	SW 846 Method 3015A Revision 1 February 2007
SW3050B	SW 846 Method 3050B Revision 2 December 1996
SW3535A	SW 846 Method 3535A Revision 1 February 2007
SW3546	SW 846 Method 3546 Revision 0 February 2007
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003
SW5035A	SW 846 Method 5035A Revision 1 July 2002
SW5035A/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5035A Revision 1 July 2002
SW6020A	SW 846 Method 6020A Revision 1 February 2007
SW7471B	SW 846 Method 7471B Revision 2 February 2007
SW8082A	SW 846 Method 8082A Revision 1 February 2007
SW8260B - SIM	SW 846 Method 8260B Revision 2 December 1996 SIMs
SW8270D	SW 846 Method 8270D Revision 4 February 2007



Analytical Laboratory Report

Sample Summary (31 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S43599.01	AOC10-MW-22-17 (2-4)	Soil	12/15/22 09:10
S43599.02	AOC10-MW-22-17 (8-10)	Soil	12/15/22 09:20
S43599.03	AOC8-MW-22-18 (2-4)	Soil	12/15/22 10:40
S43599.04	AOC8-MW-22-18 (8-10)	Soil	12/15/22 10:50
S43599.05	AOC8-MW-22-19 (2-4)	Soil	12/15/22 12:50
S43599.06	AOC8-MW-22-19 (8-10)	Soil	12/15/22 13:00
S43599.07	AOC12-MW-22-20 (2-4)	Soil	12/15/22 14:30
S43599.08	AOC12-MW-22-20 (10-12)	Soil	12/15/22 15:10
S43599.09	AOC12-MW-22-21 (2-4)	Soil	12/16/22 08:10
S43599.10	AOC12-MW-22-21 (8-10)	Soil	12/16/22 08:20
S43599.11	TRIP BLANK-MW	Methanol	12/16/22 10:00
S43599.12	COMP-01	Soil	12/16/22 10:00
S43599.13	AOC12-TP01-E	Soil	12/15/22 09:00
S43599.14	AOC12-TP01-W	Soil	12/15/22 09:07
S43599.15	AOC12-TP01-N	Soil	12/15/22 09:21
S43599.16	AOC12-TP01-S	Soil	12/15/22 09:27
S43599.17	AOC12-TP01-B	Soil	12/15/22 10:00
S43599.18	DUP-11S	Soil	12/15/22 00:01
S43599.19	AOC12-TP02-E	Soil	12/15/22 10:42
S43599.20	AOC12-TP02-W	Soil	12/15/22 10:52
S43599.21	AOC12-TP02-N	Soil	12/15/22 11:00
S43599.22	AOC12-TP02-S	Soil	12/15/22 11:00
S43599.23	AOC12-TP02-B	Soil	12/15/22 11:16
S43599.24	DUP-12S	Soil	12/15/22 00:01
S43599.25	AOC12-TP03-E	Soil	12/15/22 12:30
S43599.26	AOC12-TP03-W	Soil	12/15/22 12:35
S43599.27	AOC12-TP03-N	Soil	12/15/22 12:45
S43599.28	AOC12-TP03-S	Soil	12/15/22 12:45
S43599.29	AOC12-TP03-B	Soil	12/15/22 13:05
S43599.30	COMP-02	Soil	12/16/22 10:00
S43599.31	TRIP BLANK-TB	Methanol	12/16/22 10:00



Analytical Laboratory Report

Lab Sample ID: S43599.01

Sample Tag: AOC10-MW-22-17 (2-4)

Collected Date/Time: 12/15/2022 09:10

Matrix: Soil

COC Reference: 144467

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.7	IR
3	4oz Glass	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/29/22 11:15	JRH	
BNA Extraction*	Completed	SW3546	12/23/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/27/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	9.408/10	SW5035A	12/16/22 17:18	JKJ	
Mercury Digestion	Completed	SW7471B	12/20/22 12:40	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 19:53, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	89	1		%	1			

Metals

Method: SW6020A, Run Date: 12/29/22 13:55, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	3,010	1.0		mg/kg	321	7429-90-5		
Antimony	Not detected	0.50		mg/kg	321	7440-36-0		
Arsenic	0.80	0.20		mg/kg	321	7440-38-2		
Barium	8.22	1.0		mg/kg	321	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	321	7440-41-7		
Boron	Not detected	2.0		mg/kg	321	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	321	7440-43-9		
Chromium	4.56	0.50		mg/kg	321	7440-47-3		
Cobalt	1.32	0.50		mg/kg	321	7440-48-4		
Copper	1.92	0.50		mg/kg	321	7440-50-8		
Iron	3,430	1.0		mg/kg	321	7439-89-6		
Lead	1.83	0.30		mg/kg	321	7439-92-1		
Manganese	50.7	0.50		mg/kg	321	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	321	7439-98-7		
Nickel	3.33	0.50		mg/kg	321	7440-02-0		
Selenium	Not detected	0.40		mg/kg	321	7782-49-2		
Silver	Not detected	0.20		mg/kg	321	7440-22-4		
Strontium	2.10	0.50		mg/kg	321	7440-24-6		
Thallium	Not detected	0.20		mg/kg	321	7440-28-0		
Tin	Not detected	2.0		mg/kg	321	7440-31-5		
Titanium	66.3	1.0		mg/kg	321	7440-32-6		
Vanadium	6.24	0.50		mg/kg	321	7440-62-2		
Zinc	8.30	0.50		mg/kg	321	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43599.01 (continued)

Sample Tag: AOC10-MW-22-17 (2-4)

Method: SW6020A, Run Date: 12/29/22 16:13, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	708	20		mg/kg	321	7440-70-2		
Magnesium	479	20		mg/kg	321	7439-95-4		
Potassium	65.2	60		mg/kg	321	7440-09-7		
Sodium	Not detected	20		mg/kg	321	7440-23-5		

Method: SW7471B, Run Date: 12/20/22 15:33, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	81	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 21:37, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/07/23 02:45, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8		
Anthracene	Not detected	330		ug/kg	7.5	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3		
Chrysene	Not detected	330		ug/kg	7.5	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43599.01 (continued)

Sample Tag: AOC10-MW-22-17 (2-4)

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/07/23 02:45, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0		
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0		
Fluorene	Not detected	330		ug/kg	7.5	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5		
Isophorone	Not detected	330		ug/kg	7.5	78-59-1		
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5		
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8		
Phenol	Not detected	330		ug/kg	7.5	108-95-2		
Pyrene	Not detected	330		ug/kg	7.5	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2		
Benzidine	Not detected	330		ug/kg	7.5	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 01/07/23 02:45, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	7.5			
Fluoranthene	Found			ug/kg	7.5	206-44-0		
Pyrene	Found			ug/kg	7.5	129-00-0		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/20/22 08:59, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	65.9	108-20-3		
TICs*	None Found			ug/kg	65.9			

Method: SW8260B - SIM, Run Date: 12/23/22 22:31, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	65.9	96-12-8		
1,4-Dioxane*	Not detected	70		ug/kg	65.9	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 08:59, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	65.9	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	300		ug/kg	65.9	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	65.9	107-13-1		
2-Butanone (MEK)	Not detected	990		ug/kg	65.9	78-93-3		



Analytical Laboratory Report

Lab Sample ID: S43599.01 (continued)

Sample Tag: AOC10-MW-22-17 (2-4)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 08:59, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Dichlorodifluoromethane	Not detected	300		ug/kg	65.9	75-71-8		
Chloromethane	Not detected	300		ug/kg	65.9	74-87-3		
Vinyl chloride	Not detected	70		ug/kg	65.9	75-01-4		
Bromomethane	Not detected	300		ug/kg	65.9	74-83-9		
Chloroethane	Not detected	300		ug/kg	65.9	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	65.9	75-69-4		
1,1-Dichloroethene	Not detected	70		ug/kg	65.9	75-35-4		
Methylene chloride	Not detected	100		ug/kg	65.9	75-09-2		
trans-1,2-Dichloroethene	Not detected	70		ug/kg	65.9	156-60-5		
1,1-Dichloroethane	Not detected	70		ug/kg	65.9	75-34-3		
cis-1,2-Dichloroethene	Not detected	70		ug/kg	65.9	156-59-2		
Chloroform	Not detected	70		ug/kg	65.9	67-66-3		
1,1,1-Trichloroethane	Not detected	70		ug/kg	65.9	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	65.9	108-10-1		
Carbon tetrachloride	Not detected	70		ug/kg	65.9	56-23-5		
Benzene	Not detected	70		ug/kg	65.9	71-43-2		
1,2-Dichloroethane	Not detected	70		ug/kg	65.9	107-06-2		
Trichloroethene	Not detected	70		ug/kg	65.9	79-01-6		
1,2-Dichloropropane	Not detected	70		ug/kg	65.9	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	65.9	75-27-4		
Dibromomethane	Not detected	300		ug/kg	65.9	74-95-3		
cis-1,3-Dichloropropene	Not detected	70		ug/kg	65.9	10061-01-5		
Toluene	Not detected	70		ug/kg	65.9	108-88-3		
trans-1,3-Dichloropropene	Not detected	70		ug/kg	65.9	10061-02-6		
1,1,2-Trichloroethane	Not detected	70		ug/kg	65.9	79-00-5		
Tetrachloroethene	Not detected	70		ug/kg	65.9	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	65.9	124-48-1		
1,2-Dibromoethane	Not detected	30		ug/kg	65.9	106-93-4	M	
Chlorobenzene	Not detected	70		ug/kg	65.9	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	65.9	630-20-6		
Ethylbenzene	Not detected	70		ug/kg	65.9	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	65.9			
o-Xylene	Not detected	70		ug/kg	65.9	95-47-6		
Styrene	Not detected	70		ug/kg	65.9	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	65.9	98-82-8		
Bromoform	Not detected	100		ug/kg	65.9	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	70		ug/kg	65.9	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	65.9	96-18-4		
n-Propylbenzene	Not detected	70		ug/kg	65.9	103-65-1		
Bromobenzene	Not detected	100		ug/kg	65.9	108-86-1		
1,3,5-Trimethylbenzene	Not detected	70		ug/kg	65.9	108-67-8		
tert-Butylbenzene	Not detected	70		ug/kg	65.9	98-06-6		
1,2,4-Trimethylbenzene	Not detected	70		ug/kg	65.9	95-63-6		
sec-Butylbenzene	Not detected	70		ug/kg	65.9	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	65.9	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	65.9	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	65.9	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	65.9	95-50-1		
1,2,3-Trimethylbenzene	Not detected	70		ug/kg	65.9	526-73-8		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43599.01 (continued)

Sample Tag: AOC10-MW-22-17 (2-4)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 08:59, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
n-Butylbenzene	Not detected	70		ug/kg	65.9	104-51-8		
1,2,4-Trichlorobenzene	Not detected	430		ug/kg	65.9	120-82-1		
1,2,3-Trichlorobenzene	Not detected	430		ug/kg	65.9	87-61-6		
Naphthalene	Not detected	300		ug/kg	65.9	91-20-3		
Acrolein	Not detected	70		ug/kg	65.9	107-02-8		
2-Chlorotoluene	Not detected	70		ug/kg	65.9	95-49-8		
4-Chlorotoluene	Not detected	70		ug/kg	65.9	106-43-4		
1,3-Dichloropropane	Not detected	70		ug/kg	65.9	142-28-9		
1,1-Dichloropropene	Not detected	70		ug/kg	65.9	563-58-6		
2,2-Dichloropropane	Not detected	70		ug/kg	65.9	594-20-7		
Hexachlorobutadiene	Not detected	70		ug/kg	65.9	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	70		ug/kg	65.9	76-13-1		

Other / Misc.

Method: , Run Date: 12/28/22 17:23, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 01/04/23 15:50, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43599.02

Sample Tag: AOC10-MW-22-17 (8-10)

Collected Date/Time: 12/15/2022 09:20

Matrix: Soil

COC Reference: 144467

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.7	IR
3	4oz Glass	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/29/22 11:15	JRH	
BNA Extraction*	Completed	SW3546	12/23/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/27/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	13.397/13	SW5035A	12/16/22 17:18	JKJ	
Mercury Digestion	Completed	SW7471B	12/20/22 12:40	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 19:53, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	93	1		%	1			

Metals

Method: SW6020A, Run Date: 12/29/22 13:57, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	2,500	1.0		mg/kg	330	7429-90-5		
Antimony	Not detected	0.50		mg/kg	330	7440-36-0		
Arsenic	0.75	0.20		mg/kg	330	7440-38-2		
Barium	9.08	1.0		mg/kg	330	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	330	7440-41-7		
Boron	Not detected	2.0		mg/kg	330	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	330	7440-43-9		
Chromium	4.47	0.50		mg/kg	330	7440-47-3		
Cobalt	1.16	0.50		mg/kg	330	7440-48-4		
Copper	1.31	0.50		mg/kg	330	7440-50-8		
Iron	3,440	1.0		mg/kg	330	7439-89-6		
Lead	1.39	0.30		mg/kg	330	7439-92-1		
Manganese	60.2	0.50		mg/kg	330	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	330	7439-98-7		
Nickel	3.04	0.50		mg/kg	330	7440-02-0		
Selenium	Not detected	0.40		mg/kg	330	7782-49-2		
Silver	Not detected	0.20		mg/kg	330	7440-22-4		
Strontium	2.73	0.50		mg/kg	330	7440-24-6		
Thallium	Not detected	0.20		mg/kg	330	7440-28-0		
Tin	Not detected	2.0		mg/kg	330	7440-31-5		
Titanium	43.9	1.0		mg/kg	330	7440-32-6		
Vanadium	6.51	0.50		mg/kg	330	7440-62-2		
Zinc	5.65	0.50		mg/kg	330	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43599.02 (continued)

Sample Tag: AOC10-MW-22-17 (8-10)

Method: SW6020A, Run Date: 12/29/22 16:14, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	1,980	20		mg/kg	330	7440-70-2		
Magnesium	714	20		mg/kg	330	7439-95-4		
Potassium	65.1	60		mg/kg	330	7440-09-7		
Sodium	Not detected	20		mg/kg	330	7440-23-5		

Method: SW7471B, Run Date: 12/20/22 15:36, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	85	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 21:49, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/07/23 10:51, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	350	330		ug/kg	7.5	83-32-9		
Acenaphthylene	390	330		ug/kg	7.5	208-96-8		
Anthracene	1,840	330		ug/kg	7.5	120-12-7		
Benzo(a)anthracene	4,990	330		ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	3,800	330		ug/kg	7.5	205-99-2		
Benzo(k)fluoranthene	3,900	330		ug/kg	7.5	207-08-9		
Benzo(ghi)perylene	1,470	330		ug/kg	7.5	191-24-2		
Benzo(a)pyrene	4,130	330		ug/kg	7.5	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3		
Chrysene	4,500	330		ug/kg	7.5	218-01-9		
Dibenzo(ah)anthracene	340	330		ug/kg	7.5	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43599.02 (continued)

Sample Tag: AOC10-MW-22-17 (8-10)

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/07/23 10:51, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0		
Fluoranthene	11,870	330		ug/kg	7.5	206-44-0		
Fluorene	1,540	330		ug/kg	7.5	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1		
Indeno(1,2,3-cd)pyrene	1,560	330		ug/kg	7.5	193-39-5		
Isophorone	Not detected	330		ug/kg	7.5	78-59-1		
Naphthalene	360	330		ug/kg	7.5	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5		
Phenanthrene	10,190	330		ug/kg	7.5	85-01-8		
Phenol	Not detected	330		ug/kg	7.5	108-95-2		
Pyrene	9,320	330		ug/kg	7.5	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2		
Benzidine	Not detected	330		ug/kg	7.5	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 01/07/23 10:51, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	7.5			
Fluoranthene	Found			ug/kg	7.5	206-44-0		
Pyrene	Found			ug/kg	7.5	129-00-0		
Phenanthrene	Found			ug/kg	7.5	85-01-8		
Chrysene	Found			ug/kg	7.5	218-01-9		
Benzo(a)anthracene	Found			ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	7.5	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	7.5	207-08-9		
Benzo(a)pyrene	Found			ug/kg	7.5	50-32-8		
Benzo(e)pyrene	Found			ug/kg	7.5	192-97-2		
11H-Benzo[a]fluorene	Found			ug/kg	7.5	238-54-6		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/20/22 09:23, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	55.9	108-20-3		
TICs*	None Found			ug/kg	55.9			



Analytical Laboratory Report

Lab Sample ID: S43599.02 (continued)

Sample Tag: AOC10-MW-22-17 (8-10)

Method: SW8260B - SIM, Run Date: 12/25/22 11:15, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	55.9	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	55.9	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 09:23, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	55.9	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	55.9	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	55.9	107-13-1		
2-Butanone (MEK)	Not detected	840		ug/kg	55.9	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	55.9	75-71-8		
Chloromethane	Not detected	300		ug/kg	55.9	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	55.9	75-01-4		
Bromomethane	Not detected	200		ug/kg	55.9	74-83-9		
Chloroethane	Not detected	300		ug/kg	55.9	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	55.9	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	55.9	75-35-4		
Methylene chloride	Not detected	100		ug/kg	55.9	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	55.9	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	55.9	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	55.9	156-59-2		
Chloroform	Not detected	60		ug/kg	55.9	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	55.9	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	55.9	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	55.9	56-23-5		
Benzene	Not detected	60		ug/kg	55.9	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	55.9	107-06-2		
Trichloroethene	Not detected	60		ug/kg	55.9	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	55.9	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	55.9	75-27-4		
Dibromomethane	Not detected	300		ug/kg	55.9	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	55.9	10061-01-5		
Toluene	Not detected	60		ug/kg	55.9	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	55.9	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	55.9	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	55.9	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	55.9	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	55.9	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	55.9	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	55.9	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	55.9	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	55.9			
o-Xylene	Not detected	60		ug/kg	55.9	95-47-6		
Styrene	Not detected	60		ug/kg	55.9	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	55.9	98-82-8		
Bromoform	Not detected	100		ug/kg	55.9	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	55.9	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	55.9	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	55.9	103-65-1		
Bromobenzene	Not detected	100		ug/kg	55.9	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43599.02 (continued)

Sample Tag: AOC10-MW-22-17 (8-10)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 09:23, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	55.9	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	55.9	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	55.9	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	55.9	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	55.9	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	55.9	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	55.9	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	55.9	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	55.9	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	55.9	104-51-8		
1,2,4-Trichlorobenzene	Not detected	370		ug/kg	55.9	120-82-1		
1,2,3-Trichlorobenzene	Not detected	370		ug/kg	55.9	87-61-6		
Naphthalene	Not detected	300		ug/kg	55.9	91-20-3		
Acrolein	Not detected	60		ug/kg	55.9	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	55.9	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	55.9	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	55.9	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	55.9	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	55.9	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	55.9	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	55.9	76-13-1		

Other / Misc.

Method: , Run Date: 12/28/22 17:44, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 01/04/23 16:07, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43599.03

Sample Tag: AOC8-MW-22-18 (2-4)

Collected Date/Time: 12/15/2022 10:40

Matrix: Soil

COC Reference: 144467

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.7	IR
3	4oz Glass	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/29/22 11:15	JRH	
BNA Extraction*	Completed	SW3546	12/23/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/27/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	12.973/12	SW5035A	12/16/22 17:18	JKJ	
Mercury Digestion	Completed	SW7471B	12/20/22 12:40	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 19:53, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	88	1		%	1			

Metals

Method: SW6020A, Run Date: 12/29/22 13:59, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	5,240	1.0		mg/kg	316	7429-90-5		
Antimony	Not detected	0.50		mg/kg	316	7440-36-0		
Arsenic	2.12	0.20		mg/kg	316	7440-38-2		
Barium	58.2	1.0		mg/kg	316	7440-39-3		
Beryllium	0.48	0.20		mg/kg	316	7440-41-7		
Boron	3.41	2.0		mg/kg	316	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	316	7440-43-9		
Chromium	14.8	0.50		mg/kg	316	7440-47-3		
Cobalt	1.31	0.50		mg/kg	316	7440-48-4		
Copper	7.00	0.50		mg/kg	316	7440-50-8		
Iron	6,650	1.0		mg/kg	316	7439-89-6		
Lead	11.1	0.30		mg/kg	316	7439-92-1		
Manganese	370	0.50		mg/kg	316	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	316	7439-98-7		
Nickel	3.48	0.50		mg/kg	316	7440-02-0		
Selenium	0.44	0.40		mg/kg	316	7782-49-2		
Silver	Not detected	0.20		mg/kg	316	7440-22-4		
Strontium	33.9	0.50		mg/kg	316	7440-24-6		
Thallium	Not detected	0.20		mg/kg	316	7440-28-0		
Tin	Not detected	2.0		mg/kg	316	7440-31-5		
Titanium	34.1	1.0		mg/kg	316	7440-32-6		
Vanadium	10.0	0.50		mg/kg	316	7440-62-2		
Zinc	27.9	0.50		mg/kg	316	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43599.03 (continued)

Sample Tag: AOC8-MW-22-18 (2-4)

Method: SW6020A, Run Date: 12/29/22 16:15, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	8,580	20		mg/kg	316	7440-70-2		
Magnesium	1,500	20		mg/kg	316	7439-95-4		
Potassium	174	60		mg/kg	316	7440-09-7		
Sodium	94.7	20		mg/kg	316	7440-23-5		

Method: SW7471B, Run Date: 12/20/22 15:39, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.060	0.050		mg/kg	90	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 22:01, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/07/23 03:15, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8		
Anthracene	Not detected	330		ug/kg	7.5	120-12-7		
Benzo(a)anthracene	540	330		ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	490	330		ug/kg	7.5	205-99-2		
Benzo(k)fluoranthene	510	330		ug/kg	7.5	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2		
Benzo(a)pyrene	590	330		ug/kg	7.5	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3		
Chrysene	620	330		ug/kg	7.5	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43599.03 (continued)

Sample Tag: AOC8-MW-22-18 (2-4)

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/07/23 03:15, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0		
Fluoranthene	590	330		ug/kg	7.5	206-44-0		
Fluorene	Not detected	330		ug/kg	7.5	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5		
Isophorone	Not detected	330		ug/kg	7.5	78-59-1		
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5		
Phenanthrene	420	330		ug/kg	7.5	85-01-8		
Phenol	Not detected	330		ug/kg	7.5	108-95-2		
Pyrene	770	330		ug/kg	7.5	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2		
Benzidine	Not detected	330		ug/kg	7.5	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 01/07/23 03:15, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	7.5			
Fluoranthene	Found			ug/kg	7.5	206-44-0		
Pyrene	Found			ug/kg	7.5	129-00-0		
Phenanthrene	Found			ug/kg	7.5	85-01-8		
Chrysene	Found			ug/kg	7.5	218-01-9		
Benzo(a)anthracene	Found			ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	7.5	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	7.5	207-08-9		
Benzo(a)pyrene	Found			ug/kg	7.5	50-32-8		
Benzo(e)pyrene	Found			ug/kg	7.5	192-97-2		
Acenaphthylene	Found			ug/kg	7.5	208-96-8		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/20/22 09:46, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	59.4	108-20-3		
TICs*	None Found			ug/kg	59.4			



Analytical Laboratory Report

Lab Sample ID: S43599.03 (continued)

Sample Tag: AOC8-MW-22-18 (2-4)

Method: SW8260B - SIM, Run Date: 12/25/22 11:36, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	59.4	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	59.4	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 09:46, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	59.4	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	59.4	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	59.4	107-13-1		
2-Butanone (MEK)	Not detected	890		ug/kg	59.4	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	59.4	75-71-8		
Chloromethane	Not detected	300		ug/kg	59.4	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	59.4	75-01-4		
Bromomethane	Not detected	200		ug/kg	59.4	74-83-9		
Chloroethane	Not detected	300		ug/kg	59.4	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	59.4	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	59.4	75-35-4		
Methylene chloride	Not detected	100		ug/kg	59.4	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	59.4	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	59.4	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	59.4	156-59-2		
Chloroform	Not detected	60		ug/kg	59.4	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	59.4	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	59.4	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	59.4	56-23-5		
Benzene	Not detected	60		ug/kg	59.4	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	59.4	107-06-2		
Trichloroethene	Not detected	60		ug/kg	59.4	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	59.4	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	59.4	75-27-4		
Dibromomethane	Not detected	300		ug/kg	59.4	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	59.4	10061-01-5		
Toluene	Not detected	60		ug/kg	59.4	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	59.4	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	59.4	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	59.4	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	59.4	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	59.4	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	59.4	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	59.4	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	59.4	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	59.4			
o-Xylene	Not detected	60		ug/kg	59.4	95-47-6		
Styrene	Not detected	60		ug/kg	59.4	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	59.4	98-82-8		
Bromoform	Not detected	100		ug/kg	59.4	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	59.4	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	59.4	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	59.4	103-65-1		
Bromobenzene	Not detected	100		ug/kg	59.4	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43599.03 (continued)

Sample Tag: AOC8-MW-22-18 (2-4)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 09:46, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	59.4	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	59.4	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	59.4	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	59.4	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	59.4	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	59.4	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	59.4	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	59.4	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	59.4	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	59.4	104-51-8		
1,2,4-Trichlorobenzene	Not detected	390		ug/kg	59.4	120-82-1		
1,2,3-Trichlorobenzene	Not detected	390		ug/kg	59.4	87-61-6		
Naphthalene	Not detected	300		ug/kg	59.4	91-20-3		
Acrolein	Not detected	60		ug/kg	59.4	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	59.4	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	59.4	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	59.4	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	59.4	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	59.4	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	59.4	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	59.4	76-13-1		

Other / Misc.

Method: , Run Date: 12/28/22 18:06, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 01/04/23 16:21, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43599.04

Sample Tag: AOC8-MW-22-18 (8-10)

Collected Date/Time: 12/15/2022 10:50

Matrix: Soil

COC Reference: 144467

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.7	IR
3	4oz Glass	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	12/29/22 11:15	JRH	
BNA Extraction*	Completed	SW3546	12/23/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/27/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	12.996/12	SW5035A	12/16/22 17:18	JKJ	
Mercury Digestion	Completed	SW7471B	12/20/22 12:40	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 19:53, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Metals

Method: SW6020A, Run Date: 12/29/22 14:02, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,360	1.0		mg/kg	323	7429-90-5		
Antimony	Not detected	0.50		mg/kg	323	7440-36-0		
Arsenic	0.53	0.20		mg/kg	323	7440-38-2		
Barium	8.15	1.0		mg/kg	323	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	323	7440-41-7		
Boron	Not detected	2.0		mg/kg	323	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	323	7440-43-9		
Chromium	2.85	0.50		mg/kg	323	7440-47-3		
Cobalt	1.37	0.50		mg/kg	323	7440-48-4		
Copper	2.31	0.50		mg/kg	323	7440-50-8		
Iron	3,790	1.0		mg/kg	323	7439-89-6		
Lead	1.10	0.30		mg/kg	323	7439-92-1		
Manganese	32.8	0.50		mg/kg	323	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	323	7439-98-7		
Nickel	3.21	0.50		mg/kg	323	7440-02-0		
Selenium	Not detected	0.40		mg/kg	323	7782-49-2		
Silver	Not detected	0.20		mg/kg	323	7440-22-4		
Strontium	1.57	0.50		mg/kg	323	7440-24-6		
Thallium	Not detected	0.20		mg/kg	323	7440-28-0		
Tin	Not detected	2.0		mg/kg	323	7440-31-5		
Titanium	9.25	1.0		mg/kg	323	7440-32-6		
Vanadium	3.91	0.50		mg/kg	323	7440-62-2		
Zinc	6.13	0.50		mg/kg	323	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43599.04 (continued)

Sample Tag: AOC8-MW-22-18 (8-10)

Method: SW6020A, Run Date: 12/29/22 16:16, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	407	20		mg/kg	323	7440-70-2		
Magnesium	336	20		mg/kg	323	7439-95-4		
Potassium	94.8	60		mg/kg	323	7440-09-7		
Sodium	235	20		mg/kg	323	7440-23-5		

Method: SW7471B, Run Date: 12/20/22 15:43, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	80	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 22:13, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/07/23 03:46, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	7.5			
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8		
Anthracene	Not detected	330		ug/kg	7.5	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3		
Chrysene	Not detected	330		ug/kg	7.5	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3		



Analytical Laboratory Report

Lab Sample ID: S43599.04 (continued)

Sample Tag: AOC8-MW-22-18 (8-10)

Method: SW8270D, Run Date: 01/07/23 03:46, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1		
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0		
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0		
Fluorene	Not detected	330		ug/kg	7.5	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5		
Isophorone	Not detected	330		ug/kg	7.5	78-59-1		
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5		
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8		
Phenol	Not detected	330		ug/kg	7.5	108-95-2		
Pyrene	Not detected	330		ug/kg	7.5	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2		
Benzidine	Not detected	330		ug/kg	7.5	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/20/22 10:11, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	51.2	108-20-3		
TICs*	None Found			ug/kg	51.2			

Method: SW8260B - SIM, Run Date: 12/25/22 11:56, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	51.2	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	51.2	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 10:11, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	51.2	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	51.2	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	51.2	107-13-1		
2-Butanone (MEK)	Not detected	770		ug/kg	51.2	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	51.2	75-71-8		
Chloromethane	Not detected	300		ug/kg	51.2	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	51.2	75-01-4		
Bromomethane	Not detected	200		ug/kg	51.2	74-83-9		
Chloroethane	Not detected	300		ug/kg	51.2	75-00-3		



Analytical Laboratory Report

Lab Sample ID: S43599.04 (continued)

Sample Tag: AOC8-MW-22-18 (8-10)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 10:11, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Trichlorofluoromethane	Not detected	100		ug/kg	51.2	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	51.2	75-35-4		
Methylene chloride	Not detected	100		ug/kg	51.2	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	51.2	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	51.2	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	51.2	156-59-2		
Chloroform	Not detected	50		ug/kg	51.2	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	51.2	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	51.2	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	51.2	56-23-5		
Benzene	Not detected	50		ug/kg	51.2	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	51.2	107-06-2		
Trichloroethene	Not detected	50		ug/kg	51.2	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	51.2	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	51.2	75-27-4		
Dibromomethane	Not detected	300		ug/kg	51.2	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	51.2	10061-01-5		
Toluene	Not detected	50		ug/kg	51.2	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	51.2	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	51.2	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	51.2	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	51.2	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	51.2	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	51.2	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	51.2	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	51.2	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	51.2			
o-Xylene	Not detected	50		ug/kg	51.2	95-47-6		
Styrene	Not detected	50		ug/kg	51.2	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	51.2	98-82-8		
Bromoform	Not detected	100		ug/kg	51.2	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	51.2	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	51.2	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	51.2	103-65-1		
Bromobenzene	Not detected	100		ug/kg	51.2	108-86-1		
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	51.2	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	51.2	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	51.2	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	51.2	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	51.2	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	51.2	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	51.2	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	51.2	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	51.2	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	51.2	104-51-8		
1,2,4-Trichlorobenzene	Not detected	340		ug/kg	51.2	120-82-1		
1,2,3-Trichlorobenzene	Not detected	340		ug/kg	51.2	87-61-6		
Naphthalene	Not detected	300		ug/kg	51.2	91-20-3		
Acrolein	Not detected	50		ug/kg	51.2	107-02-8		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43599.04 (continued)

Sample Tag: AOC8-MW-22-18 (8-10)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 10:11, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2-Chlorotoluene	Not detected	50		ug/kg	51.2	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	51.2	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	51.2	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	51.2	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	51.2	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	51.2	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	51.2	76-13-1		

Other / Misc.

Method: , Run Date: 12/28/22 18:27, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 01/04/23 16:24, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43599.05

Sample Tag: AOC8-MW-22-19 (2-4)

Collected Date/Time: 12/15/2022 12:50

Matrix: Soil

COC Reference: 144467

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.7	IR
3	4oz Glass	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	01/04/23 10:05	JRH	
BNA Extraction*	Completed	SW3546	12/23/22 13:00	TAW	
Extraction, PCB*	Completed	SW3546	12/27/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	12.873/12	SW5035A	12/16/22 17:18	JKJ	
Mercury Digestion	Completed	SW7471B	12/20/22 12:40	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 19:53, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Metals

Method: SW6020A, Run Date: 01/05/23 11:18, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	9,480	20		mg/kg	322	7440-70-2		
Magnesium	2,500	20		mg/kg	322	7439-95-4		
Potassium	106	20		mg/kg	322	7440-09-7		
Sodium	Not detected	20		mg/kg	322	7440-23-5		

Method: SW6020A, Run Date: 01/04/23 13:14, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,930	1.0		mg/kg	322	7429-90-5		
Antimony	Not detected	0.50		mg/kg	322	7440-36-0		
Arsenic	0.90	0.20		mg/kg	322	7440-38-2		
Beryllium	Not detected	0.20		mg/kg	322	7440-41-7		
Boron	Not detected	2.0		mg/kg	322	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	322	7440-43-9		
Chromium	3.73	0.50		mg/kg	322	7440-47-3		
Cobalt	1.19	0.50		mg/kg	322	7440-48-4		
Copper	2.54	0.50		mg/kg	322	7440-50-8		
Iron	2,980	1.0		mg/kg	322	7439-89-6		
Lead	3.75	0.30		mg/kg	322	7439-92-1		
Manganese	68.3	0.50		mg/kg	322	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	322	7439-98-7		
Nickel	3.08	0.50		mg/kg	322	7440-02-0		
Selenium	Not detected	0.40		mg/kg	322	7782-49-2		
Silver	Not detected	0.20		mg/kg	322	7440-22-4		
Strontium	8.95	0.50		mg/kg	322	7440-24-6		
Thallium	Not detected	0.20		mg/kg	322	7440-28-0		
Titanium	37.4	1.0		mg/kg	322	7440-32-6		
Vanadium	4.97	0.50		mg/kg	322	7440-62-2		



Analytical Laboratory Report

Lab Sample ID: S43599.05 (continued)

Sample Tag: AOC8-MW-22-19 (2-4)

Method: SW6020A, Run Date: 01/04/23 13:14, Analyst: JRH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Zinc	10.8	0.50		mg/kg	322	7440-66-6		

Method: SW6020A, Run Date: 01/04/23 15:34, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Barium	8.35	1.0		mg/kg	322	7440-39-3		
Tin	Not detected	2.0		mg/kg	322	7440-31-5		

Method: SW7471B, Run Date: 12/20/22 15:46, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.057	0.050		mg/kg	77	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 22:25, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/07/23 04:16, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8		
Anthracene	Not detected	330		ug/kg	7.5	120-12-7		
Benzo(a)anthracene	370	330		ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	360	330		ug/kg	7.5	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2		
Benzo(a)pyrene	360	330		ug/kg	7.5	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3		
Chrysene	420	330		ug/kg	7.5	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9		



Analytical Laboratory Report

Lab Sample ID: S43599.05 (continued)

Sample Tag: AOC8-MW-22-19 (2-4)

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/07/23 04:16, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1		
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0		
Fluoranthene	820	330		ug/kg	7.5	206-44-0		
Fluorene	Not detected	330		ug/kg	7.5	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5		
Isophorone	Not detected	330		ug/kg	7.5	78-59-1		
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5		
Phenanthrene	380	330		ug/kg	7.5	85-01-8		
Phenol	Not detected	330		ug/kg	7.5	108-95-2		
Pyrene	710	330		ug/kg	7.5	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2		
Benzidine	Not detected	330		ug/kg	7.5	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 01/07/23 04:16, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	7.5			
Fluoranthene	Found			ug/kg	7.5	206-44-0		
Pyrene	Found			ug/kg	7.5	129-00-0		
Phenanthrene	Found			ug/kg	7.5	85-01-8		
Chrysene	Found			ug/kg	7.5	218-01-9		
Benzo(a)anthracene	Found			ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	7.5	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	7.5	207-08-9		
Benzo(a)pyrene	Found			ug/kg	7.5	50-32-8		
Benzo(e)pyrene	Found			ug/kg	7.5	192-97-2		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/20/22 10:35, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	52.8	108-20-3		
TICs*	None Found			ug/kg	52.8			



Analytical Laboratory Report

Lab Sample ID: S43599.05 (continued)

Sample Tag: AOC8-MW-22-19 (2-4)

Method: SW8260B - SIM, Run Date: 12/25/22 12:17, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	52.8	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	52.8	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 10:35, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	52.8	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	52.8	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	52.8	107-13-1		
2-Butanone (MEK)	Not detected	790		ug/kg	52.8	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	52.8	75-71-8		
Chloromethane	Not detected	300		ug/kg	52.8	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	52.8	75-01-4		
Bromomethane	Not detected	200		ug/kg	52.8	74-83-9		
Chloroethane	Not detected	300		ug/kg	52.8	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	52.8	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	52.8	75-35-4		
Methylene chloride	Not detected	100		ug/kg	52.8	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	52.8	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	52.8	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	52.8	156-59-2		
Chloroform	Not detected	50		ug/kg	52.8	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	52.8	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	52.8	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	52.8	56-23-5		
Benzene	Not detected	50		ug/kg	52.8	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	52.8	107-06-2		
Trichloroethene	Not detected	50		ug/kg	52.8	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	52.8	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	52.8	75-27-4		
Dibromomethane	Not detected	300		ug/kg	52.8	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	52.8	10061-01-5		
Toluene	Not detected	50		ug/kg	52.8	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	52.8	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	52.8	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	52.8	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	52.8	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	52.8	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	52.8	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	52.8	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	52.8	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	52.8			
o-Xylene	Not detected	50		ug/kg	52.8	95-47-6		
Styrene	Not detected	50		ug/kg	52.8	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	52.8	98-82-8		
Bromoform	Not detected	100		ug/kg	52.8	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	52.8	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	52.8	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	52.8	103-65-1		
Bromobenzene	Not detected	100		ug/kg	52.8	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43599.05 (continued)

Sample Tag: AOC8-MW-22-19 (2-4)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/20/22 10:35, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	52.8	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	52.8	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	52.8	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	52.8	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	52.8	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	52.8	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	52.8	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	52.8	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	52.8	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	52.8	104-51-8		
1,2,4-Trichlorobenzene	Not detected	350		ug/kg	52.8	120-82-1		
1,2,3-Trichlorobenzene	Not detected	350		ug/kg	52.8	87-61-6		
Naphthalene	Not detected	300		ug/kg	52.8	91-20-3		
Acrolein	Not detected	50		ug/kg	52.8	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	52.8	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	52.8	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	52.8	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	52.8	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	52.8	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	52.8	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	52.8	76-13-1		

Other / Misc.

Method: , Run Date: 12/28/22 18:49, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 01/04/23 16:28, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43599.06

Sample Tag: AOC8-MW-22-19 (8-10)

Collected Date/Time: 12/15/2022 13:00

Matrix: Soil

COC Reference: 144467

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.7	IR
3	4oz Glass	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	01/04/23 10:05	JRH	
BNA Extraction*	Completed	SW3546	12/28/22 15:30	JWR	
Extraction, PCB*	Completed	SW3546	12/27/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	13.557/13	SW5035A	12/16/22 17:18	JKJ	
Mercury Digestion	Completed	SW7471B	12/20/22 12:40	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 19:53, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Metals

Method: SW6020A, Run Date: 01/05/23 11:19, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	12,900	20		mg/kg	329	7440-70-2		
Magnesium	2,950	20		mg/kg	329	7439-95-4		
Potassium	107	20		mg/kg	329	7440-09-7		
Sodium	Not detected	20		mg/kg	329	7440-23-5		

Method: SW6020A, Run Date: 01/04/23 13:16, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,870	1.0		mg/kg	329	7429-90-5		
Antimony	Not detected	0.50		mg/kg	329	7440-36-0		
Arsenic	0.94	0.20		mg/kg	329	7440-38-2		
Beryllium	Not detected	0.20		mg/kg	329	7440-41-7		
Boron	Not detected	2.0		mg/kg	329	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	329	7440-43-9		
Chromium	3.94	0.50		mg/kg	329	7440-47-3		
Cobalt	1.54	0.50		mg/kg	329	7440-48-4		
Copper	2.68	0.50		mg/kg	329	7440-50-8		
Iron	3,520	1.0		mg/kg	329	7439-89-6		
Lead	2.36	0.30		mg/kg	329	7439-92-1		
Manganese	92.5	0.50		mg/kg	329	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	329	7439-98-7		
Nickel	3.41	0.50		mg/kg	329	7440-02-0		
Selenium	Not detected	0.40		mg/kg	329	7782-49-2		
Silver	Not detected	0.20		mg/kg	329	7440-22-4		
Strontium	13.2	0.50		mg/kg	329	7440-24-6		
Thallium	Not detected	0.20		mg/kg	329	7440-28-0		
Titanium	45.9	1.0		mg/kg	329	7440-32-6		
Vanadium	6.70	0.50		mg/kg	329	7440-62-2		



Analytical Laboratory Report

Lab Sample ID: S43599.06 (continued)

Sample Tag: AOC8-MW-22-19 (8-10)

Method: SW6020A, Run Date: 01/04/23 13:16, Analyst: JRH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Zinc	9.40	0.50		mg/kg	329	7440-66-6		

Method: SW6020A, Run Date: 01/04/23 15:35, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Barium	7.52	1.0		mg/kg	329	7440-39-3		
Tin	Not detected	2.0		mg/kg	329	7440-31-5		

Method: SW7471B, Run Date: 12/20/22 15:49, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	78	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 22:37, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/07/23 21:58, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8		
Anthracene	Not detected	330		ug/kg	7.5	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3		
Chrysene	Not detected	330		ug/kg	7.5	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9		



Analytical Laboratory Report

Lab Sample ID: S43599.06 (continued)

Sample Tag: AOC8-MW-22-19 (8-10)

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/07/23 21:58, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1		
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0		
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0		
Fluorene	Not detected	330		ug/kg	7.5	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5		
Isophorone	Not detected	330		ug/kg	7.5	78-59-1		
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5		
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8		
Phenol	Not detected	330		ug/kg	7.5	108-95-2		
Pyrene	Not detected	330		ug/kg	7.5	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2		
Benzidine	Not detected	330		ug/kg	7.5	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 01/07/23 21:58, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	7.5			
Fluoranthene	Found			ug/kg	7.5	206-44-0		
Pyrene	Found			ug/kg	7.5	129-00-0		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/29/22 03:39, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	53.1	108-20-3		
TICs*	None Found			ug/kg	53.1			

Method: SW8260B - SIM, Run Date: 12/25/22 12:38, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	53.1	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	53.1	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 03:39, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	53.1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	53.1	1634-04-4		



Analytical Laboratory Report

Lab Sample ID: S43599.06 (continued)

Sample Tag: AOC8-MW-22-19 (8-10)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 03:39, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acrylonitrile	Not detected	100		ug/kg	53.1	107-13-1		
2-Butanone (MEK)	Not detected	800		ug/kg	53.1	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	53.1	75-71-8		
Chloromethane	Not detected	300		ug/kg	53.1	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	53.1	75-01-4		
Bromomethane	Not detected	200		ug/kg	53.1	74-83-9		
Chloroethane	Not detected	300		ug/kg	53.1	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	53.1	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	53.1	75-35-4		
Methylene chloride	Not detected	100		ug/kg	53.1	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	53.1	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	53.1	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	53.1	156-59-2		
Chloroform	Not detected	50		ug/kg	53.1	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	53.1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	53.1	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	53.1	56-23-5		
Benzene	Not detected	50		ug/kg	53.1	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	53.1	107-06-2		
Trichloroethene	Not detected	50		ug/kg	53.1	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	53.1	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	53.1	75-27-4		
Dibromomethane	Not detected	300		ug/kg	53.1	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	53.1	10061-01-5		
Toluene	Not detected	50		ug/kg	53.1	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	53.1	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	53.1	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	53.1	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	53.1	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	53.1	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	53.1	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	53.1	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	53.1	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	53.1			
o-Xylene	Not detected	50		ug/kg	53.1	95-47-6		
Styrene	Not detected	50		ug/kg	53.1	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	53.1	98-82-8		
Bromoform	Not detected	100		ug/kg	53.1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	53.1	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	53.1	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	53.1	103-65-1		
Bromobenzene	Not detected	100		ug/kg	53.1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	53.1	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	53.1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	53.1	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	53.1	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	53.1	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	53.1	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	53.1	106-46-7		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43599.06 (continued)

Sample Tag: AOC8-MW-22-19 (8-10)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 03:39, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dichlorobenzene	Not detected	100		ug/kg	53.1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	53.1	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	53.1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	350		ug/kg	53.1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	350		ug/kg	53.1	87-61-6		
Naphthalene	Not detected	300		ug/kg	53.1	91-20-3		
Acrolein	Not detected	50		ug/kg	53.1	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	53.1	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	53.1	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	53.1	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	53.1	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	53.1	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	53.1	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	53.1	76-13-1		

Other / Misc.

Method: , Run Date: 12/28/22 19:10, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 01/04/23 16:31, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43599.07

Sample Tag: AOC12-MW-22-20 (2-4)

Collected Date/Time: 12/15/2022 14:30

Matrix: Soil

COC Reference: 144467

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.7	IR
3	4oz Glass	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	01/03/23 09:30	JRH	
BNA Extraction*	Completed	SW3546	12/28/22 15:30	JWR	
Extraction, PCB*	Completed	SW3546	12/27/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	11.339/11	SW5035A	12/16/22 17:18	JKJ	
Mercury Digestion	Completed	SW7471B	12/20/22 14:23	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 19:53, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Metals

Method: SW6020A, Run Date: 01/03/23 13:01, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,690	1.0		mg/kg	330	7429-90-5		
Antimony	Not detected	0.50		mg/kg	330	7440-36-0		
Arsenic	1.06	0.20		mg/kg	330	7440-38-2		
Barium	8.42	1.0		mg/kg	330	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	330	7440-41-7		
Boron	Not detected	2.0		mg/kg	330	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	330	7440-43-9		
Chromium	5.74	0.50		mg/kg	330	7440-47-3		
Cobalt	1.24	0.50		mg/kg	330	7440-48-4		
Copper	2.96	0.50		mg/kg	330	7440-50-8		
Iron	3,040	1.0		mg/kg	330	7439-89-6		
Lead	3.96	0.30		mg/kg	330	7439-92-1		
Manganese	81.2	0.50		mg/kg	330	7439-96-5		
Molybdenum	0.52	0.50		mg/kg	330	7439-98-7		
Nickel	3.35	0.50		mg/kg	330	7440-02-0		
Selenium	Not detected	0.40		mg/kg	330	7782-49-2		
Silver	Not detected	0.20		mg/kg	330	7440-22-4		
Strontium	19.0	0.50		mg/kg	330	7440-24-6		
Thallium	Not detected	0.20		mg/kg	330	7440-28-0		
Tin	Not detected	2.0		mg/kg	330	7440-31-5		
Titanium	24.8	1.0		mg/kg	330	7440-32-6		
Vanadium	4.73	0.50		mg/kg	330	7440-62-2		
Zinc	12.1	0.50		mg/kg	330	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43599.07 (continued)

Sample Tag: AOC12-MW-22-20 (2-4)

Method: SW6020A, Run Date: 01/05/23 10:28, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	21,400	20		mg/kg	330	7440-70-2		
Magnesium	5,370	20		mg/kg	330	7439-95-4		
Potassium	125	20		mg/kg	330	7440-09-7		
Sodium	43.0	20		mg/kg	330	7440-23-5		

Method: SW7471B, Run Date: 12/20/22 15:04, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	76	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 22:49, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/07/23 22:28, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8		
Anthracene	Not detected	330		ug/kg	7.5	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3		
Chrysene	Not detected	330		ug/kg	7.5	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43599.07 (continued)

Sample Tag: AOC12-MW-22-20 (2-4)

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/07/23 22:28, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0		
Fluoranthene	640	330		ug/kg	7.5	206-44-0		
Fluorene	Not detected	330		ug/kg	7.5	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5		
Isophorone	Not detected	330		ug/kg	7.5	78-59-1		
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5		
Phenanthrene	420	330		ug/kg	7.5	85-01-8		
Phenol	Not detected	330		ug/kg	7.5	108-95-2		
Pyrene	580	330		ug/kg	7.5	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2		
Benzidine	Not detected	330		ug/kg	7.5	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 01/07/23 22:28, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	7.5			
Fluoranthene	Found			ug/kg	7.5	206-44-0		
Pyrene	Found			ug/kg	7.5	129-00-0		
Phenanthrene	Found			ug/kg	7.5	85-01-8		
Chrysene	Found			ug/kg	7.5	218-01-9		
Benzo(a)anthracene	Found			ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	7.5	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	7.5	207-08-9		
Benzo(a)pyrene	Found			ug/kg	7.5	50-32-8		
Benzo(e)pyrene	Found			ug/kg	7.5	192-97-2		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/29/22 04:03, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	54.8	108-20-3		
TICs*	None Found			ug/kg	54.8			

Method: SW8260B - SIM, Run Date: 12/25/22 12:58, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	54.8	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	54.8	123-91-1		



Analytical Laboratory Report

Lab Sample ID: S43599.07 (continued)

Sample Tag: AOC12-MW-22-20 (2-4)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 04:03, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	54.8	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	54.8	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	54.8	107-13-1		
2-Butanone (MEK)	Not detected	820		ug/kg	54.8	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	54.8	75-71-8		
Chloromethane	Not detected	300		ug/kg	54.8	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	54.8	75-01-4		
Bromomethane	Not detected	200		ug/kg	54.8	74-83-9		
Chloroethane	Not detected	300		ug/kg	54.8	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	54.8	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	54.8	75-35-4		
Methylene chloride	Not detected	100		ug/kg	54.8	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	54.8	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	54.8	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	54.8	156-59-2		
Chloroform	Not detected	50		ug/kg	54.8	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	54.8	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	54.8	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	54.8	56-23-5		
Benzene	Not detected	50		ug/kg	54.8	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	54.8	107-06-2		
Trichloroethene	Not detected	50		ug/kg	54.8	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	54.8	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	54.8	75-27-4		
Dibromomethane	Not detected	300		ug/kg	54.8	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	54.8	10061-01-5		
Toluene	Not detected	50		ug/kg	54.8	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	54.8	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	54.8	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	54.8	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	54.8	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	54.8	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	54.8	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	54.8	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	54.8	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	54.8			
o-Xylene	Not detected	50		ug/kg	54.8	95-47-6		
Styrene	Not detected	50		ug/kg	54.8	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	54.8	98-82-8		
Bromoform	Not detected	100		ug/kg	54.8	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	54.8	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	54.8	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	54.8	103-65-1		
Bromobenzene	Not detected	100		ug/kg	54.8	108-86-1		
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	54.8	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	54.8	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	54.8	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	54.8	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	54.8	99-87-6		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43599.07 (continued)

Sample Tag: AOC12-MW-22-20 (2-4)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 04:03, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3-Dichlorobenzene	Not detected	100		ug/kg	54.8	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	54.8	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	54.8	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	54.8	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	54.8	104-51-8		
1,2,4-Trichlorobenzene	Not detected	360		ug/kg	54.8	120-82-1		
1,2,3-Trichlorobenzene	Not detected	360		ug/kg	54.8	87-61-6		
Naphthalene	Not detected	300		ug/kg	54.8	91-20-3		
Acrolein	Not detected	50		ug/kg	54.8	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	54.8	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	54.8	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	54.8	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	54.8	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	54.8	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	54.8	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	54.8	76-13-1		

Other / Misc.

Method: , Run Date: 12/28/22 19:32, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 01/04/23 16:35, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43599.08

Sample Tag: AOC12-MW-22-20 (10-12)

Collected Date/Time: 12/15/2022 15:10

Matrix: Soil

COC Reference: 144467

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.7	IR
3	4oz Glass	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	01/03/23 09:30	JRH	
BNA Extraction*	Completed	SW3546	12/28/22 15:30	JWR	
Extraction, PCB*	Completed	SW3546	12/27/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	15.277/15	SW5035A	12/16/22 17:18	JKJ	
Mercury Digestion	Completed	SW7471B	12/20/22 14:23	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 19:53, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	86	1		%	1			

Metals

Method: SW6020A, Run Date: 01/03/23 13:03, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,440	1.0		mg/kg	327	7429-90-5		
Antimony	Not detected	0.50		mg/kg	327	7440-36-0		
Arsenic	0.75	0.20		mg/kg	327	7440-38-2		
Barium	10.3	1.0		mg/kg	327	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	327	7440-41-7		
Boron	Not detected	2.0		mg/kg	327	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	327	7440-43-9		
Chromium	4.41	0.50		mg/kg	327	7440-47-3		
Cobalt	1.20	0.50		mg/kg	327	7440-48-4		
Copper	4.03	0.50		mg/kg	327	7440-50-8		
Iron	3,250	1.0		mg/kg	327	7439-89-6		
Lead	18.4	0.30		mg/kg	327	7439-92-1		
Manganese	91.7	0.50		mg/kg	327	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	327	7439-98-7		
Nickel	3.32	0.50		mg/kg	327	7440-02-0		
Selenium	Not detected	0.40		mg/kg	327	7782-49-2		
Silver	Not detected	0.20		mg/kg	327	7440-22-4		
Strontium	33.8	0.50		mg/kg	327	7440-24-6		
Thallium	Not detected	0.20		mg/kg	327	7440-28-0		
Tin	Not detected	2.0		mg/kg	327	7440-31-5		
Titanium	21.5	1.0		mg/kg	327	7440-32-6		
Vanadium	4.36	0.50		mg/kg	327	7440-62-2		
Zinc	16.3	0.50		mg/kg	327	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43599.08 (continued)

Sample Tag: AOC12-MW-22-20 (10-12)

Method: SW6020A, Run Date: 01/05/23 10:29, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	29,900	20		mg/kg	327	7440-70-2		
Magnesium	6,740	20		mg/kg	327	7439-95-4		
Potassium	309	20		mg/kg	327	7440-09-7		
Sodium	54.3	20		mg/kg	327	7440-23-5		

Method: SW7471B, Run Date: 12/20/22 15:08, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	91	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/29/22 12:28, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/07/23 22:59, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	550	330		ug/kg	7.5	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8		
Anthracene	650	330		ug/kg	7.5	120-12-7		
Benzo(a)anthracene	1,360	330		ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	2,340	330		ug/kg	7.5	205-99-2	p	
Benzo(k)fluoranthene	2,410	330		ug/kg	7.5	207-08-9	p	
Benzo(ghi)perylene	630	330		ug/kg	7.5	191-24-2		
Benzo(a)pyrene	1,150	330		ug/kg	7.5	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3		
Chrysene	1,590	330		ug/kg	7.5	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3		

p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.



Analytical Laboratory Report

Lab Sample ID: S43599.08 (continued)

Sample Tag: AOC12-MW-22-20 (10-12)

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/07/23 22:59, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1		
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0		
Fluoranthene	3,730	330		ug/kg	7.5	206-44-0		
Fluorene	980	330		ug/kg	7.5	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1		
Indeno(1,2,3-cd)pyrene	580	330		ug/kg	7.5	193-39-5		
Isophorone	Not detected	330		ug/kg	7.5	78-59-1		
Naphthalene	490	330		ug/kg	7.5	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5		
Phenanthrene	3,350	330		ug/kg	7.5	85-01-8		
Phenol	Not detected	330		ug/kg	7.5	108-95-2		
Pyrene	2,940	330		ug/kg	7.5	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2		
Benzidine	Not detected	330		ug/kg	7.5	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 01/07/23 22:59, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	7.5			
Fluoranthene	Found			ug/kg	7.5	206-44-0		
Pyrene	Found			ug/kg	7.5	129-00-0		
Phenanthrene	Found			ug/kg	7.5	85-01-8		
Sulfur, mol. (S8)*	Found			ug/kg	7.5			
Fluorene	Found			ug/kg	7.5	86-73-7		
Chrysene	Found			ug/kg	7.5	218-01-9		
Benzo(a)anthracene	Found			ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	7.5	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	7.5	207-08-9		
Benzo(a)pyrene	Found			ug/kg	7.5	50-32-8		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/29/22 04:27, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	65.2	108-20-3		
TICs*	None Found			ug/kg	65.2			



Analytical Laboratory Report

Lab Sample ID: S43599.08 (continued)

Sample Tag: AOC12-MW-22-20 (10-12)

Method: SW8260B - SIM, Run Date: 12/25/22 13:19, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	65.2	96-12-8		
1,4-Dioxane*	Not detected	70		ug/kg	65.2	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 04:27, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	65.2	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	300		ug/kg	65.2	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	65.2	107-13-1		
2-Butanone (MEK)	Not detected	980		ug/kg	65.2	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	65.2	75-71-8		
Chloromethane	Not detected	300		ug/kg	65.2	74-87-3		
Vinyl chloride	Not detected	70		ug/kg	65.2	75-01-4		
Bromomethane	Not detected	300		ug/kg	65.2	74-83-9		
Chloroethane	Not detected	300		ug/kg	65.2	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	65.2	75-69-4		
1,1-Dichloroethene	Not detected	70		ug/kg	65.2	75-35-4		
Methylene chloride	Not detected	100		ug/kg	65.2	75-09-2		
trans-1,2-Dichloroethene	Not detected	70		ug/kg	65.2	156-60-5		
1,1-Dichloroethane	Not detected	70		ug/kg	65.2	75-34-3		
cis-1,2-Dichloroethene	Not detected	70		ug/kg	65.2	156-59-2		
Chloroform	Not detected	70		ug/kg	65.2	67-66-3		
1,1,1-Trichloroethane	Not detected	70		ug/kg	65.2	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	65.2	108-10-1		
Carbon tetrachloride	Not detected	70		ug/kg	65.2	56-23-5		
Benzene	Not detected	70		ug/kg	65.2	71-43-2		
1,2-Dichloroethane	Not detected	70		ug/kg	65.2	107-06-2		
Trichloroethene	Not detected	70		ug/kg	65.2	79-01-6		
1,2-Dichloropropane	Not detected	70		ug/kg	65.2	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	65.2	75-27-4		
Dibromomethane	Not detected	300		ug/kg	65.2	74-95-3		
cis-1,3-Dichloropropene	Not detected	70		ug/kg	65.2	10061-01-5		
Toluene	Not detected	70		ug/kg	65.2	108-88-3		
trans-1,3-Dichloropropene	Not detected	70		ug/kg	65.2	10061-02-6		
1,1,2-Trichloroethane	Not detected	70		ug/kg	65.2	79-00-5		
Tetrachloroethene	Not detected	70		ug/kg	65.2	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	65.2	124-48-1		
1,2-Dibromoethane	Not detected	30		ug/kg	65.2	106-93-4	M	
Chlorobenzene	Not detected	70		ug/kg	65.2	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	65.2	630-20-6		
Ethylbenzene	Not detected	70		ug/kg	65.2	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	65.2			
o-Xylene	Not detected	70		ug/kg	65.2	95-47-6		
Styrene	Not detected	70		ug/kg	65.2	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	65.2	98-82-8		
Bromoform	Not detected	100		ug/kg	65.2	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	70		ug/kg	65.2	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	65.2	96-18-4		
n-Propylbenzene	Not detected	70		ug/kg	65.2	103-65-1		
Bromobenzene	Not detected	100		ug/kg	65.2	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43599.08 (continued)

Sample Tag: AOC12-MW-22-20 (10-12)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 04:27, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	70		ug/kg	65.2	108-67-8		
tert-Butylbenzene	Not detected	70		ug/kg	65.2	98-06-6		
1,2,4-Trimethylbenzene	Not detected	70		ug/kg	65.2	95-63-6		
sec-Butylbenzene	Not detected	70		ug/kg	65.2	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	65.2	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	65.2	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	65.2	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	65.2	95-50-1		
1,2,3-Trimethylbenzene	Not detected	70		ug/kg	65.2	526-73-8		
n-Butylbenzene	Not detected	70		ug/kg	65.2	104-51-8		
1,2,4-Trichlorobenzene	Not detected	430		ug/kg	65.2	120-82-1		
1,2,3-Trichlorobenzene	Not detected	430		ug/kg	65.2	87-61-6		
Naphthalene	Not detected	300		ug/kg	65.2	91-20-3		
Acrolein	Not detected	70		ug/kg	65.2	107-02-8		
2-Chlorotoluene	Not detected	70		ug/kg	65.2	95-49-8		
4-Chlorotoluene	Not detected	70		ug/kg	65.2	106-43-4		
1,3-Dichloropropane	Not detected	70		ug/kg	65.2	142-28-9		
1,1-Dichloropropene	Not detected	70		ug/kg	65.2	563-58-6		
2,2-Dichloropropane	Not detected	70		ug/kg	65.2	594-20-7		
Hexachlorobutadiene	Not detected	70		ug/kg	65.2	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	70		ug/kg	65.2	76-13-1		

Other / Misc.

Method: , Run Date: 12/28/22 19:53, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 01/04/23 16:38, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43599.09

Sample Tag: AOC12-MW-22-21 (2-4)

Collected Date/Time: 12/16/2022 08:10

Matrix: Soil

COC Reference: 144467

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.7	IR
3	4oz Glass	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	01/03/23 09:30	JRH	
BNA Extraction*	Completed	SW3546	12/29/22 12:00	TAW	
Extraction, PCB*	Completed	SW3546	12/27/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	12.345/12	SW5035A	12/16/22 17:18	JKJ	
Mercury Digestion	Completed	SW7471B	12/20/22 14:23	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 19:53, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	93	1		%	1			

Metals

Method: SW6020A, Run Date: 01/03/23 13:05, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,830	1.0		mg/kg	316	7429-90-5		
Antimony	Not detected	0.50		mg/kg	316	7440-36-0		
Arsenic	0.71	0.20		mg/kg	316	7440-38-2		
Barium	10.4	1.0		mg/kg	316	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	316	7440-41-7		
Boron	Not detected	2.0		mg/kg	316	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	316	7440-43-9		
Chromium	3.42	0.50		mg/kg	316	7440-47-3		
Cobalt	1.02	0.50		mg/kg	316	7440-48-4		
Copper	2.28	0.50		mg/kg	316	7440-50-8		
Iron	2,530	1.0		mg/kg	316	7439-89-6		
Lead	2.95	0.30		mg/kg	316	7439-92-1		
Manganese	64.8	0.50		mg/kg	316	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	316	7439-98-7		
Nickel	3.18	0.50		mg/kg	316	7440-02-0		
Selenium	Not detected	0.40		mg/kg	316	7782-49-2		
Silver	Not detected	0.20		mg/kg	316	7440-22-4		
Strontium	4.99	0.50		mg/kg	316	7440-24-6		
Thallium	Not detected	0.20		mg/kg	316	7440-28-0		
Tin	Not detected	2.0		mg/kg	316	7440-31-5		
Titanium	23.8	1.0		mg/kg	316	7440-32-6		
Vanadium	3.87	0.50		mg/kg	316	7440-62-2		
Zinc	10.1	0.50		mg/kg	316	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43599.09 (continued)

Sample Tag: AOC12-MW-22-21 (2-4)

Method: SW6020A, Run Date: 01/05/23 10:30, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	3,170	20		mg/kg	316	7440-70-2		
Magnesium	781	20		mg/kg	316	7439-95-4		
Potassium	103	20		mg/kg	316	7440-09-7		
Sodium	Not detected	20		mg/kg	316	7440-23-5		

Method: SW7471B, Run Date: 12/20/22 15:11, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	80	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 21:01, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/09/23 16:06, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8		
Anthracene	Not detected	330		ug/kg	7.5	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3		
Chrysene	Not detected	330		ug/kg	7.5	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43599.09 (continued)

Sample Tag: AOC12-MW-22-21 (2-4)

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/09/23 16:06, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0		
Fluoranthene	430	330		ug/kg	7.5	206-44-0		
Fluorene	Not detected	330		ug/kg	7.5	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5		
Isophorone	Not detected	330		ug/kg	7.5	78-59-1		
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5		
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8		
Phenol	Not detected	330		ug/kg	7.5	108-95-2		
Pyrene	360	330		ug/kg	7.5	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2		
Benzidine	Not detected	330		ug/kg	7.5	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 01/09/23 16:06, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	7.5			
Fluoranthene	Found			ug/kg	7.5	206-44-0		
Pyrene	Found			ug/kg	7.5	129-00-0		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/29/22 04:51, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	56	108-20-3		
TICs*	None Found			ug/kg	56			

Method: SW8260B - SIM, Run Date: 12/25/22 13:40, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	56	96-12-8		
1,4-Dioxane*	1,250	60		ug/kg	56	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 04:51, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	56	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	56	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	56	107-13-1		
2-Butanone (MEK)	Not detected	840		ug/kg	56	78-93-3		



Analytical Laboratory Report

Lab Sample ID: S43599.09 (continued)

Sample Tag: AOC12-MW-22-21 (2-4)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 04:51, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Dichlorodifluoromethane	Not detected	300		ug/kg	56	75-71-8		
Chloromethane	Not detected	300		ug/kg	56	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	56	75-01-4		
Bromomethane	Not detected	200		ug/kg	56	74-83-9		
Chloroethane	Not detected	300		ug/kg	56	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	56	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	56	75-35-4		
Methylene chloride	Not detected	100		ug/kg	56	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	56	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	56	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	56	156-59-2		
Chloroform	Not detected	60		ug/kg	56	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	56	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	56	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	56	56-23-5		
Benzene	Not detected	60		ug/kg	56	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	56	107-06-2		
Trichloroethene	Not detected	60		ug/kg	56	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	56	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	56	75-27-4		
Dibromomethane	Not detected	300		ug/kg	56	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	56	10061-01-5		
Toluene	Not detected	60		ug/kg	56	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	56	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	56	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	56	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	56	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	56	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	56	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	56	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	56	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	56			
o-Xylene	Not detected	60		ug/kg	56	95-47-6		
Styrene	Not detected	60		ug/kg	56	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	56	98-82-8		
Bromoform	Not detected	100		ug/kg	56	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	56	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	56	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	56	103-65-1		
Bromobenzene	Not detected	100		ug/kg	56	108-86-1		
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	56	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	56	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	56	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	56	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	56	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	56	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	56	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	56	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	56	526-73-8		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43599.09 (continued)

Sample Tag: AOC12-MW-22-21 (2-4)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 04:51, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
n-Butylbenzene	Not detected	60		ug/kg	56	104-51-8		
1,2,4-Trichlorobenzene	Not detected	370		ug/kg	56	120-82-1		
1,2,3-Trichlorobenzene	Not detected	370		ug/kg	56	87-61-6		
Naphthalene	Not detected	300		ug/kg	56	91-20-3		
Acrolein	Not detected	60		ug/kg	56	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	56	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	56	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	56	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	56	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	56	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	56	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	56	76-13-1		

Other / Misc.

Method: , Run Date: 12/28/22 20:15, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 01/04/23 16:42, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43599.10

Sample Tag: AOC12-MW-22-21 (8-10)

Collected Date/Time: 12/16/2022 08:20

Matrix: Soil

COC Reference: 144467

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.7	IR
3	4oz Glass	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	01/03/23 09:30	JRH	
BNA Extraction*	Completed	SW3546	12/29/22 12:00	TAW	
BNA Extraction (Replicate 01)*	Completed	SW3546	01/10/23 13:00	JWR	F
Extraction, PCB*	Completed	SW3546	12/27/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	14.260/14	SW5035A	12/16/22 17:18	JKJ	
Mercury Digestion	Completed	SW7471B	12/20/22 14:23	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 19:53, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	88	1		%	1			

Metals

Method: SW6020A, Run Date: 01/03/23 13:07, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Antimony	Not detected	0.50		mg/kg	328	7440-36-0		
Arsenic	4.09	0.20		mg/kg	328	7440-38-2		
Barium	62.9	1.0		mg/kg	328	7440-39-3		
Beryllium	0.23	0.20		mg/kg	328	7440-41-7		
Boron	16.4	2.0		mg/kg	328	7440-42-8		
Cadmium	1.03	0.20		mg/kg	328	7440-43-9		
Chromium	11.3	0.50		mg/kg	328	7440-47-3		
Cobalt	2.56	0.50		mg/kg	328	7440-48-4		
Copper	11.3	0.50		mg/kg	328	7440-50-8		
Lead	20.9	0.30		mg/kg	328	7439-92-1		
Manganese	179	0.50		mg/kg	328	7439-96-5		
Molybdenum	2.09	0.50		mg/kg	328	7439-98-7		
Nickel	8.12	0.50		mg/kg	328	7440-02-0		
Selenium	Not detected	0.40		mg/kg	328	7782-49-2		
Silver	Not detected	0.20		mg/kg	328	7440-22-4		
Strontium	97.5	0.50		mg/kg	328	7440-24-6		
Thallium	Not detected	0.20		mg/kg	328	7440-28-0		
Tin	Not detected	2.0		mg/kg	328	7440-31-5		
Titanium	192	1.0		mg/kg	328	7440-32-6		
Vanadium	13.5	0.50		mg/kg	328	7440-62-2		
Zinc	89.4	0.50		mg/kg	328	7440-66-6		

F-Analysis run outside of holding time



Analytical Laboratory Report

Lab Sample ID: S43599.10 (continued)

Sample Tag: AOC12-MW-22-21 (8-10)

Method: SW6020A, Run Date: 01/04/23 10:40, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	5,520	20		mg/kg	16100	7429-90-5		
Iron	7,440	20		mg/kg	16100	7439-89-6		

Method: SW6020A, Run Date: 01/05/23 10:31, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	95,700	20		mg/kg	328	7440-70-2		
Magnesium	10,000	20		mg/kg	328	7439-95-4		
Potassium	355	20		mg/kg	328	7440-09-7		
Sodium	119	20		mg/kg	328	7440-23-5		

Method: SW7471B, Run Date: 12/20/22 15:14, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.214	0.050		mg/kg	92	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 21:13, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/09/23 16:36, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	1,440	330		ug/kg	7.5	83-32-9	S	
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8	S	
Anthracene	2,880	330		ug/kg	7.5	120-12-7		
Benzo(a)anthracene	11,180	330		ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	10,980	330		ug/kg	7.5	205-99-2		
Benzo(k)fluoranthene	8,200	330		ug/kg	7.5	207-08-9		
Benzo(ghi)perylene	5,610	330		ug/kg	7.5	191-24-2		
Benzo(a)pyrene	10,380	330		ug/kg	7.5	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1		
bis(2-Ethylhexyl)phthalate	740	330		ug/kg	7.5	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7	S	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3	S	
Chrysene	12,650	330		ug/kg	7.5	218-01-9		
Dibenzo(ah)anthracene	1,340	330		ug/kg	7.5	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2		

S-Surrogate recovery outside of control limits



Analytical Laboratory Report

Lab Sample ID: S43599.10 (continued)

Sample Tag: AOC12-MW-22-21 (8-10)

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/09/23 16:36, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2	S	
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3	S	
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1		
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5	S	
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2	S	
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2	S	
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0		
Fluoranthene	22,390	330		ug/kg	7.5	206-44-0		
Fluorene	1,190	330		ug/kg	7.5	86-73-7	S	
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4	S	
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1		
Indeno(1,2,3-cd)pyrene	5,500	330		ug/kg	7.5	193-39-5		
Isophorone	Not detected	330		ug/kg	7.5	78-59-1		
Naphthalene	400	330		ug/kg	7.5	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7	S	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5		
Phenanthrene	13,380	330		ug/kg	7.5	85-01-8		
Phenol	Not detected	330		ug/kg	7.5	108-95-2		
Pyrene	22,260	330		ug/kg	7.5	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2	S	
Benzidine	Not detected	330		ug/kg	7.5	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9		

Semi-Volatile Organics (Replicate 01), Method: SW8270D, Run Date: 01/11/23 22:48, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	900	330		ug/kg	7.5	83-32-9	SG	
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8	SG	
Anthracene	1,470	330		ug/kg	7.5	120-12-7	G	
Benzo(a)anthracene	5,450	330		ug/kg	7.5	56-55-3	G	
Benzo(b)fluoranthene	5,980	330		ug/kg	7.5	205-99-2	G	
Benzo(k)fluoranthene	4,540	330		ug/kg	7.5	207-08-9	G	
Benzo(ghi)perylene	2,120	330		ug/kg	7.5	191-24-2	G	
Benzo(a)pyrene	5,310	330		ug/kg	7.5	50-32-8	G	
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1	G	
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4	G	
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1	G	
bis(2-Ethylhexyl)phthalate	12,770	330		ug/kg	7.5	117-81-7	G	
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3	G	

S-Surrogate recovery outside of control limits

G-Estimated result due to extraction run outside of holding time



Analytical Laboratory Report

Lab Sample ID: S43599.10 (continued)

Sample Tag: AOC12-MW-22-21 (8-10)

Semi-Volatile Organics (Replicate 01), Method: SW8270D, Run Date: 01/11/23 22:48, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7	G	
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7	SG	
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7	G	
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8	G	
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3	SG	
Chrysene	6,140	330		ug/kg	7.5	218-01-9	G	
Dibenzo(ah)anthracene	450	330		ug/kg	7.5	53-70-3	G	
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2	G	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1	G	
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2	G	
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2	SG	
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9	G	
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3	SG	
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1	G	
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5	SG	
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2	SG	
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2	SG	
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0	G	
Fluoranthene	12,000	330		ug/kg	7.5	206-44-0	G	
Fluorene	700	330		ug/kg	7.5	86-73-7	SG	
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1	G	
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3	G	
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4	SG	
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1	G	
Indeno(1,2,3-cd)pyrene	2,080	330		ug/kg	7.5	193-39-5	G	
Isophorone	Not detected	330		ug/kg	7.5	78-59-1	G	
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3	G	
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3	G	
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5	G	
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7	SG	
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6	G	
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7	G	
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5	G	
Phenanthrene	7,480	330		ug/kg	7.5	85-01-8	G	
Phenol	Not detected	330		ug/kg	7.5	108-95-2	G	
Pyrene	11,950	330		ug/kg	7.5	129-00-0	G	
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1	G	
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2	SG	
Benzidine	Not detected	330		ug/kg	7.5	92-87-5	G	
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9	G	

TICs Semi-Volatiles, Method: SW8270D, Run Date: 01/09/23 16:36, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	7.5			
Fluoranthene	Found			ug/kg	7.5	206-44-0		
Pyrene	Found			ug/kg	7.5	129-00-0		
Phenanthrene	Found			ug/kg	7.5	85-01-8		
Chrysene	Found			ug/kg	7.5	218-01-9		

G-Estimated result due to extraction run outside of holding time
 S-Surrogate recovery outside of control limits



Analytical Laboratory Report

Lab Sample ID: S43599.10 (continued)

Sample Tag: AOC12-MW-22-21 (8-10)

TICs Semi-Volatiles, Method: SW8270D, Run Date: 01/09/23 16:36, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Benzo(a)anthracene	Found			ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	7.5	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	7.5	207-08-9		
Benzo(a)pyrene	Found			ug/kg	7.5	50-32-8		
Benzo(e)pyrene	Found			ug/kg	7.5	192-97-2		
Indeno(1,2,3-cd)pyrene	Found			ug/kg	7.5	193-39-5		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/29/22 05:15, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	62.6	108-20-3		
TICs*	None Found			ug/kg	62.6			

Method: SW8260B - SIM, Run Date: 12/25/22 14:00, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	62.6	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	62.6	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 05:15, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	62.6	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	300		ug/kg	62.6	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	62.6	107-13-1		
2-Butanone (MEK)	Not detected	940		ug/kg	62.6	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	62.6	75-71-8		
Chloromethane	Not detected	300		ug/kg	62.6	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	62.6	75-01-4		
Bromomethane	Not detected	300		ug/kg	62.6	74-83-9		
Chloroethane	Not detected	300		ug/kg	62.6	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	62.6	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	62.6	75-35-4		
Methylene chloride	Not detected	100		ug/kg	62.6	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	62.6	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	62.6	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	62.6	156-59-2		
Chloroform	Not detected	60		ug/kg	62.6	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	62.6	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	62.6	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	62.6	56-23-5		
Benzene	Not detected	60		ug/kg	62.6	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	62.6	107-06-2		
Trichloroethene	Not detected	60		ug/kg	62.6	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	62.6	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	62.6	75-27-4		
Dibromomethane	Not detected	300		ug/kg	62.6	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	62.6	10061-01-5		
Toluene	Not detected	60		ug/kg	62.6	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	62.6	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	62.6	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	62.6	127-18-4		



Analytical Laboratory Report

Lab Sample ID: S43599.10 (continued)

Sample Tag: AOC12-MW-22-21 (8-10)

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 05:15, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Dibromochloromethane	Not detected	100		ug/kg	62.6	124-48-1		
1,2-Dibromoethane	Not detected	30		ug/kg	62.6	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	62.6	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	62.6	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	62.6	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	62.6			
o-Xylene	Not detected	60		ug/kg	62.6	95-47-6		
Styrene	Not detected	60		ug/kg	62.6	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	62.6	98-82-8		
Bromoform	Not detected	100		ug/kg	62.6	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	62.6	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	62.6	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	62.6	103-65-1		
Bromobenzene	Not detected	100		ug/kg	62.6	108-86-1		
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	62.6	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	62.6	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	62.6	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	62.6	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	62.6	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	62.6	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	62.6	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	62.6	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	62.6	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	62.6	104-51-8		
1,2,4-Trichlorobenzene	Not detected	410		ug/kg	62.6	120-82-1		
1,2,3-Trichlorobenzene	Not detected	410		ug/kg	62.6	87-61-6		
Naphthalene	Not detected	300		ug/kg	62.6	91-20-3		
Acrolein	Not detected	60		ug/kg	62.6	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	62.6	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	62.6	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	62.6	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	62.6	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	62.6	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	62.6	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	62.6	76-13-1		

Other / Misc.

Method: , Run Date: 12/28/22 20:36, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 01/04/23 16:45, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

M-Result reported to MDL not RDL

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43599.11

Sample Tag: TRIP BLANK-MW

Collected Date/Time: 12/16/2022 10:00

Matrix: Methanol

COC Reference: 144467

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Sample wt. (g) / Methanol (ml)*	10/10	SW5035A	12/16/22 17:18	JKJ	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/29/22 05:39, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	50	108-20-3		
Acetone	Not detected	1,000		ug/kg	50	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	50	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	50	107-13-1		
2-Butanone (MEK)	Not detected	750		ug/kg	50	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	50	75-71-8		
Chloromethane	Not detected	300		ug/kg	50	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	50	75-01-4		
Bromomethane	Not detected	200		ug/kg	50	74-83-9		
Chloroethane	Not detected	300		ug/kg	50	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	50	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	50	75-35-4		
Methylene chloride	Not detected	100		ug/kg	50	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	50	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	50	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	50	156-59-2		
Chloroform	Not detected	50		ug/kg	50	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	50	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	50	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	50	56-23-5		
Benzene	Not detected	50		ug/kg	50	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	50	107-06-2		
Trichloroethene	Not detected	50		ug/kg	50	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	50	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	50	75-27-4		
Dibromomethane	Not detected	300		ug/kg	50	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	50	10061-01-5		
Toluene	Not detected	50		ug/kg	50	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	50	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	50	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	50	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	50	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	50	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	50	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	50	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	50	100-41-4		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43599.11 (continued)

Sample Tag: TRIP BLANK-MW

Method: SW5035A/8260C, Run Date: 12/29/22 05:39, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
p,m-Xylene	Not detected	100		ug/kg	50			
o-Xylene	Not detected	50		ug/kg	50	95-47-6		
Styrene	Not detected	50		ug/kg	50	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	50	98-82-8		
Bromoform	Not detected	100		ug/kg	50	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	50	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	50	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	50	103-65-1		
Bromobenzene	Not detected	100		ug/kg	50	108-86-1		
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	50	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	50	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	50	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	50	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	50	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	50	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	50	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	50	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	50	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	50	104-51-8		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	50	120-82-1		
1,2,3-Trichlorobenzene	Not detected	330		ug/kg	50	87-61-6		
Naphthalene	Not detected	300		ug/kg	50	91-20-3		
Acrolein	Not detected	50		ug/kg	50	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	50	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	50	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	50	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	50	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	50	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	50	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	50	76-13-1		



Analytical Laboratory Report

Lab Sample ID: S43599.12

Sample Tag: COMP-01

Collected Date/Time: 12/16/2022 10:00

Matrix: Soil

COC Reference: 144467

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	32oz Glass	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
TCLP Zero Headspace Ext.	Completed	SW1311	12/20/22 19:30	DMP	
Metal Digestion*	Completed	SW3015A	12/22/22 10:40	CCM	
TCLP/SPLP BNA Extraction*	Completed	SW3535A	12/28/22 09:00	PTW	
Extraction, PCB*	Completed	SW3546	12/27/22 14:00	JWR	
Mercury Digestion	Completed	SW7471B	12/22/22 12:44	CTV	

TCLP Extraction

Parameter	Result	Method	Run Date	Analyst	Flags
Initial Sample pH	9.57	SW1311	12/20/22 19:30 - 12/21/22	DMP	
pH after 3.5 ml HCl	2.04	SW1311	12/20/22 19:30 - 12/21/22	DMP	
% Solids	100	SW1311	12/20/22 19:30 - 12/21/22	DMP	
Sample Used g	100	SW1311	12/20/22 19:30 - 12/21/22	DMP	
Final Volume mL	2000	SW1311	12/20/22 19:30 - 12/21/22	DMP	
TCLP Extraction Fluid	1	SW1311	12/20/22 19:30 - 12/21/22	DMP	
Final Extract pH	6.32	SW1311	12/20/22 19:30 - 12/21/22	DMP	

Inorganics

Method: SM2540B, Run Date: 12/16/22 19:53, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	86	1		%	1			

Metals

Method: SW6020A, Run Date: 12/22/22 12:03, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Arsenic, TCLP	Not detected	0.02		mg/L	25	7440-38-2		5.0
Barium, TCLP	0.21	0.05		mg/L	25	7440-39-3		100.0
Cadmium, TCLP	Not detected	0.005		mg/L	25	7440-43-9		1.0
Chromium, TCLP	Not detected	0.05		mg/L	25	7440-47-3		5.0
Lead, TCLP	Not detected	0.03		mg/L	25	7439-92-1		5.0
Selenium, TCLP	Not detected	0.05		mg/L	25	7782-49-2		1.0
Silver, TCLP	Not detected	0.005		mg/L	25	7440-22-4		5.0

Method: SW7471B, Run Date: 12/22/22 14:48, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury, TCLP	Not detected	0.0005		mg/L	2	7439-97-6		0.2

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/29/22 12:40, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		



Analytical Laboratory Report

Lab Sample ID: S43599.12 (continued)

Sample Tag: COMP-01

PCB List, Method: SW8082A, Run Date: 12/29/22 12:40, Analyst: JANB (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

TCLP Semi Volatiles, Method: SW8270D, Run Date: 12/28/22 21:06, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2-Methylphenol (o-Cresol)	Not detected	1,000		ug/L	10	95-48-7		200,000
3-, 4-Methylphenol (p,m-Cresol)	Not detected	1,000		ug/L	10	3/4-CRESOL		200,000
Pentachlorophenol	Not detected	1,000		ug/L	10	87-86-5		100,000
2,4,5-Trichlorophenol	Not detected	1,000		ug/L	10	95-95-4		400,000
2,4,6-Trichlorophenol	Not detected	1,000		ug/L	10	88-06-2		2,000
2,4-Dinitrotoluene	Not detected	90		ug/L	10	121-14-2		130
Hexachlorobenzene	Not detected	90		ug/L	10	118-74-1		130
Hexachlorobutadiene	Not detected	100		ug/L	10	87-68-3		500
Hexachloroethane	Not detected	100		ug/L	10	67-72-1		3,000
Nitrobenzene	Not detected	100		ug/L	10	98-95-3		2,000
Pyridine	Not detected	100		ug/L	10	110-86-1		5,000

Organics - Volatiles

TCLP Volatiles, Method: SW5030C/8260C, Run Date: 12/22/22 16:44, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Benzene*	Not detected	100		ug/L	100	71-43-2		500
Carbon tetrachloride*	Not detected	100		ug/L	100	56-23-5		500
Chlorobenzene*	Not detected	100		ug/L	100	108-90-7		100,000
Chloroform*	Not detected	100		ug/L	100	67-66-3		6,000
1,4-Dichlorobenzene*	Not detected	100		ug/L	100	106-46-7		7,500
1,2-Dichloroethane*	Not detected	100		ug/L	100	107-06-2		500
1,1-Dichloroethene*	Not detected	100		ug/L	100	75-35-4		700
2-Butanone (MEK)*	Not detected	1,000		ug/L	100	78-93-3		200,000
Tetrachloroethene*	Not detected	100		ug/L	100	127-18-4		700
Trichloroethene*	Not detected	100		ug/L	100	79-01-6		500
Vinyl chloride*	Not detected	100		ug/L	100	75-01-4		200



Analytical Laboratory Report

Lab Sample ID: S43599.13

Sample Tag: AOC12-TP01-E

Collected Date/Time: 12/15/2022 09:00

Matrix: Soil

COC Reference: 158669

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.7	IR
3	4oz Glass	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	01/03/23 09:30	JRH	
BNA Extraction*	Completed	SW3546	12/28/22 15:30	JWR	
Extraction, PCB*	Completed	SW3546	12/27/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	12.612/12	SW5035A	12/16/22 17:18	JKJ	
Mercury Digestion	Completed	SW7471B	12/20/22 14:23	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 19:53, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	87	1		%	1			

Metals

Method: SW6020A, Run Date: 01/03/23 13:09, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Antimony	Not detected	0.50		mg/kg	359	7440-36-0		
Arsenic	3.77	0.20		mg/kg	359	7440-38-2		
Barium	117	1.0		mg/kg	359	7440-39-3		
Beryllium	0.25	0.20		mg/kg	359	7440-41-7		
Boron	5.86	2.0		mg/kg	359	7440-42-8		
Cadmium	0.55	0.20		mg/kg	359	7440-43-9		
Chromium	9.03	0.50		mg/kg	359	7440-47-3		
Cobalt	4.20	0.50		mg/kg	359	7440-48-4		
Copper	9.18	0.50		mg/kg	359	7440-50-8		
Lead	25.8	0.30		mg/kg	359	7439-92-1		
Manganese	698	0.50		mg/kg	359	7439-96-5		
Molybdenum	0.75	0.50		mg/kg	359	7439-98-7		
Nickel	5.34	0.50		mg/kg	359	7440-02-0		
Selenium	Not detected	0.40		mg/kg	359	7782-49-2		
Silver	Not detected	0.20		mg/kg	359	7440-22-4		
Strontium	75.6	0.50		mg/kg	359	7440-24-6		
Thallium	Not detected	0.20		mg/kg	359	7440-28-0		
Tin	Not detected	2.0		mg/kg	359	7440-31-5		
Titanium	95.6	1.0		mg/kg	359	7440-32-6		
Vanadium	14.5	0.50		mg/kg	359	7440-62-2		
Zinc	96.0	0.50		mg/kg	359	7440-66-6		

Method: SW6020A, Run Date: 01/04/23 10:41, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	6,150	20		mg/kg	17950	7429-90-5		
Iron	4,830	20		mg/kg	17950	7439-89-6		



Analytical Laboratory Report

Lab Sample ID: S43599.13 (continued)

Sample Tag: AOC12-TP01-E

Method: SW6020A, Run Date: 01/05/23 10:33, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	70,500	20		mg/kg	359	7440-70-2		
Magnesium	15,000	20		mg/kg	359	7439-95-4		
Potassium	966	20		mg/kg	359	7440-09-7		
Sodium	416	20		mg/kg	359	7440-23-5		

Method: SW7471B, Run Date: 12/20/22 15:18, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.098	0.050		mg/kg	91	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/28/22 21:25, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/08/23 05:32, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	2,330	330		ug/kg	10	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	10	208-96-8		
Anthracene	5,250	330		ug/kg	10	120-12-7		
Benzo(a)anthracene	19,060	330		ug/kg	10	56-55-3		
Benzo(b)fluoranthene	23,270	330		ug/kg	10	205-99-2		
Benzo(k)fluoranthene	15,480	330		ug/kg	10	207-08-9		
Benzo(ghi)perylene	7,700	330		ug/kg	10	191-24-2		
Benzo(a)pyrene	19,990	330		ug/kg	10	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	10	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	10	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	10	108-60-1		
bis(2-Ethylhexyl)phthalate	1,790	330		ug/kg	10	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	10	101-55-3		
Butyl benzyl phthalate	14,390	330		ug/kg	10	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	10	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	10	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	10	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	10	7005-72-3		
Chrysene	21,840	330		ug/kg	10	218-01-9		
Dibenzo(ah)anthracene	1,740	330		ug/kg	10	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	10	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	10	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	10	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	10	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	10	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	10	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	10	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43599.13 (continued)

Sample Tag: AOC12-TP01-E

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/08/23 05:32, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	10	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	10	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	10	606-20-2		
di-n-Octyl phthalate	6,290	330		ug/kg	10	117-84-0		
Fluoranthene	40,440	330		ug/kg	10	206-44-0		
Fluorene	1,950	330		ug/kg	10	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	10	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	10	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	10	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	10	67-72-1		
Indeno(1,2,3-cd)pyrene	8,040	330		ug/kg	10	193-39-5		
Isophorone	Not detected	330		ug/kg	10	78-59-1		
Naphthalene	460	330		ug/kg	10	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	10	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	10	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	10	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	10	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	10	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	10	87-86-5		
Phenanthrene	21,480	330		ug/kg	10	85-01-8		
Phenol	Not detected	330		ug/kg	10	108-95-2		
Pyrene	35,470	330		ug/kg	10	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	10	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	10	88-06-2		
Benzidine	Not detected	330		ug/kg	10	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	10	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 01/08/23 05:32, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	10			
Fluoranthene	Found			ug/kg	10	206-44-0		
Pyrene	Found			ug/kg	10	129-00-0		
Phenanthrene	Found			ug/kg	10	85-01-8		
Chrysene	Found			ug/kg	10	218-01-9		
Benzo(a)anthracene	Found			ug/kg	10	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	10	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	10	207-08-9		
Benzo(a)pyrene	Found			ug/kg	10	50-32-8		
Benzo(e)pyrene	Found			ug/kg	10	192-97-2		
Butyl benzyl phthalate	Found			ug/kg	10	85-68-7		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/29/22 06:03, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	62.2	108-20-3		
TICs*	None Found			ug/kg	62.2			



Analytical Laboratory Report

Lab Sample ID: S43599.13 (continued)

Sample Tag: AOC12-TP01-E

Method: SW8260B - SIM, Run Date: 12/25/22 14:22, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	62.2	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	62.2	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 06:03, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	62.2	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	62.2	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	62.2	107-13-1		
2-Butanone (MEK)	Not detected	930		ug/kg	62.2	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	62.2	75-71-8		
Chloromethane	Not detected	300		ug/kg	62.2	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	62.2	75-01-4		
Bromomethane	Not detected	200		ug/kg	62.2	74-83-9		
Chloroethane	Not detected	300		ug/kg	62.2	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	62.2	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	62.2	75-35-4		
Methylene chloride	Not detected	100		ug/kg	62.2	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	62.2	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	62.2	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	62.2	156-59-2		
Chloroform	Not detected	60		ug/kg	62.2	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	62.2	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	62.2	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	62.2	56-23-5		
Benzene	Not detected	60		ug/kg	62.2	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	62.2	107-06-2		
Trichloroethene	Not detected	60		ug/kg	62.2	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	62.2	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	62.2	75-27-4		
Dibromomethane	Not detected	300		ug/kg	62.2	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	62.2	10061-01-5		
Toluene	Not detected	60		ug/kg	62.2	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	62.2	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	62.2	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	62.2	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	62.2	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	62.2	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	62.2	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	62.2	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	62.2	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	62.2			
o-Xylene	Not detected	60		ug/kg	62.2	95-47-6		
Styrene	Not detected	60		ug/kg	62.2	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	62.2	98-82-8		
Bromoform	Not detected	100		ug/kg	62.2	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	62.2	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	62.2	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	62.2	103-65-1		
Bromobenzene	Not detected	100		ug/kg	62.2	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43599.13 (continued)

Sample Tag: AOC12-TP01-E

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 06:03, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	62.2	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	62.2	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	62.2	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	62.2	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	62.2	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	62.2	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	62.2	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	62.2	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	62.2	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	62.2	104-51-8		
1,2,4-Trichlorobenzene	Not detected	410		ug/kg	62.2	120-82-1		
1,2,3-Trichlorobenzene	Not detected	410		ug/kg	62.2	87-61-6		
Naphthalene	Not detected	300		ug/kg	62.2	91-20-3		
Acrolein	Not detected	60		ug/kg	62.2	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	62.2	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	62.2	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	62.2	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	62.2	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	62.2	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	62.2	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	62.2	76-13-1		



Analytical Laboratory Report

Lab Sample ID: S43599.14

Sample Tag: AOC12-TP01-W

Collected Date/Time: 12/15/2022 09:07

Matrix: Soil

COC Reference: 158669

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.7	IR
3	4oz Glass	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	01/03/23 09:30	JRH	
BNA Extraction*	Completed	SW3546	12/28/22 15:30	JWR	
Extraction, PCB*	Completed	SW3546	12/27/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	14.639/14	SW5035A	12/16/22 17:18	JKJ	
Mercury Digestion	Completed	SW7471B	12/20/22 14:23	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 19:53, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	88	1		%	1			

Metals

Method: SW6020A, Run Date: 01/03/23 13:11, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Antimony	Not detected	0.50		mg/kg	316	7440-36-0		
Arsenic	3.11	0.20		mg/kg	316	7440-38-2		
Barium	115	1.0		mg/kg	316	7440-39-3		
Beryllium	0.29	0.20		mg/kg	316	7440-41-7		
Boron	8.20	2.0		mg/kg	316	7440-42-8		
Cadmium	0.50	0.20		mg/kg	316	7440-43-9		
Chromium	9.68	0.50		mg/kg	316	7440-47-3		
Cobalt	1.95	0.50		mg/kg	316	7440-48-4		
Copper	8.92	0.50		mg/kg	316	7440-50-8		
Lead	26.0	0.30		mg/kg	316	7439-92-1		
Manganese	165	0.50		mg/kg	316	7439-96-5		
Molybdenum	0.67	0.50		mg/kg	316	7439-98-7		
Nickel	5.21	0.50		mg/kg	316	7440-02-0		
Selenium	Not detected	0.40		mg/kg	316	7782-49-2		
Silver	Not detected	0.20		mg/kg	316	7440-22-4		
Strontium	78.7	0.50		mg/kg	316	7440-24-6		
Thallium	Not detected	0.20		mg/kg	316	7440-28-0		
Tin	Not detected	2.0		mg/kg	316	7440-31-5		
Titanium	121	1.0		mg/kg	316	7440-32-6		
Vanadium	14.4	0.50		mg/kg	316	7440-62-2		
Zinc	99.0	0.50		mg/kg	316	7440-66-6		

Method: SW6020A, Run Date: 01/04/23 10:43, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	7,990	20		mg/kg	15800	7429-90-5		
Iron	4,990	20		mg/kg	15800	7439-89-6		



Analytical Laboratory Report

Lab Sample ID: S43599.14 (continued)

Sample Tag: AOC12-TP01-W

Method: SW6020A, Run Date: 01/05/23 10:34, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	51,200	20		mg/kg	316	7440-70-2		
Magnesium	6,070	20		mg/kg	316	7439-95-4		
Potassium	1,820	20		mg/kg	316	7440-09-7		
Sodium	556	20		mg/kg	316	7440-23-5		

Method: SW7471B, Run Date: 12/20/22 15:21, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.668	0.050		mg/kg	83	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/29/22 12:11, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/08/23 06:02, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	3,450	330		ug/kg	10	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	10	208-96-8		
Anthracene	6,490	330		ug/kg	10	120-12-7		
Benzo(a)anthracene	22,060	330		ug/kg	10	56-55-3		
Benzo(b)fluoranthene	28,580	330		ug/kg	10	205-99-2		
Benzo(k)fluoranthene	18,440	330		ug/kg	10	207-08-9		
Benzo(ghi)perylene	8,570	330		ug/kg	10	191-24-2		
Benzo(a)pyrene	24,020	330		ug/kg	10	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	10	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	10	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	10	108-60-1		
bis(2-Ethylhexyl)phthalate	1,390	330		ug/kg	10	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	10	101-55-3		
Butyl benzyl phthalate	1,070	330		ug/kg	10	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	10	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	10	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	10	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	10	7005-72-3		
Chrysene	24,290	330		ug/kg	10	218-01-9		
Dibenzo(ah)anthracene	2,120	330		ug/kg	10	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	10	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	10	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	10	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	10	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	10	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	10	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	10	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43599.14 (continued)

Sample Tag: AOC12-TP01-W

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/08/23 06:02, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	10	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	10	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	10	606-20-2		
di-n-Octyl phthalate	520	330		ug/kg	10	117-84-0		
Fluoranthene	48,660	330		ug/kg	10	206-44-0		
Fluorene	2,610	330		ug/kg	10	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	10	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	10	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	10	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	10	67-72-1		
Indeno(1,2,3-cd)pyrene	9,120	330		ug/kg	10	193-39-5		
Isophorone	Not detected	330		ug/kg	10	78-59-1		
Naphthalene	1,020	330		ug/kg	10	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	10	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	10	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	10	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	10	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	10	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	10	87-86-5		
Phenanthrene	26,940	330		ug/kg	10	85-01-8		
Phenol	Not detected	330		ug/kg	10	108-95-2		
Pyrene	42,150	330		ug/kg	10	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	10	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	10	88-06-2		
Benzidine	Not detected	330		ug/kg	10	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	10	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 01/08/23 06:02, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	10			
Fluoranthene	Found			ug/kg	10	206-44-0		
Pyrene	Found			ug/kg	10	129-00-0		
Phenanthrene	Found			ug/kg	10	85-01-8		
Chrysene	Found			ug/kg	10	218-01-9		
Benzo(a)anthracene	Found			ug/kg	10	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	10	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	10	207-08-9		
Benzo(a)pyrene	Found			ug/kg	10	50-32-8		
Benzo(e)pyrene	Found			ug/kg	10	192-97-2		
Anthracene	Found			ug/kg	10	120-12-7		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/29/22 06:27, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	61.2	108-20-3		
TICs*	None Found			ug/kg	61.2			



Analytical Laboratory Report

Lab Sample ID: S43599.14 (continued)

Sample Tag: AOC12-TP01-W

Method: SW8260B - SIM, Run Date: 12/25/22 14:42, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	61.2	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	61.2	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 06:27, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	61.2	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	61.2	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	61.2	107-13-1		
2-Butanone (MEK)	Not detected	920		ug/kg	61.2	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	61.2	75-71-8		
Chloromethane	Not detected	300		ug/kg	61.2	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	61.2	75-01-4		
Bromomethane	Not detected	200		ug/kg	61.2	74-83-9		
Chloroethane	Not detected	300		ug/kg	61.2	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	61.2	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	61.2	75-35-4		
Methylene chloride	Not detected	100		ug/kg	61.2	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	61.2	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	61.2	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	61.2	156-59-2		
Chloroform	Not detected	60		ug/kg	61.2	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	61.2	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	61.2	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	61.2	56-23-5		
Benzene	Not detected	60		ug/kg	61.2	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	61.2	107-06-2		
Trichloroethene	Not detected	60		ug/kg	61.2	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	61.2	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	61.2	75-27-4		
Dibromomethane	Not detected	300		ug/kg	61.2	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	61.2	10061-01-5		
Toluene	Not detected	60		ug/kg	61.2	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	61.2	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	61.2	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	61.2	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	61.2	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	61.2	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	61.2	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	61.2	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	61.2	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	61.2			
o-Xylene	Not detected	60		ug/kg	61.2	95-47-6		
Styrene	Not detected	60		ug/kg	61.2	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	61.2	98-82-8		
Bromoform	Not detected	100		ug/kg	61.2	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	61.2	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	61.2	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	61.2	103-65-1		
Bromobenzene	Not detected	100		ug/kg	61.2	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43599.14 (continued)

Sample Tag: AOC12-TP01-W

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 06:27, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	61.2	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	61.2	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	61.2	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	61.2	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	61.2	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	61.2	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	61.2	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	61.2	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	61.2	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	61.2	104-51-8		
1,2,4-Trichlorobenzene	Not detected	400		ug/kg	61.2	120-82-1		
1,2,3-Trichlorobenzene	Not detected	400		ug/kg	61.2	87-61-6		
Naphthalene	Not detected	300		ug/kg	61.2	91-20-3		
Acrolein	Not detected	60		ug/kg	61.2	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	61.2	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	61.2	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	61.2	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	61.2	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	61.2	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	61.2	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	61.2	76-13-1		

Other / Misc.

Method: , Run Date: 12/28/22 20:58, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 01/04/23 16:52, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43599.15

Sample Tag: AOC12-TP01-N

Collected Date/Time: 12/15/2022 09:21

Matrix: Soil

COC Reference: 158669

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.7	IR
3	4oz Glass	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	01/03/23 09:30	JRH	
BNA Extraction*	Completed	SW3546	12/28/22 15:30	JWR	
Extraction, PCB*	Completed	SW3546	12/28/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	10.508/10	SW5035A	12/16/22 17:18	JKJ	
Mercury Digestion	Completed	SW7471B	12/20/22 14:23	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 19:53, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	87	1		%	1			

Metals

Method: SW6020A, Run Date: 01/03/23 13:13, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Antimony	Not detected	0.50		mg/kg	348	7440-36-0		
Arsenic	5.01	0.20		mg/kg	348	7440-38-2		
Barium	152	1.0		mg/kg	348	7440-39-3		
Beryllium	0.35	0.20		mg/kg	348	7440-41-7		
Boron	11.6	2.0		mg/kg	348	7440-42-8		
Cadmium	0.91	0.20		mg/kg	348	7440-43-9		
Chromium	15.0	0.50		mg/kg	348	7440-47-3		
Cobalt	2.37	0.50		mg/kg	348	7440-48-4		
Copper	13.4	0.50		mg/kg	348	7440-50-8		
Lead	39.4	0.30		mg/kg	348	7439-92-1		
Manganese	224	0.50		mg/kg	348	7439-96-5		
Molybdenum	0.75	0.50		mg/kg	348	7439-98-7		
Nickel	6.48	0.50		mg/kg	348	7440-02-0		
Selenium	Not detected	0.40		mg/kg	348	7782-49-2		
Silver	Not detected	0.20		mg/kg	348	7440-22-4		
Strontium	102	0.50		mg/kg	348	7440-24-6		
Thallium	Not detected	0.20		mg/kg	348	7440-28-0		
Tin	Not detected	2.0		mg/kg	348	7440-31-5		
Titanium	153	1.0		mg/kg	348	7440-32-6		
Vanadium	19.2	0.50		mg/kg	348	7440-62-2		
Zinc	156	0.50		mg/kg	348	7440-66-6		

Method: SW6020A, Run Date: 01/04/23 10:44, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	10,500	20		mg/kg	17400	7429-90-5		
Iron	6,240	20		mg/kg	17400	7439-89-6		



Analytical Laboratory Report

Lab Sample ID: S43599.15 (continued)

Sample Tag: AOC12-TP01-N

Method: SW6020A, Run Date: 01/05/23 10:35, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	72,900	20		mg/kg	348	7440-70-2		
Magnesium	7,030	20		mg/kg	348	7439-95-4		
Potassium	2,570	20		mg/kg	348	7440-09-7		
Sodium	687	20		mg/kg	348	7440-23-5		

Method: SW7471B, Run Date: 12/20/22 15:24, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.571	0.050		mg/kg	93	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/29/22 14:32, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/08/23 06:33, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	2,890	330		ug/kg	10	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	10	208-96-8		
Anthracene	6,100	330		ug/kg	10	120-12-7		
Benzo(a)anthracene	22,340	330		ug/kg	10	56-55-3		
Benzo(b)fluoranthene	25,860	330		ug/kg	10	205-99-2		
Benzo(k)fluoranthene	21,700	330		ug/kg	10	207-08-9		
Benzo(ghi)perylene	8,120	330		ug/kg	10	191-24-2		
Benzo(a)pyrene	23,840	330		ug/kg	10	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	10	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	10	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	10	108-60-1		
bis(2-Ethylhexyl)phthalate	1,510	330		ug/kg	10	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	10	101-55-3		
Butyl benzyl phthalate	1,430	330		ug/kg	10	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	10	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	10	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	10	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	10	7005-72-3		
Chrysene	25,290	330		ug/kg	10	218-01-9		
Dibenzo(ah)anthracene	2,140	330		ug/kg	10	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	10	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	10	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	10	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	10	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	10	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	10	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	10	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43599.15 (continued)

Sample Tag: AOC12-TP01-N

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/08/23 06:33, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	10	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	10	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	10	606-20-2		
di-n-Octyl phthalate	400	330		ug/kg	10	117-84-0		
Fluoranthene	46,210	330		ug/kg	10	206-44-0		
Fluorene	2,410	330		ug/kg	10	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	10	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	10	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	10	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	10	67-72-1		
Indeno(1,2,3-cd)pyrene	8,800	330		ug/kg	10	193-39-5		
Isophorone	Not detected	330		ug/kg	10	78-59-1		
Naphthalene	630	330		ug/kg	10	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	10	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	10	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	10	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	10	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	10	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	10	87-86-5		
Phenanthrene	25,500	330		ug/kg	10	85-01-8		
Phenol	Not detected	330		ug/kg	10	108-95-2		
Pyrene	41,430	330		ug/kg	10	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	10	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	10	88-06-2		
Benzidine	Not detected	330		ug/kg	10	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	10	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 01/08/23 06:33, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	10			
Fluoranthene	Found			ug/kg	10	206-44-0		
Pyrene	Found			ug/kg	10	129-00-0		
Phenanthrene	Found			ug/kg	10	85-01-8		
Chrysene	Found			ug/kg	10	218-01-9		
Benzo(a)anthracene	Found			ug/kg	10	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	10	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	10	207-08-9		
Benzo(a)pyrene	Found			ug/kg	10	50-32-8		
Benzo(e)pyrene	Found			ug/kg	10	192-97-2		
Anthracene	Found			ug/kg	10	120-12-7		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/29/22 06:52, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	62.2	108-20-3		
TICs*	None Found			ug/kg	62.2			



Analytical Laboratory Report

Lab Sample ID: S43599.15 (continued)

Sample Tag: AOC12-TP01-N

Method: SW8260B - SIM, Run Date: 12/25/22 15:03, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	62.2	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	62.2	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 06:52, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	62.2	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	62.2	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	62.2	107-13-1		
2-Butanone (MEK)	Not detected	930		ug/kg	62.2	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	62.2	75-71-8		
Chloromethane	Not detected	300		ug/kg	62.2	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	62.2	75-01-4		
Bromomethane	Not detected	200		ug/kg	62.2	74-83-9		
Chloroethane	Not detected	300		ug/kg	62.2	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	62.2	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	62.2	75-35-4		
Methylene chloride	Not detected	100		ug/kg	62.2	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	62.2	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	62.2	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	62.2	156-59-2		
Chloroform	Not detected	60		ug/kg	62.2	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	62.2	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	62.2	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	62.2	56-23-5		
Benzene	Not detected	60		ug/kg	62.2	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	62.2	107-06-2		
Trichloroethene	Not detected	60		ug/kg	62.2	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	62.2	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	62.2	75-27-4		
Dibromomethane	Not detected	300		ug/kg	62.2	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	62.2	10061-01-5		
Toluene	Not detected	60		ug/kg	62.2	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	62.2	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	62.2	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	62.2	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	62.2	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	62.2	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	62.2	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	62.2	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	62.2	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	62.2			
o-Xylene	Not detected	60		ug/kg	62.2	95-47-6		
Styrene	Not detected	60		ug/kg	62.2	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	62.2	98-82-8		
Bromoform	Not detected	100		ug/kg	62.2	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	62.2	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	62.2	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	62.2	103-65-1		
Bromobenzene	Not detected	100		ug/kg	62.2	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43599.15 (continued)

Sample Tag: AOC12-TP01-N

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 06:52, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	62.2	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	62.2	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	62.2	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	62.2	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	62.2	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	62.2	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	62.2	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	62.2	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	62.2	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	62.2	104-51-8		
1,2,4-Trichlorobenzene	Not detected	410		ug/kg	62.2	120-82-1		
1,2,3-Trichlorobenzene	Not detected	410		ug/kg	62.2	87-61-6		
Naphthalene	Not detected	300		ug/kg	62.2	91-20-3		
Acrolein	Not detected	60		ug/kg	62.2	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	62.2	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	62.2	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	62.2	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	62.2	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	62.2	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	62.2	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	62.2	76-13-1		

Other / Misc.

Method: , Run Date: 12/28/22 21:19, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 01/04/23 17:06, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43599.16

Sample Tag: AOC12-TP01-S

Collected Date/Time: 12/15/2022 09:27

Matrix: Soil

COC Reference: 158669

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.7	IR
3	4oz Glass	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	01/03/23 09:30	JRH	
BNA Extraction*	Completed	SW3546	12/28/22 15:30	JWR	
Extraction, PCB*	Completed	SW3546	12/28/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	11.646/11	SW5035A	12/16/22 17:18	JKJ	
Mercury Digestion	Completed	SW7471B	12/20/22 14:23	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 19:53, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	88	1		%	1			

Metals

Method: SW6020A, Run Date: 01/03/23 13:15, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	4,010	1.0		mg/kg	317	7429-90-5		
Antimony	Not detected	0.50		mg/kg	317	7440-36-0		
Arsenic	2.60	0.20		mg/kg	317	7440-38-2		
Barium	68.1	1.0		mg/kg	317	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	317	7440-41-7		
Boron	4.78	2.0		mg/kg	317	7440-42-8		
Cadmium	0.51	0.20		mg/kg	317	7440-43-9		
Chromium	6.62	0.50		mg/kg	317	7440-47-3		
Cobalt	1.69	0.50		mg/kg	317	7440-48-4		
Copper	7.94	0.50		mg/kg	317	7440-50-8		
Iron	4,290	1.0		mg/kg	317	7439-89-6		
Lead	19.8	0.30		mg/kg	317	7439-92-1		
Manganese	144	0.50		mg/kg	317	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	317	7439-98-7		
Nickel	5.09	0.50		mg/kg	317	7440-02-0		
Selenium	Not detected	0.40		mg/kg	317	7782-49-2		
Silver	Not detected	0.20		mg/kg	317	7440-22-4		
Strontium	64.6	0.50		mg/kg	317	7440-24-6		
Thallium	Not detected	0.20		mg/kg	317	7440-28-0		
Tin	Not detected	2.0		mg/kg	317	7440-31-5		
Titanium	83.7	1.0		mg/kg	317	7440-32-6		
Vanadium	10.3	0.50		mg/kg	317	7440-62-2		
Zinc	78.3	0.50		mg/kg	317	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43599.16 (continued)

Sample Tag: AOC12-TP01-S

Method: SW6020A, Run Date: 01/05/23 10:36, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	65,700	20		mg/kg	317	7440-70-2		
Magnesium	11,500	20		mg/kg	317	7439-95-4		
Potassium	621	20		mg/kg	317	7440-09-7		
Sodium	170	20		mg/kg	317	7440-23-5		

Method: SW7471B, Run Date: 12/20/22 15:27, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.437	0.050		mg/kg	83	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/29/22 14:44, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/08/23 07:03, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	2,560	330		ug/kg	10	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	10	208-96-8		
Anthracene	5,530	330		ug/kg	10	120-12-7		
Benzo(a)anthracene	20,010	330		ug/kg	10	56-55-3		
Benzo(b)fluoranthene	24,820	330		ug/kg	10	205-99-2		
Benzo(k)fluoranthene	18,720	330		ug/kg	10	207-08-9		
Benzo(ghi)perylene	6,860	330		ug/kg	10	191-24-2		
Benzo(a)pyrene	22,020	330		ug/kg	10	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	10	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	10	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	10	108-60-1		
bis(2-Ethylhexyl)phthalate	1,280	330		ug/kg	10	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	10	101-55-3		
Butyl benzyl phthalate	8,700	330		ug/kg	10	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	10	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	10	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	10	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	10	7005-72-3		
Chrysene	22,560	330		ug/kg	10	218-01-9		
Dibenzo(ah)anthracene	1,660	330		ug/kg	10	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	10	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	10	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	10	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	10	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	10	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	10	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	10	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43599.16 (continued)

Sample Tag: AOC12-TP01-S

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/08/23 07:03, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	10	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	10	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	10	606-20-2		
di-n-Octyl phthalate	3,130	330		ug/kg	10	117-84-0		
Fluoranthene	43,720	330		ug/kg	10	206-44-0		
Fluorene	2,100	330		ug/kg	10	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	10	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	10	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	10	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	10	67-72-1		
Indeno(1,2,3-cd)pyrene	7,450	330		ug/kg	10	193-39-5		
Isophorone	Not detected	330		ug/kg	10	78-59-1		
Naphthalene	570	330		ug/kg	10	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	10	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	10	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	10	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	10	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	10	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	10	87-86-5		
Phenanthrene	23,570	330		ug/kg	10	85-01-8		
Phenol	Not detected	330		ug/kg	10	108-95-2		
Pyrene	38,460	330		ug/kg	10	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	10	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	10	88-06-2		
Benzidine	Not detected	330		ug/kg	10	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	10	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 01/08/23 07:03, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	10			
Fluoranthene	Found			ug/kg	10	206-44-0		
Pyrene	Found			ug/kg	10	129-00-0		
Phenanthrene	Found			ug/kg	10	85-01-8		
Chrysene	Found			ug/kg	10	218-01-9		
Benzo(a)anthracene	Found			ug/kg	10	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	10	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	10	207-08-9		
Benzo(a)pyrene	Found			ug/kg	10	50-32-8		
Benzo(e)pyrene	Found			ug/kg	10	192-97-2		
Anthracene	Found			ug/kg	10	120-12-7		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/29/22 07:16, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	60.5	108-20-3		
TICs*	None Found			ug/kg	60.5			



Analytical Laboratory Report

Lab Sample ID: S43599.16 (continued)

Sample Tag: AOC12-TP01-S

Method: SW8260B - SIM, Run Date: 12/25/22 15:23, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	60.5	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	60.5	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 07:16, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	60.5	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	60.5	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	60.5	107-13-1		
2-Butanone (MEK)	Not detected	910		ug/kg	60.5	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	60.5	75-71-8		
Chloromethane	Not detected	300		ug/kg	60.5	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	60.5	75-01-4		
Bromomethane	Not detected	200		ug/kg	60.5	74-83-9		
Chloroethane	Not detected	300		ug/kg	60.5	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	60.5	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	60.5	75-35-4		
Methylene chloride	Not detected	100		ug/kg	60.5	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	60.5	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	60.5	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	60.5	156-59-2		
Chloroform	Not detected	60		ug/kg	60.5	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	60.5	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	60.5	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	60.5	56-23-5		
Benzene	Not detected	60		ug/kg	60.5	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	60.5	107-06-2		
Trichloroethene	Not detected	60		ug/kg	60.5	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	60.5	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	60.5	75-27-4		
Dibromomethane	Not detected	300		ug/kg	60.5	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	60.5	10061-01-5		
Toluene	Not detected	60		ug/kg	60.5	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	60.5	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	60.5	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	60.5	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	60.5	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	60.5	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	60.5	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	60.5	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	60.5	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	60.5			
o-Xylene	Not detected	60		ug/kg	60.5	95-47-6		
Styrene	Not detected	60		ug/kg	60.5	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	60.5	98-82-8		
Bromoform	Not detected	100		ug/kg	60.5	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	60.5	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	60.5	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	60.5	103-65-1		
Bromobenzene	Not detected	100		ug/kg	60.5	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43599.16 (continued)

Sample Tag: AOC12-TP01-S

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 07:16, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	60.5	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	60.5	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	60.5	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	60.5	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	60.5	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	60.5	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	60.5	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	60.5	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	60.5	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	60.5	104-51-8		
1,2,4-Trichlorobenzene	Not detected	400		ug/kg	60.5	120-82-1		
1,2,3-Trichlorobenzene	Not detected	400		ug/kg	60.5	87-61-6		
Naphthalene	Not detected	300		ug/kg	60.5	91-20-3		
Acrolein	Not detected	60		ug/kg	60.5	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	60.5	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	60.5	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	60.5	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	60.5	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	60.5	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	60.5	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	60.5	76-13-1		

Other / Misc.

Method: , Run Date: 12/28/22 21:40, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 01/10/23 13:51, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43599.17

Sample Tag: AOC12-TP01-B

Collected Date/Time: 12/15/2022 10:00

Matrix: Soil

COC Reference: 158669

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.7	IR
3	4oz Glass	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	01/03/23 09:30	JRH	
BNA Extraction*	Completed	SW3546	12/28/22 15:30	JWR	
Extraction, PCB*	Completed	SW3546	12/28/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	12.223/12	SW5035A	12/16/22 17:18	JKJ	
Mercury Digestion	Completed	SW7471B	12/20/22 14:23	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 19:53, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	86	1		%	1			

Metals

Method: SW6020A, Run Date: 01/03/23 13:17, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	4,880	1.0		mg/kg	354	7429-90-5		
Antimony	Not detected	0.50		mg/kg	354	7440-36-0		
Arsenic	3.58	0.20		mg/kg	354	7440-38-2		
Barium	102	1.0		mg/kg	354	7440-39-3		
Beryllium	0.24	0.20		mg/kg	354	7440-41-7		
Boron	15.6	2.0		mg/kg	354	7440-42-8		
Cadmium	0.64	0.20		mg/kg	354	7440-43-9		
Chromium	10.3	0.50		mg/kg	354	7440-47-3		
Cobalt	2.02	0.50		mg/kg	354	7440-48-4		
Copper	12.2	0.50		mg/kg	354	7440-50-8		
Iron	4,980	1.0		mg/kg	354	7439-89-6		
Lead	43.8	0.30		mg/kg	354	7439-92-1		
Manganese	173	0.50		mg/kg	354	7439-96-5		
Molybdenum	0.74	0.50		mg/kg	354	7439-98-7		
Nickel	5.54	0.50		mg/kg	354	7440-02-0		
Selenium	Not detected	0.40		mg/kg	354	7782-49-2		
Silver	Not detected	0.20		mg/kg	354	7440-22-4		
Strontium	81.7	0.50		mg/kg	354	7440-24-6		
Thallium	Not detected	0.20		mg/kg	354	7440-28-0		
Tin	Not detected	2.0		mg/kg	354	7440-31-5		
Titanium	107	1.0		mg/kg	354	7440-32-6		
Vanadium	13.5	0.50		mg/kg	354	7440-62-2		
Zinc	112	0.50		mg/kg	354	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43599.17 (continued)

Sample Tag: AOC12-TP01-B

Method: SW6020A, Run Date: 01/05/23 10:54, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	76,300	20		mg/kg	354	7440-70-2		
Magnesium	9,870	20		mg/kg	354	7439-95-4		
Potassium	857	20		mg/kg	354	7440-09-7		
Sodium	276	20		mg/kg	354	7440-23-5		

Method: SW7471B, Run Date: 12/20/22 15:31, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.476	0.050		mg/kg	92	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/29/22 14:17, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	400	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/08/23 04:32, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	5,240	430		ug/kg	15	83-32-9	Y	
Acenaphthylene	Not detected	430		ug/kg	15	208-96-8	Y	
Anthracene	10,740	430		ug/kg	15	120-12-7	Y	
Benzo(a)anthracene	27,490	430		ug/kg	15	56-55-3	Y	
Benzo(b)fluoranthene	28,910	430		ug/kg	15	205-99-2	Y	
Benzo(k)fluoranthene	24,770	430		ug/kg	15	207-08-9	Y	
Benzo(ghi)perylene	12,070	430		ug/kg	15	191-24-2	Y	
Benzo(a)pyrene	27,770	430		ug/kg	15	50-32-8	Y	
bis(2-Chloroethoxy)methane	Not detected	430		ug/kg	15	111-91-1	Y	
bis(2-Chloroethyl)ether	Not detected	430		ug/kg	15	111-44-4	Y	
bis(2-Chloroisopropyl)ether*	Not detected	430		ug/kg	15	108-60-1	Y	
bis(2-Ethylhexyl)phthalate	2,340	430		ug/kg	15	117-81-7	Y	
4-Bromophenyl phenyl ether	Not detected	430		ug/kg	15	101-55-3	Y	
Butyl benzyl phthalate	1,580	430		ug/kg	15	85-68-7	Y	
2-Chloronaphthalene	Not detected	430		ug/kg	15	91-58-7	Y	
4-Chloro-3-methylphenol	Not detected	430		ug/kg	15	59-50-7	Y	
2-Chlorophenol	Not detected	430		ug/kg	15	95-57-8	Y	
4-Chlorophenyl phenyl ether	Not detected	430		ug/kg	15	7005-72-3	Y	
Chrysene	31,550	430		ug/kg	15	218-01-9	Y	
Dibenzo(ah)anthracene	2,850	430		ug/kg	15	53-70-3	Y	
di-n-Butyl phthalate*	Not detected	430		ug/kg	15	84-74-2	Y	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	15	91-94-1		
2,4-Dichlorophenol	Not detected	430		ug/kg	15	120-83-2	Y	
Diethyl phthalate	Not detected	430		ug/kg	15	84-66-2	Y	
2,4-Dimethylphenol	Not detected	430		ug/kg	15	105-67-9	Y	
Dimethyl phthalate	Not detected	430		ug/kg	15	131-11-3	Y	

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S43599.17 (continued)

Sample Tag: AOC12-TP01-B

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/08/23 04:32, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	15	534-52-1		
2,4-Dinitrophenol	Not detected	830		ug/kg	15	51-28-5		
2,4-Dinitrotoluene	Not detected	430		ug/kg	15	121-14-2	Y	
2,6-Dinitrotoluene	Not detected	430		ug/kg	15	606-20-2	Y	
di-n-Octyl phthalate	460	430		ug/kg	15	117-84-0	Y	
Fluoranthene	64,880	430		ug/kg	15	206-44-0	Y	
Fluorene	5,180	430		ug/kg	15	86-73-7	Y	
Hexachlorobenzene	Not detected	430		ug/kg	15	118-74-1	Y	
Hexachlorobutadiene	Not detected	430		ug/kg	15	87-68-3	Y	
Hexachlorocyclopentadiene	Not detected	430		ug/kg	15	77-47-4	Y	
Hexachloroethane	Not detected	430		ug/kg	15	67-72-1	Y	
Indeno(1,2,3-cd)pyrene	12,170	430		ug/kg	15	193-39-5	Y	
Isophorone	Not detected	430		ug/kg	15	78-59-1	Y	
Naphthalene	1,880	430		ug/kg	15	91-20-3	Y	
Nitrobenzene	Not detected	430		ug/kg	15	98-95-3	Y	
2-Nitrophenol	Not detected	430		ug/kg	15	88-75-5	Y	
4-Nitrophenol	Not detected	830		ug/kg	15	100-02-7		
N-Nitrosodiphenylamine	Not detected	430		ug/kg	15	86-30-6	Y	
N-Nitrosodi-n-propylamine	Not detected	430		ug/kg	15	621-64-7	Y	
Pentachlorophenol	Not detected	430		ug/kg	15	87-86-5	Y	
Phenanthrene	44,040	430		ug/kg	15	85-01-8	Y	
Phenol	Not detected	430		ug/kg	15	108-95-2	Y	
Pyrene	53,420	430		ug/kg	15	129-00-0	Y	
1,2,4-Trichlorobenzene	Not detected	430		ug/kg	15	120-82-1	Y	
2,4,6-Trichlorophenol	Not detected	430		ug/kg	15	88-06-2	Y	
Benzidine	Not detected	430		ug/kg	15	92-87-5	Y	
N-Nitrosodimethylamine	Not detected	430		ug/kg	15	62-75-9	Y	

TICs Semi-Volatiles, Method: SW8270D, Run Date: 01/08/23 04:32, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	15			
Fluoranthene	Found			ug/kg	15	206-44-0		
Pyrene	Found			ug/kg	15	129-00-0		
Phenanthrene	Found			ug/kg	15	85-01-8		
Chrysene	Found			ug/kg	15	218-01-9		
Benzo(a)anthracene	Found			ug/kg	15	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	15	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	15	207-08-9		
Benzo(a)pyrene	Found			ug/kg	15	50-32-8		
Benzo(e)pyrene	Found			ug/kg	15	192-97-2		
Anthracene	Found			ug/kg	15	120-12-7		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/29/22 07:40, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	65.2	108-20-3		
TICs*	None Found			ug/kg	65.2			

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S43599.17 (continued)

Sample Tag: AOC12-TP01-B

Method: SW8260B - SIM, Run Date: 12/25/22 15:44, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	65.2	96-12-8		
1,4-Dioxane*	Not detected	70		ug/kg	65.2	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 07:40, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	65.2	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	300		ug/kg	65.2	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	65.2	107-13-1		
2-Butanone (MEK)	Not detected	980		ug/kg	65.2	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	65.2	75-71-8		
Chloromethane	Not detected	300		ug/kg	65.2	74-87-3		
Vinyl chloride	Not detected	70		ug/kg	65.2	75-01-4		
Bromomethane	Not detected	300		ug/kg	65.2	74-83-9		
Chloroethane	Not detected	300		ug/kg	65.2	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	65.2	75-69-4		
1,1-Dichloroethene	Not detected	70		ug/kg	65.2	75-35-4		
Methylene chloride	Not detected	100		ug/kg	65.2	75-09-2		
trans-1,2-Dichloroethene	Not detected	70		ug/kg	65.2	156-60-5		
1,1-Dichloroethane	Not detected	70		ug/kg	65.2	75-34-3		
cis-1,2-Dichloroethene	Not detected	70		ug/kg	65.2	156-59-2		
Chloroform	Not detected	70		ug/kg	65.2	67-66-3		
1,1,1-Trichloroethane	Not detected	70		ug/kg	65.2	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	65.2	108-10-1		
Carbon tetrachloride	Not detected	70		ug/kg	65.2	56-23-5		
Benzene	Not detected	70		ug/kg	65.2	71-43-2		
1,2-Dichloroethane	Not detected	70		ug/kg	65.2	107-06-2		
Trichloroethene	Not detected	70		ug/kg	65.2	79-01-6		
1,2-Dichloropropane	Not detected	70		ug/kg	65.2	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	65.2	75-27-4		
Dibromomethane	Not detected	300		ug/kg	65.2	74-95-3		
cis-1,3-Dichloropropene	Not detected	70		ug/kg	65.2	10061-01-5		
Toluene	Not detected	70		ug/kg	65.2	108-88-3		
trans-1,3-Dichloropropene	Not detected	70		ug/kg	65.2	10061-02-6		
1,1,2-Trichloroethane	Not detected	70		ug/kg	65.2	79-00-5		
Tetrachloroethene	Not detected	70		ug/kg	65.2	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	65.2	124-48-1		
1,2-Dibromoethane	Not detected	30		ug/kg	65.2	106-93-4	M	
Chlorobenzene	Not detected	70		ug/kg	65.2	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	65.2	630-20-6		
Ethylbenzene	Not detected	70		ug/kg	65.2	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	65.2			
o-Xylene	Not detected	70		ug/kg	65.2	95-47-6		
Styrene	Not detected	70		ug/kg	65.2	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	65.2	98-82-8		
Bromoform	Not detected	100		ug/kg	65.2	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	70		ug/kg	65.2	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	65.2	96-18-4		
n-Propylbenzene	Not detected	70		ug/kg	65.2	103-65-1		
Bromobenzene	Not detected	100		ug/kg	65.2	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43599.17 (continued)

Sample Tag: AOC12-TP01-B

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 07:40, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	70		ug/kg	65.2	108-67-8		
tert-Butylbenzene	Not detected	70		ug/kg	65.2	98-06-6		
1,2,4-Trimethylbenzene	Not detected	70		ug/kg	65.2	95-63-6		
sec-Butylbenzene	Not detected	70		ug/kg	65.2	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	65.2	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	65.2	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	65.2	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	65.2	95-50-1		
1,2,3-Trimethylbenzene	Not detected	70		ug/kg	65.2	526-73-8		
n-Butylbenzene	Not detected	70		ug/kg	65.2	104-51-8		
1,2,4-Trichlorobenzene	Not detected	430		ug/kg	65.2	120-82-1		
1,2,3-Trichlorobenzene	Not detected	430		ug/kg	65.2	87-61-6		
Naphthalene	Not detected	300		ug/kg	65.2	91-20-3		
Acrolein	Not detected	70		ug/kg	65.2	107-02-8		
2-Chlorotoluene	Not detected	70		ug/kg	65.2	95-49-8		
4-Chlorotoluene	Not detected	70		ug/kg	65.2	106-43-4		
1,3-Dichloropropane	Not detected	70		ug/kg	65.2	142-28-9		
1,1-Dichloropropene	Not detected	70		ug/kg	65.2	563-58-6		
2,2-Dichloropropane	Not detected	70		ug/kg	65.2	594-20-7		
Hexachlorobutadiene	Not detected	70		ug/kg	65.2	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	70		ug/kg	65.2	76-13-1		

Other / Misc.

Method: , Run Date: 12/28/22 22:02, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43599.18

Sample Tag: DUP-11S

Collected Date/Time: 12/15/2022 00:01

Matrix: Soil

COC Reference: 158669

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.7	IR
3	4oz Glass	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	01/03/23 09:30	JRH	
BNA Extraction*	Completed	SW3546	12/28/22 15:30	JWR	
Extraction, PCB*	Completed	SW3546	12/28/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	13.624/13	SW5035A	12/16/22 17:18	JKJ	
Mercury Digestion	Completed	SW7471B	12/20/22 14:23	CTV	

Inorganics

Method: SM2540B, Run Date: 12/19/22 17:24, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	90	1		%	1			

Metals

Method: SW6020A, Run Date: 01/04/23 13:48, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	2,680	1.0		mg/kg	331	7429-90-5		
Antimony	Not detected	0.50		mg/kg	331	7440-36-0		
Arsenic	3.38	0.20		mg/kg	331	7440-38-2		
Beryllium	Not detected	0.20		mg/kg	331	7440-41-7		
Boron	3.02	2.0		mg/kg	331	7440-42-8		
Cadmium	0.38	0.20		mg/kg	331	7440-43-9		
Chromium	5.63	0.50		mg/kg	331	7440-47-3		
Cobalt	2.12	0.50		mg/kg	331	7440-48-4		
Copper	12.3	0.50		mg/kg	331	7440-50-8		
Iron	11,700	1.0		mg/kg	331	7439-89-6		
Lead	13.2	0.30		mg/kg	331	7439-92-1		
Manganese	183	0.50		mg/kg	331	7439-96-5		
Molybdenum	1.64	0.50		mg/kg	331	7439-98-7		
Nickel	6.40	0.50		mg/kg	331	7440-02-0		
Selenium	Not detected	0.40		mg/kg	331	7782-49-2		
Silver	Not detected	0.20		mg/kg	331	7440-22-4		
Strontium	42.9	0.50		mg/kg	331	7440-24-6		
Thallium	Not detected	0.20		mg/kg	331	7440-28-0		
Titanium	53.6	1.0		mg/kg	331	7440-32-6		
Vanadium	10.9	0.50		mg/kg	331	7440-62-2		
Zinc	68.9	0.50		mg/kg	331	7440-66-6		

Method: SW6020A, Run Date: 01/04/23 16:00, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Barium	45.2	1.0		mg/kg	331	7440-39-3		
Tin	Not detected	2.0		mg/kg	331	7440-31-5		



Analytical Laboratory Report

Lab Sample ID: S43599.18 (continued)

Sample Tag: DUP-11S

Method: SW6020A, Run Date: 01/05/23 10:39, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	37,500	20		mg/kg	331	7440-70-2		
Magnesium	6,160	20		mg/kg	331	7439-95-4		
Potassium	291	20		mg/kg	331	7440-09-7		
Sodium	108	20		mg/kg	331	7440-23-5		

Method: SW7471B, Run Date: 12/20/22 15:34, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.060	0.050		mg/kg	89	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/29/22 14:56, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/08/23 05:02, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	5,430	400		ug/kg	15	83-32-9	Y	
Acenaphthylene	Not detected	400		ug/kg	15	208-96-8	Y	
Anthracene	10,560	400		ug/kg	15	120-12-7	Y	
Benzo(a)anthracene	32,990	400		ug/kg	15	56-55-3	Y	
Benzo(b)fluoranthene	38,190	400		ug/kg	15	205-99-2	Y	
Benzo(k)fluoranthene	26,530	400		ug/kg	15	207-08-9	Y	
Benzo(ghi)perylene	13,640	400		ug/kg	15	191-24-2	Y	
Benzo(a)pyrene	33,660	400		ug/kg	15	50-32-8	Y	
bis(2-Chloroethoxy)methane	Not detected	400		ug/kg	15	111-91-1	Y	
bis(2-Chloroethyl)ether	Not detected	400		ug/kg	15	111-44-4	Y	
bis(2-Chloroisopropyl)ether*	Not detected	400		ug/kg	15	108-60-1	Y	
bis(2-Ethylhexyl)phthalate	1,320	400		ug/kg	15	117-81-7	Y	
4-Bromophenyl phenyl ether	Not detected	400		ug/kg	15	101-55-3	Y	
Butyl benzyl phthalate	1,640	400		ug/kg	15	85-68-7	Y	
2-Chloronaphthalene	Not detected	400		ug/kg	15	91-58-7	Y	
4-Chloro-3-methylphenol	Not detected	400		ug/kg	15	59-50-7	Y	
2-Chlorophenol	Not detected	400		ug/kg	15	95-57-8	Y	
4-Chlorophenyl phenyl ether	Not detected	400		ug/kg	15	7005-72-3	Y	
Chrysene	36,540	400		ug/kg	15	218-01-9	Y	
Dibenzo(ah)anthracene	3,160	400		ug/kg	15	53-70-3	Y	
di-n-Butyl phthalate*	Not detected	400		ug/kg	15	84-74-2	Y	
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	15	91-94-1		
2,4-Dichlorophenol	Not detected	400		ug/kg	15	120-83-2	Y	
Diethyl phthalate	Not detected	400		ug/kg	15	84-66-2	Y	
2,4-Dimethylphenol	Not detected	400		ug/kg	15	105-67-9	Y	
Dimethyl phthalate	Not detected	400		ug/kg	15	131-11-3	Y	

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S43599.18 (continued)

Sample Tag: DUP-11S

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/08/23 05:02, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	15	534-52-1		
2,4-Dinitrophenol	Not detected	830		ug/kg	15	51-28-5		
2,4-Dinitrotoluene	Not detected	400		ug/kg	15	121-14-2	Y	
2,6-Dinitrotoluene	Not detected	400		ug/kg	15	606-20-2	Y	
di-n-Octyl phthalate	590	400		ug/kg	15	117-84-0	Y	
Fluoranthene	75,430	400		ug/kg	15	206-44-0	Y	
Fluorene	4,670	400		ug/kg	15	86-73-7	Y	
Hexachlorobenzene	Not detected	400		ug/kg	15	118-74-1	Y	
Hexachlorobutadiene	Not detected	400		ug/kg	15	87-68-3	Y	
Hexachlorocyclopentadiene	Not detected	400		ug/kg	15	77-47-4	Y	
Hexachloroethane	Not detected	400		ug/kg	15	67-72-1	Y	
Indeno(1,2,3-cd)pyrene	14,390	400		ug/kg	15	193-39-5	Y	
Isophorone	Not detected	400		ug/kg	15	78-59-1	Y	
Naphthalene	2,270	400		ug/kg	15	91-20-3	Y	
Nitrobenzene	Not detected	400		ug/kg	15	98-95-3	Y	
2-Nitrophenol	Not detected	400		ug/kg	15	88-75-5	Y	
4-Nitrophenol	Not detected	830		ug/kg	15	100-02-7		
N-Nitrosodiphenylamine	Not detected	400		ug/kg	15	86-30-6	Y	
N-Nitrosodi-n-propylamine	Not detected	400		ug/kg	15	621-64-7	Y	
Pentachlorophenol	Not detected	400		ug/kg	15	87-86-5	Y	
Phenanthrene	46,740	400		ug/kg	15	85-01-8	Y	
Phenol	Not detected	400		ug/kg	15	108-95-2	Y	
Pyrene	62,420	400		ug/kg	15	129-00-0	Y	
1,2,4-Trichlorobenzene	Not detected	400		ug/kg	15	120-82-1	Y	
2,4,6-Trichlorophenol	Not detected	400		ug/kg	15	88-06-2	Y	
Benzidine	Not detected	400		ug/kg	15	92-87-5	Y	
N-Nitrosodimethylamine	Not detected	400		ug/kg	15	62-75-9	Y	

TICs Semi-Volatiles, Method: SW8270D, Run Date: 01/08/23 05:02, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	15			
Fluoranthene	Found			ug/kg	15	206-44-0		
Pyrene	Found			ug/kg	15	129-00-0		
Phenanthrene	Found			ug/kg	15	85-01-8		
Chrysene	Found			ug/kg	15	218-01-9		
Benzo(a)anthracene	Found			ug/kg	15	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	15	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	15	207-08-9		
Benzo(a)pyrene	Found			ug/kg	15	50-32-8		
Benzo(e)pyrene	Found			ug/kg	15	192-97-2		
Anthracene	Found			ug/kg	15	120-12-7		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/29/22 08:04, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	58.6	108-20-3		
TICs*	None Found			ug/kg	58.6			

Y-Elevated reporting limit due to high target concentration



Analytical Laboratory Report

Lab Sample ID: S43599.18 (continued)

Sample Tag: DUP-11S

Method: SW8260B - SIM, Run Date: 12/25/22 16:04, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	58.6	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	58.6	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 08:04, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	58.6	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	58.6	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	58.6	107-13-1		
2-Butanone (MEK)	Not detected	880		ug/kg	58.6	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	58.6	75-71-8		
Chloromethane	Not detected	300		ug/kg	58.6	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	58.6	75-01-4		
Bromomethane	Not detected	200		ug/kg	58.6	74-83-9		
Chloroethane	Not detected	300		ug/kg	58.6	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	58.6	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	58.6	75-35-4		
Methylene chloride	Not detected	100		ug/kg	58.6	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	58.6	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	58.6	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	58.6	156-59-2		
Chloroform	Not detected	60		ug/kg	58.6	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	58.6	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	58.6	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	58.6	56-23-5		
Benzene	Not detected	60		ug/kg	58.6	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	58.6	107-06-2		
Trichloroethene	Not detected	60		ug/kg	58.6	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	58.6	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	58.6	75-27-4		
Dibromomethane	Not detected	300		ug/kg	58.6	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	58.6	10061-01-5		
Toluene	Not detected	60		ug/kg	58.6	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	58.6	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	58.6	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	58.6	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	58.6	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	58.6	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	58.6	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	58.6	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	58.6	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	58.6			
o-Xylene	Not detected	60		ug/kg	58.6	95-47-6		
Styrene	Not detected	60		ug/kg	58.6	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	58.6	98-82-8		
Bromoform	Not detected	100		ug/kg	58.6	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	58.6	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	58.6	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	58.6	103-65-1		
Bromobenzene	Not detected	100		ug/kg	58.6	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43599.18 (continued)

Sample Tag: DUP-11S

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 08:04, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	58.6	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	58.6	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	58.6	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	58.6	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	58.6	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	58.6	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	58.6	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	58.6	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	58.6	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	58.6	104-51-8		
1,2,4-Trichlorobenzene	Not detected	390		ug/kg	58.6	120-82-1		
1,2,3-Trichlorobenzene	Not detected	390		ug/kg	58.6	87-61-6		
Naphthalene	Not detected	300		ug/kg	58.6	91-20-3		
Acrolein	Not detected	60		ug/kg	58.6	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	58.6	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	58.6	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	58.6	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	58.6	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	58.6	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	58.6	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	58.6	76-13-1		

Other / Misc.

Method: , Run Date: 12/28/22 22:23, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 01/04/23 17:09, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43599.19

Sample Tag: AOC12-TP02-E

Collected Date/Time: 12/15/2022 10:42

Matrix: Soil

COC Reference: 158669

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.7	IR
3	4oz Glass	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	01/03/23 09:30	JRH	
BNA Extraction*	Completed	SW3546	12/28/22 15:30	JWR	
Extraction, PCB*	Completed	SW3546	12/28/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	12.451/12	SW5035A	12/16/22 17:18	JKJ	
Mercury Digestion	Completed	SW7471B	12/20/22 14:23	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 19:53, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	97	1		%	1			

Metals

Method: SW6020A, Run Date: 01/03/23 13:20, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,650	1.0		mg/kg	314	7429-90-5		
Antimony	Not detected	0.50		mg/kg	314	7440-36-0		
Arsenic	0.66	0.20		mg/kg	314	7440-38-2		
Barium	8.11	1.0		mg/kg	314	7440-39-3		
Beryllium	Not detected	0.20		mg/kg	314	7440-41-7		
Boron	Not detected	2.0		mg/kg	314	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	314	7440-43-9		
Chromium	3.98	0.50		mg/kg	314	7440-47-3		
Cobalt	2.00	0.50		mg/kg	314	7440-48-4		
Copper	1.54	0.50		mg/kg	314	7440-50-8		
Iron	2,820	1.0		mg/kg	314	7439-89-6		
Lead	1.20	0.30		mg/kg	314	7439-92-1		
Manganese	92.4	0.50		mg/kg	314	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	314	7439-98-7		
Nickel	3.37	0.50		mg/kg	314	7440-02-0		
Selenium	Not detected	0.40		mg/kg	314	7782-49-2		
Silver	Not detected	0.20		mg/kg	314	7440-22-4		
Strontium	1.54	0.50		mg/kg	314	7440-24-6		
Thallium	Not detected	0.20		mg/kg	314	7440-28-0		
Tin	Not detected	2.0		mg/kg	314	7440-31-5		
Titanium	33.0	1.0		mg/kg	314	7440-32-6		
Vanadium	4.67	0.50		mg/kg	314	7440-62-2		
Zinc	6.97	0.50		mg/kg	314	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43599.19 (continued)

Sample Tag: AOC12-TP02-E

Method: SW6020A, Run Date: 01/05/23 10:45, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	543	20		mg/kg	314	7440-70-2		
Magnesium	683	20		mg/kg	314	7439-95-4		
Potassium	107	20		mg/kg	314	7440-09-7		
Sodium	Not detected	20		mg/kg	314	7440-23-5		

Method: SW7471B, Run Date: 12/20/22 15:44, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	74	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/29/22 15:08, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/07/23 23:29, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	7.5			
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8		
Anthracene	Not detected	330		ug/kg	7.5	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3		
Chrysene	Not detected	330		ug/kg	7.5	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3		



Analytical Laboratory Report

Lab Sample ID: S43599.19 (continued)

Sample Tag: AOC12-TP02-E

Method: SW8270D, Run Date: 01/07/23 23:29, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1		
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0		
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0		
Fluorene	Not detected	330		ug/kg	7.5	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5		
Isophorone	Not detected	330		ug/kg	7.5	78-59-1		
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5		
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8		
Phenol	Not detected	330		ug/kg	7.5	108-95-2		
Pyrene	Not detected	330		ug/kg	7.5	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2		
Benzidine	Not detected	330		ug/kg	7.5	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/29/22 08:29, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	51.2	108-20-3		
TICs*	None Found			ug/kg	51.2			

Method: SW8260B - SIM, Run Date: 12/25/22 16:25, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	51.2	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	51.2	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 08:29, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	51.2	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	51.2	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	51.2	107-13-1		
2-Butanone (MEK)	Not detected	770		ug/kg	51.2	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	51.2	75-71-8		
Chloromethane	Not detected	300		ug/kg	51.2	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	51.2	75-01-4		
Bromomethane	Not detected	200		ug/kg	51.2	74-83-9		
Chloroethane	Not detected	300		ug/kg	51.2	75-00-3		



Analytical Laboratory Report

Lab Sample ID: S43599.19 (continued)

Sample Tag: AOC12-TP02-E

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 08:29, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Trichlorofluoromethane	Not detected	100		ug/kg	51.2	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	51.2	75-35-4		
Methylene chloride	Not detected	100		ug/kg	51.2	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	51.2	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	51.2	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	51.2	156-59-2		
Chloroform	Not detected	50		ug/kg	51.2	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	51.2	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	51.2	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	51.2	56-23-5		
Benzene	Not detected	50		ug/kg	51.2	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	51.2	107-06-2		
Trichloroethene	Not detected	50		ug/kg	51.2	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	51.2	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	51.2	75-27-4		
Dibromomethane	Not detected	300		ug/kg	51.2	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	51.2	10061-01-5		
Toluene	Not detected	50		ug/kg	51.2	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	51.2	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	51.2	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	51.2	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	51.2	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	51.2	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	51.2	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	51.2	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	51.2	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	51.2			
o-Xylene	Not detected	50		ug/kg	51.2	95-47-6		
Styrene	Not detected	50		ug/kg	51.2	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	51.2	98-82-8		
Bromoform	Not detected	100		ug/kg	51.2	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	51.2	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	51.2	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	51.2	103-65-1		
Bromobenzene	Not detected	100		ug/kg	51.2	108-86-1		
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	51.2	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	51.2	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	51.2	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	51.2	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	51.2	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	51.2	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	51.2	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	51.2	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	51.2	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	51.2	104-51-8		
1,2,4-Trichlorobenzene	Not detected	340		ug/kg	51.2	120-82-1		
1,2,3-Trichlorobenzene	Not detected	340		ug/kg	51.2	87-61-6		
Naphthalene	Not detected	300		ug/kg	51.2	91-20-3		
Acrolein	Not detected	50		ug/kg	51.2	107-02-8		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43599.19 (continued)

Sample Tag: AOC12-TP02-E

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 08:29, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2-Chlorotoluene	Not detected	50		ug/kg	51.2	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	51.2	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	51.2	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	51.2	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	51.2	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	51.2	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	51.2	76-13-1		

Other / Misc.

Method: , Run Date: 12/28/22 22:45, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 01/04/23 17:12, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43599.20

Sample Tag: AOC12-TP02-W

Collected Date/Time: 12/15/2022 10:52

Matrix: Soil

COC Reference: 158669

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.7	IR
3	4oz Glass	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	01/03/23 09:30	JRH	
BNA Extraction*	Completed	SW3546	12/28/22 15:30	JWR	
Extraction, PCB*	Completed	SW3546	12/28/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	14.453/14	SW5035A	12/16/22 17:18	JKJ	
Mercury Digestion	Completed	SW7471B	12/20/22 14:23	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 19:53, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Metals

Method: SW6020A, Run Date: 01/04/23 14:07, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	2,620	1.0		mg/kg	299	7429-90-5		
Antimony	Not detected	0.50		mg/kg	299	7440-36-0		
Arsenic	0.51	0.20		mg/kg	299	7440-38-2		
Beryllium	Not detected	0.20		mg/kg	299	7440-41-7		
Boron	Not detected	2.0		mg/kg	299	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	299	7440-43-9		
Chromium	5.72	0.50		mg/kg	299	7440-47-3		
Cobalt	1.22	0.50		mg/kg	299	7440-48-4		
Copper	4.17	0.50		mg/kg	299	7440-50-8		
Iron	2,900	1.0		mg/kg	299	7439-89-6		
Lead	1.85	0.30		mg/kg	299	7439-92-1		
Manganese	21.1	0.50		mg/kg	299	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	299	7439-98-7		
Nickel	4.32	0.50		mg/kg	299	7440-02-0		
Selenium	Not detected	0.40		mg/kg	299	7782-49-2		
Silver	Not detected	0.20		mg/kg	299	7440-22-4		
Strontium	2.47	0.50		mg/kg	299	7440-24-6		
Thallium	Not detected	0.20		mg/kg	299	7440-28-0		
Titanium	26.1	1.0		mg/kg	299	7440-32-6		
Vanadium	8.13	0.50		mg/kg	299	7440-62-2		
Zinc	8.58	0.50		mg/kg	299	7440-66-6		

Method: SW6020A, Run Date: 01/04/23 16:02, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Barium	12.4	1.0		mg/kg	299	7440-39-3		
Tin	Not detected	2.0		mg/kg	299	7440-31-5		



Analytical Laboratory Report

Lab Sample ID: S43599.20 (continued)

Sample Tag: AOC12-TP02-W

Method: SW6020A, Run Date: 01/05/23 10:56, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	656	20		mg/kg	299	7440-70-2		
Magnesium	639	20		mg/kg	299	7439-95-4		
Potassium	131	20		mg/kg	299	7440-09-7		
Sodium	Not detected	20		mg/kg	299	7440-23-5		

Method: SW7471B, Run Date: 12/20/22 15:54, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	77	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/29/22 15:20, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/07/23 23:59, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	7.5			
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8		
Anthracene	Not detected	330		ug/kg	7.5	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3		
Chrysene	Not detected	330		ug/kg	7.5	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3		



Analytical Laboratory Report

Lab Sample ID: S43599.20 (continued)

Sample Tag: AOC12-TP02-W

Method: SW8270D, Run Date: 01/07/23 23:59, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1		
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0		
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0		
Fluorene	Not detected	330		ug/kg	7.5	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5		
Isophorone	Not detected	330		ug/kg	7.5	78-59-1		
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5		
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8		
Phenol	Not detected	330		ug/kg	7.5	108-95-2		
Pyrene	Not detected	330		ug/kg	7.5	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2		
Benzidine	Not detected	330		ug/kg	7.5	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/29/22 08:52, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	54.7	108-20-3		
TICs*	None Found			ug/kg	54.7			

Method: SW8260B - SIM, Run Date: 12/25/22 16:46, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	54.7	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	54.7	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 08:52, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	54.7	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	54.7	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	54.7	107-13-1		
2-Butanone (MEK)	Not detected	820		ug/kg	54.7	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	54.7	75-71-8		
Chloromethane	Not detected	300		ug/kg	54.7	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	54.7	75-01-4		
Bromomethane	Not detected	200		ug/kg	54.7	74-83-9		
Chloroethane	Not detected	300		ug/kg	54.7	75-00-3		



Analytical Laboratory Report

Lab Sample ID: S43599.20 (continued)

Sample Tag: AOC12-TP02-W

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 08:52, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Trichlorofluoromethane	Not detected	100		ug/kg	54.7	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	54.7	75-35-4		
Methylene chloride	Not detected	100		ug/kg	54.7	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	54.7	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	54.7	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	54.7	156-59-2		
Chloroform	Not detected	50		ug/kg	54.7	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	54.7	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	54.7	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	54.7	56-23-5		
Benzene	Not detected	50		ug/kg	54.7	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	54.7	107-06-2		
Trichloroethene	Not detected	50		ug/kg	54.7	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	54.7	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	54.7	75-27-4		
Dibromomethane	Not detected	300		ug/kg	54.7	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	54.7	10061-01-5		
Toluene	Not detected	50		ug/kg	54.7	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	54.7	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	54.7	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	54.7	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	54.7	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	54.7	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	54.7	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	54.7	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	54.7	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	54.7			
o-Xylene	Not detected	50		ug/kg	54.7	95-47-6		
Styrene	Not detected	50		ug/kg	54.7	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	54.7	98-82-8		
Bromoform	Not detected	100		ug/kg	54.7	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	54.7	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	54.7	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	54.7	103-65-1		
Bromobenzene	Not detected	100		ug/kg	54.7	108-86-1		
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	54.7	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	54.7	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	54.7	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	54.7	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	54.7	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	54.7	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	54.7	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	54.7	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	54.7	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	54.7	104-51-8		
1,2,4-Trichlorobenzene	Not detected	360		ug/kg	54.7	120-82-1		
1,2,3-Trichlorobenzene	Not detected	360		ug/kg	54.7	87-61-6		
Naphthalene	Not detected	300		ug/kg	54.7	91-20-3		
Acrolein	Not detected	50		ug/kg	54.7	107-02-8		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43599.20 (continued)

Sample Tag: AOC12-TP02-W

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 08:52, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2-Chlorotoluene	Not detected	50		ug/kg	54.7	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	54.7	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	54.7	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	54.7	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	54.7	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	54.7	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	54.7	76-13-1		

Other / Misc.

Method: , Run Date: 12/28/22 23:06, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 01/04/23 17:16, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43599.21

Sample Tag: AOC12-TP02-N

Collected Date/Time: 12/15/2022 11:00

Matrix: Soil

COC Reference: 158669

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.7	IR
3	4oz Glass	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	01/03/23 09:30	JRH	
BNA Extraction*	Completed	SW3546	12/28/22 15:30	JWR	
Extraction, PCB*	Completed	SW3546	12/28/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	13.689/13	SW5035A	12/19/22 10:06	JKJ	
Mercury Digestion	Completed	SW7471B	12/20/22 14:23	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 19:53, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	91	1		%	1			

Metals

Method: SW6020A, Run Date: 01/04/23 14:09, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	3,310	1.0		mg/kg	343	7429-90-5		
Antimony	Not detected	0.50		mg/kg	343	7440-36-0		
Arsenic	1.08	0.20		mg/kg	343	7440-38-2		
Beryllium	Not detected	0.20		mg/kg	343	7440-41-7		
Boron	Not detected	2.0		mg/kg	343	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	343	7440-43-9		
Chromium	6.61	0.50		mg/kg	343	7440-47-3		
Cobalt	6.06	0.50		mg/kg	343	7440-48-4		
Copper	4.65	0.50		mg/kg	343	7440-50-8		
Iron	4,290	1.0		mg/kg	343	7439-89-6		
Lead	2.23	0.30		mg/kg	343	7439-92-1		
Manganese	743	0.50		mg/kg	343	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	343	7439-98-7		
Nickel	7.66	0.50		mg/kg	343	7440-02-0		
Selenium	Not detected	0.40		mg/kg	343	7782-49-2		
Silver	Not detected	0.20		mg/kg	343	7440-22-4		
Strontium	3.46	0.50		mg/kg	343	7440-24-6		
Thallium	Not detected	0.20		mg/kg	343	7440-28-0		
Titanium	28.9	1.0		mg/kg	343	7440-32-6		
Vanadium	6.65	0.50		mg/kg	343	7440-62-2		
Zinc	11.8	0.50		mg/kg	343	7440-66-6		

Method: SW6020A, Run Date: 01/04/23 16:05, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Barium	40.2	1.0		mg/kg	343	7440-39-3		
Tin	Not detected	2.0		mg/kg	343	7440-31-5		



Analytical Laboratory Report

Lab Sample ID: S43599.21 (continued)

Sample Tag: AOC12-TP02-N

Method: SW6020A, Run Date: 01/05/23 10:57, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	873	20		mg/kg	343	7440-70-2		
Magnesium	803	20		mg/kg	343	7439-95-4		
Potassium	203	20		mg/kg	343	7440-09-7		
Sodium	Not detected	20		mg/kg	343	7440-23-5		

Method: SW7471B, Run Date: 12/20/22 15:57, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	86	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/29/22 15:32, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/08/23 00:30, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	7.5			
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8		
Anthracene	Not detected	330		ug/kg	7.5	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3		
Chrysene	Not detected	330		ug/kg	7.5	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3		



Analytical Laboratory Report

Lab Sample ID: S43599.21 (continued)

Sample Tag: AOC12-TP02-N

Method: SW8270D, Run Date: 01/08/23 00:30, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1		
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0		
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0		
Fluorene	Not detected	330		ug/kg	7.5	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5		
Isophorone	Not detected	330		ug/kg	7.5	78-59-1		
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5		
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8		
Phenol	Not detected	330		ug/kg	7.5	108-95-2		
Pyrene	Not detected	330		ug/kg	7.5	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2		
Benzidine	Not detected	330		ug/kg	7.5	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/29/22 09:17, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	57.1	108-20-3		
TICs*	None Found			ug/kg	57.1			

Method: SW8260B - SIM, Run Date: 12/25/22 17:06, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	57.1	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	57.1	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 09:17, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	57.1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	57.1	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	57.1	107-13-1		
2-Butanone (MEK)	Not detected	860		ug/kg	57.1	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	57.1	75-71-8		
Chloromethane	Not detected	300		ug/kg	57.1	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	57.1	75-01-4		
Bromomethane	Not detected	200		ug/kg	57.1	74-83-9		
Chloroethane	Not detected	300		ug/kg	57.1	75-00-3		



Analytical Laboratory Report

Lab Sample ID: S43599.21 (continued)

Sample Tag: AOC12-TP02-N

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 09:17, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Trichlorofluoromethane	Not detected	100		ug/kg	57.1	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	57.1	75-35-4		
Methylene chloride	Not detected	100		ug/kg	57.1	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	57.1	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	57.1	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	57.1	156-59-2		
Chloroform	Not detected	60		ug/kg	57.1	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	57.1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	57.1	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	57.1	56-23-5		
Benzene	Not detected	60		ug/kg	57.1	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	57.1	107-06-2		
Trichloroethene	Not detected	60		ug/kg	57.1	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	57.1	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	57.1	75-27-4		
Dibromomethane	Not detected	300		ug/kg	57.1	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	57.1	10061-01-5		
Toluene	Not detected	60		ug/kg	57.1	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	57.1	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	57.1	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	57.1	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	57.1	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	57.1	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	57.1	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	57.1	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	57.1	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	57.1			
o-Xylene	Not detected	60		ug/kg	57.1	95-47-6		
Styrene	Not detected	60		ug/kg	57.1	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	57.1	98-82-8		
Bromoform	Not detected	100		ug/kg	57.1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	57.1	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	57.1	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	57.1	103-65-1		
Bromobenzene	Not detected	100		ug/kg	57.1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	57.1	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	57.1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	57.1	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	57.1	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	57.1	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	57.1	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	57.1	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	57.1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	57.1	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	57.1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	380		ug/kg	57.1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	380		ug/kg	57.1	87-61-6		
Naphthalene	Not detected	300		ug/kg	57.1	91-20-3		
Acrolein	Not detected	60		ug/kg	57.1	107-02-8		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43599.21 (continued)

Sample Tag: AOC12-TP02-N

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 09:17, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2-Chlorotoluene	Not detected	60		ug/kg	57.1	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	57.1	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	57.1	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	57.1	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	57.1	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	57.1	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	57.1	76-13-1		

Other / Misc.

Method: , Run Date: 12/28/22 23:27, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 01/04/23 17:19, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43599.22

Sample Tag: AOC12-TP02-S

Collected Date/Time: 12/15/2022 11:00

Matrix: Soil

COC Reference: 158669

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.7	IR
3	4oz Glass	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	01/03/23 09:30	JRH	
BNA Extraction*	Completed	SW3546	12/28/22 15:30	JWR	
Extraction, PCB*	Completed	SW3546	12/28/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	11.993/11	SW5035A	12/16/22 17:18	JKJ	
Mercury Digestion	Completed	SW7471B	12/20/22 14:23	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 19:53, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	92	1		%	1			

Metals

Method: SW6020A, Run Date: 01/04/23 14:11, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,980	1.0		mg/kg	302	7429-90-5		
Antimony	Not detected	0.50		mg/kg	302	7440-36-0		
Arsenic	1.12	0.20		mg/kg	302	7440-38-2		
Beryllium	Not detected	0.20		mg/kg	302	7440-41-7		
Boron	Not detected	2.0		mg/kg	302	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	302	7440-43-9		
Chromium	4.58	0.50		mg/kg	302	7440-47-3		
Cobalt	1.45	0.50		mg/kg	302	7440-48-4		
Copper	2.70	0.50		mg/kg	302	7440-50-8		
Iron	3,440	1.0		mg/kg	302	7439-89-6		
Lead	1.89	0.30		mg/kg	302	7439-92-1		
Manganese	54.3	0.50		mg/kg	302	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	302	7439-98-7		
Nickel	4.37	0.50		mg/kg	302	7440-02-0		
Selenium	Not detected	0.40		mg/kg	302	7782-49-2		
Silver	Not detected	0.20		mg/kg	302	7440-22-4		
Strontium	2.10	0.50		mg/kg	302	7440-24-6		
Thallium	Not detected	0.20		mg/kg	302	7440-28-0		
Titanium	28.6	1.0		mg/kg	302	7440-32-6		
Vanadium	6.24	0.50		mg/kg	302	7440-62-2		
Zinc	8.41	0.50		mg/kg	302	7440-66-6		

Method: SW6020A, Run Date: 01/04/23 16:07, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Barium	9.76	1.0		mg/kg	302	7440-39-3		
Tin	Not detected	2.0		mg/kg	302	7440-31-5		



Analytical Laboratory Report

Lab Sample ID: S43599.22 (continued)

Sample Tag: AOC12-TP02-S

Method: SW6020A, Run Date: 01/05/23 10:58, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	634	20		mg/kg	302	7440-70-2		
Magnesium	558	20		mg/kg	302	7439-95-4		
Potassium	122	20		mg/kg	302	7440-09-7		
Sodium	Not detected	20		mg/kg	302	7440-23-5		

Method: SW7471B, Run Date: 12/20/22 16:00, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	86	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/29/22 15:44, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/08/23 01:00, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	7.5			
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8		
Anthracene	Not detected	330		ug/kg	7.5	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3		
Chrysene	Not detected	330		ug/kg	7.5	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3		



Analytical Laboratory Report

Lab Sample ID: S43599.22 (continued)

Sample Tag: AOC12-TP02-S

Method: SW8270D, Run Date: 01/08/23 01:00, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1		
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0		
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0		
Fluorene	Not detected	330		ug/kg	7.5	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5		
Isophorone	Not detected	330		ug/kg	7.5	78-59-1		
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5		
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8		
Phenol	Not detected	330		ug/kg	7.5	108-95-2		
Pyrene	Not detected	330		ug/kg	7.5	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2		
Benzidine	Not detected	330		ug/kg	7.5	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/29/22 09:41, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	54.2	108-20-3		
TICs*	None Found			ug/kg	54.2			

Method: SW8260B - SIM, Run Date: 12/25/22 17:26, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	54.2	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	54.2	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 09:41, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	54.2	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	54.2	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	54.2	107-13-1		
2-Butanone (MEK)	Not detected	810		ug/kg	54.2	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	54.2	75-71-8		
Chloromethane	Not detected	300		ug/kg	54.2	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	54.2	75-01-4		
Bromomethane	Not detected	200		ug/kg	54.2	74-83-9		
Chloroethane	Not detected	300		ug/kg	54.2	75-00-3		



Analytical Laboratory Report

Lab Sample ID: S43599.22 (continued)

Sample Tag: AOC12-TP02-S

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 09:41, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Trichlorofluoromethane	Not detected	100		ug/kg	54.2	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	54.2	75-35-4		
Methylene chloride	Not detected	100		ug/kg	54.2	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	54.2	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	54.2	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	54.2	156-59-2		
Chloroform	Not detected	50		ug/kg	54.2	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	54.2	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	54.2	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	54.2	56-23-5		
Benzene	Not detected	50		ug/kg	54.2	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	54.2	107-06-2		
Trichloroethene	Not detected	50		ug/kg	54.2	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	54.2	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	54.2	75-27-4		
Dibromomethane	Not detected	300		ug/kg	54.2	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	54.2	10061-01-5		
Toluene	Not detected	50		ug/kg	54.2	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	54.2	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	54.2	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	54.2	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	54.2	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	54.2	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	54.2	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	54.2	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	54.2	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	54.2			
o-Xylene	Not detected	50		ug/kg	54.2	95-47-6		
Styrene	Not detected	50		ug/kg	54.2	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	54.2	98-82-8		
Bromoform	Not detected	100		ug/kg	54.2	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	54.2	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	54.2	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	54.2	103-65-1		
Bromobenzene	Not detected	100		ug/kg	54.2	108-86-1		
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	54.2	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	54.2	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	54.2	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	54.2	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	54.2	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	54.2	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	54.2	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	54.2	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	54.2	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	54.2	104-51-8		
1,2,4-Trichlorobenzene	Not detected	360		ug/kg	54.2	120-82-1		
1,2,3-Trichlorobenzene	Not detected	360		ug/kg	54.2	87-61-6		
Naphthalene	Not detected	300		ug/kg	54.2	91-20-3		
Acrolein	Not detected	50		ug/kg	54.2	107-02-8		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43599.22 (continued)

Sample Tag: AOC12-TP02-S

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 09:41, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2-Chlorotoluene	Not detected	50		ug/kg	54.2	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	54.2	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	54.2	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	54.2	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	54.2	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	54.2	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	54.2	76-13-1		

Other / Misc.

Method: , Run Date: 12/28/22 23:49, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 01/04/23 17:23, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43599.23

Sample Tag: AOC12-TP02-B

Collected Date/Time: 12/15/2022 11:16

Matrix: Soil

COC Reference: 158669

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.7	IR
3	4oz Glass	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	01/03/23 09:30	JRH	
BNA Extraction*	Completed	SW3546	12/28/22 15:30	JWR	
Extraction, PCB*	Completed	SW3546	12/28/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	12.683/12	SW5035A	12/16/22 17:18	JKJ	
Mercury Digestion	Completed	SW7471B	12/20/22 14:23	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 19:53, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	92	1		%	1			

Metals

Method: SW6020A, Run Date: 01/04/23 14:13, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,310	1.0		mg/kg	327	7429-90-5		
Antimony	Not detected	0.50		mg/kg	327	7440-36-0		
Arsenic	0.59	0.20		mg/kg	327	7440-38-2		
Beryllium	Not detected	0.20		mg/kg	327	7440-41-7		
Boron	Not detected	2.0		mg/kg	327	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	327	7440-43-9		
Chromium	3.23	0.50		mg/kg	327	7440-47-3		
Cobalt	0.96	0.50		mg/kg	327	7440-48-4		
Copper	1.68	0.50		mg/kg	327	7440-50-8		
Iron	2,750	1.0		mg/kg	327	7439-89-6		
Lead	1.40	0.30		mg/kg	327	7439-92-1		
Manganese	18.0	0.50		mg/kg	327	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	327	7439-98-7		
Nickel	2.92	0.50		mg/kg	327	7440-02-0		
Selenium	Not detected	0.40		mg/kg	327	7782-49-2		
Silver	Not detected	0.20		mg/kg	327	7440-22-4		
Strontium	2.10	0.50		mg/kg	327	7440-24-6		
Thallium	Not detected	0.20		mg/kg	327	7440-28-0		
Titanium	29.2	1.0		mg/kg	327	7440-32-6		
Vanadium	4.78	0.50		mg/kg	327	7440-62-2		
Zinc	7.50	0.50		mg/kg	327	7440-66-6		

Method: SW6020A, Run Date: 01/04/23 16:08, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Barium	5.43	1.0		mg/kg	327	7440-39-3		
Tin	Not detected	2.0		mg/kg	327	7440-31-5		



Analytical Laboratory Report

Lab Sample ID: S43599.23 (continued)

Sample Tag: AOC12-TP02-B

Method: SW6020A, Run Date: 01/05/23 10:59, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	642	20		mg/kg	327	7440-70-2		
Magnesium	468	20		mg/kg	327	7439-95-4		
Potassium	96.2	20		mg/kg	327	7440-09-7		
Sodium	Not detected	20		mg/kg	327	7440-23-5		

Method: SW7471B, Run Date: 12/20/22 16:04, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	78	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/29/22 15:56, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/08/23 01:30, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	7.5			
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8		
Anthracene	Not detected	330		ug/kg	7.5	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3		
Chrysene	Not detected	330		ug/kg	7.5	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3		



Analytical Laboratory Report

Lab Sample ID: S43599.23 (continued)

Sample Tag: AOC12-TP02-B

Method: SW8270D, Run Date: 01/08/23 01:30, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1		
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0		
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0		
Fluorene	Not detected	330		ug/kg	7.5	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5		
Isophorone	Not detected	330		ug/kg	7.5	78-59-1		
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5		
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8		
Phenol	Not detected	330		ug/kg	7.5	108-95-2		
Pyrene	Not detected	330		ug/kg	7.5	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2		
Benzidine	Not detected	330		ug/kg	7.5	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/29/22 10:04, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	55.8	108-20-3		
TICs*	None Found			ug/kg	55.8			

Method: SW8260B - SIM, Run Date: 12/25/22 17:46, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	55.8	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	55.8	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 10:04, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	55.8	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	55.8	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	55.8	107-13-1		
2-Butanone (MEK)	Not detected	840		ug/kg	55.8	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	55.8	75-71-8		
Chloromethane	Not detected	300		ug/kg	55.8	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	55.8	75-01-4		
Bromomethane	Not detected	200		ug/kg	55.8	74-83-9		
Chloroethane	Not detected	300		ug/kg	55.8	75-00-3		



Analytical Laboratory Report

Lab Sample ID: S43599.23 (continued)

Sample Tag: AOC12-TP02-B

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 10:04, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Trichlorofluoromethane	Not detected	100		ug/kg	55.8	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	55.8	75-35-4		
Methylene chloride	Not detected	100		ug/kg	55.8	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	55.8	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	55.8	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	55.8	156-59-2		
Chloroform	Not detected	60		ug/kg	55.8	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	55.8	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	55.8	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	55.8	56-23-5		
Benzene	Not detected	60		ug/kg	55.8	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	55.8	107-06-2		
Trichloroethene	Not detected	60		ug/kg	55.8	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	55.8	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	55.8	75-27-4		
Dibromomethane	Not detected	300		ug/kg	55.8	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	55.8	10061-01-5		
Toluene	Not detected	60		ug/kg	55.8	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	55.8	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	55.8	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	55.8	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	55.8	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	55.8	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	55.8	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	55.8	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	55.8	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	55.8			
o-Xylene	Not detected	60		ug/kg	55.8	95-47-6		
Styrene	Not detected	60		ug/kg	55.8	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	55.8	98-82-8		
Bromoform	Not detected	100		ug/kg	55.8	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	55.8	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	55.8	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	55.8	103-65-1		
Bromobenzene	Not detected	100		ug/kg	55.8	108-86-1		
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	55.8	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	55.8	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	55.8	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	55.8	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	55.8	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	55.8	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	55.8	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	55.8	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	55.8	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	55.8	104-51-8		
1,2,4-Trichlorobenzene	Not detected	370		ug/kg	55.8	120-82-1		
1,2,3-Trichlorobenzene	Not detected	370		ug/kg	55.8	87-61-6		
Naphthalene	Not detected	300		ug/kg	55.8	91-20-3		
Acrolein	Not detected	60		ug/kg	55.8	107-02-8		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43599.23 (continued)

Sample Tag: AOC12-TP02-B

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 10:04, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2-Chlorotoluene	Not detected	60		ug/kg	55.8	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	55.8	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	55.8	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	55.8	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	55.8	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	55.8	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	55.8	76-13-1		

Other / Misc.

Method: , Run Date: 12/29/22 00:10, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 01/04/23 17:26, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43599.24

Sample Tag: DUP-12S

Collected Date/Time: 12/15/2022 00:01

Matrix: Soil

COC Reference: 158669

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.7	IR
3	4oz Glass	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	01/03/23 09:30	JRH	
BNA Extraction*	Completed	SW3546	12/28/22 15:30	JWR	
Extraction, PCB*	Completed	SW3546	12/28/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	12.528/12	SW5035A	12/16/22 17:18	JKJ	
Mercury Digestion	Completed	SW7471B	12/20/22 14:23	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 19:53, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	97	1		%	1			

Metals

Method: SW6020A, Run Date: 01/04/23 14:15, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,470	1.0		mg/kg	305	7429-90-5		
Antimony	Not detected	0.50		mg/kg	305	7440-36-0		
Arsenic	0.97	0.20		mg/kg	305	7440-38-2		
Beryllium	Not detected	0.20		mg/kg	305	7440-41-7		
Boron	Not detected	2.0		mg/kg	305	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	305	7440-43-9		
Chromium	3.78	0.50		mg/kg	305	7440-47-3		
Cobalt	2.02	0.50		mg/kg	305	7440-48-4		
Copper	1.64	0.50		mg/kg	305	7440-50-8		
Iron	2,930	1.0		mg/kg	305	7439-89-6		
Lead	1.34	0.30		mg/kg	305	7439-92-1		
Manganese	109	0.50		mg/kg	305	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	305	7439-98-7		
Nickel	3.21	0.50		mg/kg	305	7440-02-0		
Selenium	Not detected	0.40		mg/kg	305	7782-49-2		
Silver	Not detected	0.20		mg/kg	305	7440-22-4		
Strontium	1.53	0.50		mg/kg	305	7440-24-6		
Thallium	Not detected	0.20		mg/kg	305	7440-28-0		
Titanium	38.3	1.0		mg/kg	305	7440-32-6		
Vanadium	5.00	0.50		mg/kg	305	7440-62-2		
Zinc	6.33	0.50		mg/kg	305	7440-66-6		

Method: SW6020A, Run Date: 01/04/23 16:10, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Barium	8.22	1.0		mg/kg	305	7440-39-3		
Tin	Not detected	2.0		mg/kg	305	7440-31-5		



Analytical Laboratory Report

Lab Sample ID: S43599.24 (continued)

Sample Tag: DUP-12S

Method: SW6020A, Run Date: 01/05/23 11:01, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	442	20		mg/kg	305	7440-70-2		
Magnesium	526	20		mg/kg	305	7439-95-4		
Potassium	79.1	20		mg/kg	305	7440-09-7		
Sodium	Not detected	20		mg/kg	305	7440-23-5		

Method: SW7471B, Run Date: 12/20/22 16:07, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	74	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/29/22 16:08, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/08/23 02:01, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/kg	7.5			
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8		
Anthracene	Not detected	330		ug/kg	7.5	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3		
Chrysene	Not detected	330		ug/kg	7.5	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3		



Analytical Laboratory Report

Lab Sample ID: S43599.24 (continued)

Sample Tag: DUP-12S

Method: SW8270D, Run Date: 01/08/23 02:01, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1		
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0		
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0		
Fluorene	Not detected	330		ug/kg	7.5	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5		
Isophorone	Not detected	330		ug/kg	7.5	78-59-1		
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5		
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8		
Phenol	Not detected	330		ug/kg	7.5	108-95-2		
Pyrene	Not detected	330		ug/kg	7.5	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2		
Benzidine	Not detected	330		ug/kg	7.5	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/29/22 10:28, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	50.9	108-20-3		
TICs*	None Found			ug/kg	50.9			

Method: SW8260B - SIM, Run Date: 12/25/22 22:32, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	50.9	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	50.9	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 10:28, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	50.9	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	50.9	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	50.9	107-13-1		
2-Butanone (MEK)	Not detected	760		ug/kg	50.9	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	50.9	75-71-8		
Chloromethane	Not detected	300		ug/kg	50.9	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	50.9	75-01-4		
Bromomethane	Not detected	200		ug/kg	50.9	74-83-9		
Chloroethane	Not detected	300		ug/kg	50.9	75-00-3		



Analytical Laboratory Report

Lab Sample ID: S43599.24 (continued)

Sample Tag: DUP-12S

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 10:28, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Trichlorofluoromethane	Not detected	100		ug/kg	50.9	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	50.9	75-35-4		
Methylene chloride	Not detected	100		ug/kg	50.9	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	50.9	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	50.9	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	50.9	156-59-2		
Chloroform	Not detected	50		ug/kg	50.9	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	50.9	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	50.9	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	50.9	56-23-5		
Benzene	Not detected	50		ug/kg	50.9	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	50.9	107-06-2		
Trichloroethene	Not detected	50		ug/kg	50.9	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	50.9	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	50.9	75-27-4		
Dibromomethane	Not detected	300		ug/kg	50.9	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	50.9	10061-01-5		
Toluene	Not detected	50		ug/kg	50.9	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	50.9	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	50.9	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	50.9	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	50.9	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	50.9	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	50.9	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	50.9	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	50.9	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	50.9			
o-Xylene	Not detected	50		ug/kg	50.9	95-47-6		
Styrene	Not detected	50		ug/kg	50.9	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	50.9	98-82-8		
Bromoform	Not detected	100		ug/kg	50.9	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	50.9	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	50.9	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	50.9	103-65-1		
Bromobenzene	Not detected	100		ug/kg	50.9	108-86-1		
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	50.9	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	50.9	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	50.9	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	50.9	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	50.9	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	50.9	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	50.9	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	50.9	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	50.9	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	50.9	104-51-8		
1,2,4-Trichlorobenzene	Not detected	340		ug/kg	50.9	120-82-1		
1,2,3-Trichlorobenzene	Not detected	340		ug/kg	50.9	87-61-6		
Naphthalene	Not detected	300		ug/kg	50.9	91-20-3		
Acrolein	Not detected	50		ug/kg	50.9	107-02-8		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43599.24 (continued)

Sample Tag: DUP-12S

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 10:28, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2-Chlorotoluene	Not detected	50		ug/kg	50.9	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	50.9	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	50.9	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	50.9	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	50.9	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	50.9	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	50.9	76-13-1		

Other / Misc.

Method: , Run Date: 12/27/22 15:59, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 01/04/23 17:30, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43599.25

Sample Tag: AOC12-TP03-E

Collected Date/Time: 12/15/2022 12:30

Matrix: Soil

COC Reference: 158671

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.7	IR
3	4oz Glass	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	01/03/23 09:30	JRH	
BNA Extraction*	Completed	SW3546	12/28/22 15:30	JWR	
Extraction, PCB*	Completed	SW3546	12/28/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	13.404/13	SW5035A	12/16/22 17:18	JKJ	
Mercury Digestion	Completed	SW7471B	12/20/22 14:23	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 19:53, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Metals

Method: SW6020A, Run Date: 01/04/23 14:18, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,240	1.0		mg/kg	321	7429-90-5		
Antimony	Not detected	0.50		mg/kg	321	7440-36-0		
Arsenic	0.90	0.20		mg/kg	321	7440-38-2		
Beryllium	Not detected	0.20		mg/kg	321	7440-41-7		
Boron	Not detected	2.0		mg/kg	321	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	321	7440-43-9		
Chromium	2.61	0.50		mg/kg	321	7440-47-3		
Cobalt	0.99	0.50		mg/kg	321	7440-48-4		
Copper	2.18	0.50		mg/kg	321	7440-50-8		
Iron	2,570	1.0		mg/kg	321	7439-89-6		
Lead	1.86	0.30		mg/kg	321	7439-92-1		
Manganese	73.7	0.50		mg/kg	321	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	321	7439-98-7		
Nickel	2.79	0.50		mg/kg	321	7440-02-0		
Selenium	Not detected	0.40		mg/kg	321	7782-49-2		
Silver	Not detected	0.20		mg/kg	321	7440-22-4		
Strontium	18.2	0.50		mg/kg	321	7440-24-6		
Thallium	Not detected	0.20		mg/kg	321	7440-28-0		
Titanium	26.6	1.0		mg/kg	321	7440-32-6		
Vanadium	3.68	0.50		mg/kg	321	7440-62-2		
Zinc	8.45	0.50		mg/kg	321	7440-66-6		

Method: SW6020A, Run Date: 01/04/23 16:11, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Barium	5.93	1.0		mg/kg	321	7440-39-3		
Tin	Not detected	2.0		mg/kg	321	7440-31-5		



Analytical Laboratory Report

Lab Sample ID: S43599.25 (continued)

Sample Tag: AOC12-TP03-E

Method: SW6020A, Run Date: 01/05/23 11:02, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	19,200	20		mg/kg	321	7440-70-2		
Magnesium	4,040	20		mg/kg	321	7439-95-4		
Potassium	100	20		mg/kg	321	7440-09-7		
Sodium	22.1	20		mg/kg	321	7440-23-5		

Method: SW7471B, Run Date: 12/20/22 16:10, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	80	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/29/22 14:17, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	1	12674-11-2		
PCB-1242	Not detected	330		ug/kg	1	53469-21-9		
PCB-1221	Not detected	330		ug/kg	1	11104-28-2		
PCB-1232	Not detected	330		ug/kg	1	11141-16-5		
PCB-1248	Not detected	330		ug/kg	1	12672-29-6		
PCB-1254	Not detected	330		ug/kg	1	11097-69-1		
PCB-1260	Not detected	330		ug/kg	1	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/08/23 02:31, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8		
Anthracene	Not detected	330		ug/kg	7.5	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3		
Chrysene	Not detected	330		ug/kg	7.5	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43599.25 (continued)

Sample Tag: AOC12-TP03-E

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/08/23 02:31, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0		
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0		
Fluorene	Not detected	330		ug/kg	7.5	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5		
Isophorone	Not detected	330		ug/kg	7.5	78-59-1		
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5		
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8		
Phenol	Not detected	330		ug/kg	7.5	108-95-2		
Pyrene	Not detected	330		ug/kg	7.5	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2		
Benzidine	Not detected	330		ug/kg	7.5	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 01/08/23 02:31, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	7.5			
Fluoranthene	Found			ug/kg	7.5	206-44-0		
Pyrene	Found			ug/kg	7.5	129-00-0		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/29/22 10:52, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	53.7	108-20-3		
TICs*	None Found			ug/kg	53.7			

Method: SW8260B - SIM, Run Date: 12/25/22 22:53, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	53.7	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	53.7	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 10:52, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	53.7	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	53.7	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	53.7	107-13-1		
2-Butanone (MEK)	Not detected	810		ug/kg	53.7	78-93-3		



Analytical Laboratory Report

Lab Sample ID: S43599.25 (continued)

Sample Tag: AOC12-TP03-E

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 10:52, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Dichlorodifluoromethane	Not detected	300		ug/kg	53.7	75-71-8		
Chloromethane	Not detected	300		ug/kg	53.7	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	53.7	75-01-4		
Bromomethane	Not detected	200		ug/kg	53.7	74-83-9		
Chloroethane	Not detected	300		ug/kg	53.7	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	53.7	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	53.7	75-35-4		
Methylene chloride	Not detected	100		ug/kg	53.7	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	53.7	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	53.7	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	53.7	156-59-2		
Chloroform	Not detected	50		ug/kg	53.7	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	53.7	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	53.7	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	53.7	56-23-5		
Benzene	Not detected	50		ug/kg	53.7	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	53.7	107-06-2		
Trichloroethene	Not detected	50		ug/kg	53.7	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	53.7	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	53.7	75-27-4		
Dibromomethane	Not detected	300		ug/kg	53.7	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	53.7	10061-01-5		
Toluene	Not detected	50		ug/kg	53.7	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	53.7	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	53.7	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	53.7	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	53.7	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	53.7	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	53.7	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	53.7	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	53.7	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	53.7			
o-Xylene	Not detected	50		ug/kg	53.7	95-47-6		
Styrene	Not detected	50		ug/kg	53.7	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	53.7	98-82-8		
Bromoform	Not detected	100		ug/kg	53.7	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	53.7	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	53.7	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	53.7	103-65-1		
Bromobenzene	Not detected	100		ug/kg	53.7	108-86-1		
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	53.7	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	53.7	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	53.7	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	53.7	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	53.7	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	53.7	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	53.7	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	53.7	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	53.7	526-73-8		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43599.25 (continued)

Sample Tag: AOC12-TP03-E

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 10:52, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
n-Butylbenzene	Not detected	50		ug/kg	53.7	104-51-8		
1,2,4-Trichlorobenzene	Not detected	350		ug/kg	53.7	120-82-1		
1,2,3-Trichlorobenzene	Not detected	350		ug/kg	53.7	87-61-6		
Naphthalene	Not detected	300		ug/kg	53.7	91-20-3		
Acrolein	Not detected	50		ug/kg	53.7	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	53.7	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	53.7	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	53.7	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	53.7	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	53.7	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	53.7	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	53.7	76-13-1		

Other / Misc.

Method: , Run Date: 12/27/22 16:20, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 01/04/23 17:50, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43599.26

Sample Tag: AOC12-TP03-W

Collected Date/Time: 12/15/2022 12:35

Matrix: Soil

COC Reference: 158671

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.7	IR
3	4oz Glass	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	01/03/23 09:30	JRH	
BNA Extraction*	Completed	SW3546	12/28/22 15:30	JWR	
Extraction, PCB*	Completed	SW3546	12/28/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	14.294/14	SW5035A	12/16/22 17:18	JKJ	
Mercury Digestion	Completed	SW7471B	12/20/22 14:23	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 19:53, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Metals

Method: SW6020A, Run Date: 01/04/23 14:20, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,940	1.0		mg/kg	322	7429-90-5		
Antimony	Not detected	0.50		mg/kg	322	7440-36-0		
Arsenic	1.00	0.20		mg/kg	322	7440-38-2		
Beryllium	Not detected	0.20		mg/kg	322	7440-41-7		
Boron	Not detected	2.0		mg/kg	322	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	322	7440-43-9		
Chromium	3.67	0.50		mg/kg	322	7440-47-3		
Cobalt	1.30	0.50		mg/kg	322	7440-48-4		
Copper	2.77	0.50		mg/kg	322	7440-50-8		
Iron	3,100	1.0		mg/kg	322	7439-89-6		
Lead	4.21	0.30		mg/kg	322	7439-92-1		
Manganese	82.8	0.50		mg/kg	322	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	322	7439-98-7		
Nickel	3.29	0.50		mg/kg	322	7440-02-0		
Selenium	Not detected	0.40		mg/kg	322	7782-49-2		
Silver	Not detected	0.20		mg/kg	322	7440-22-4		
Strontium	16.8	0.50		mg/kg	322	7440-24-6		
Thallium	Not detected	0.20		mg/kg	322	7440-28-0		
Titanium	25.7	1.0		mg/kg	322	7440-32-6		
Vanadium	4.98	0.50		mg/kg	322	7440-62-2		
Zinc	12.3	0.50		mg/kg	322	7440-66-6		

Method: SW6020A, Run Date: 01/04/23 16:13, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Barium	9.89	1.0		mg/kg	322	7440-39-3		
Tin	Not detected	2.0		mg/kg	322	7440-31-5		



Analytical Laboratory Report

Lab Sample ID: S43599.26 (continued)

Sample Tag: AOC12-TP03-W

Method: SW6020A, Run Date: 01/05/23 11:03, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	15,300	20		mg/kg	322	7440-70-2		
Magnesium	3,490	20		mg/kg	322	7439-95-4		
Potassium	113	20		mg/kg	322	7440-09-7		
Sodium	21.8	20		mg/kg	322	7440-23-5		

Method: SW7471B, Run Date: 12/20/22 16:14, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.194	0.050		mg/kg	83	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/29/22 14:28, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	1	12674-11-2		
PCB-1242	Not detected	330		ug/kg	1	53469-21-9		
PCB-1221	Not detected	330		ug/kg	1	11104-28-2		
PCB-1232	Not detected	330		ug/kg	1	11141-16-5		
PCB-1248	Not detected	330		ug/kg	1	12672-29-6		
PCB-1254	Not detected	330		ug/kg	1	11097-69-1		
PCB-1260	Not detected	330		ug/kg	1	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/08/23 03:01, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8		
Anthracene	Not detected	330		ug/kg	7.5	120-12-7		
Benzo(a)anthracene	440	330		ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	440	330		ug/kg	7.5	205-99-2		
Benzo(k)fluoranthene	340	330		ug/kg	7.5	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2		
Benzo(a)pyrene	410	330		ug/kg	7.5	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3		
Chrysene	480	330		ug/kg	7.5	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43599.26 (continued)

Sample Tag: AOC12-TP03-W

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/08/23 03:01, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0		
Fluoranthene	970	330		ug/kg	7.5	206-44-0		
Fluorene	Not detected	330		ug/kg	7.5	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5		
Isophorone	Not detected	330		ug/kg	7.5	78-59-1		
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5		
Phenanthrene	480	330		ug/kg	7.5	85-01-8		
Phenol	Not detected	330		ug/kg	7.5	108-95-2		
Pyrene	830	330		ug/kg	7.5	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2		
Benzidine	Not detected	330		ug/kg	7.5	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 01/08/23 03:01, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	7.5			
Fluoranthene	Found			ug/kg	7.5	206-44-0		
Pyrene	Found			ug/kg	7.5	129-00-0		
Phenanthrene	Found			ug/kg	7.5	85-01-8		
Chrysene	Found			ug/kg	7.5	218-01-9		
Benzo(a)anthracene	Found			ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	7.5	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	7.5	207-08-9		
Benzo(a)pyrene	Found			ug/kg	7.5	50-32-8		
Benzo(e)pyrene	Found			ug/kg	7.5	192-97-2		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/29/22 11:16, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	55.3	108-20-3		
TICs*	None Found			ug/kg	55.3			

Method: SW8260B - SIM, Run Date: 12/25/22 23:13, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	55.3	96-12-8		
1,4-Dioxane*	Not detected	60		ug/kg	55.3	123-91-1		



Analytical Laboratory Report

Lab Sample ID: S43599.26 (continued)

Sample Tag: AOC12-TP03-W

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 11:16, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	55.3	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	55.3	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	55.3	107-13-1		
2-Butanone (MEK)	Not detected	830		ug/kg	55.3	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	55.3	75-71-8		
Chloromethane	Not detected	300		ug/kg	55.3	74-87-3		
Vinyl chloride	Not detected	60		ug/kg	55.3	75-01-4		
Bromomethane	Not detected	200		ug/kg	55.3	74-83-9		
Chloroethane	Not detected	300		ug/kg	55.3	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	55.3	75-69-4		
1,1-Dichloroethene	Not detected	60		ug/kg	55.3	75-35-4		
Methylene chloride	Not detected	100		ug/kg	55.3	75-09-2		
trans-1,2-Dichloroethene	Not detected	60		ug/kg	55.3	156-60-5		
1,1-Dichloroethane	Not detected	60		ug/kg	55.3	75-34-3		
cis-1,2-Dichloroethene	Not detected	60		ug/kg	55.3	156-59-2		
Chloroform	Not detected	60		ug/kg	55.3	67-66-3		
1,1,1-Trichloroethane	Not detected	60		ug/kg	55.3	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	55.3	108-10-1		
Carbon tetrachloride	Not detected	60		ug/kg	55.3	56-23-5		
Benzene	Not detected	60		ug/kg	55.3	71-43-2		
1,2-Dichloroethane	Not detected	60		ug/kg	55.3	107-06-2		
Trichloroethene	Not detected	60		ug/kg	55.3	79-01-6		
1,2-Dichloropropane	Not detected	60		ug/kg	55.3	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	55.3	75-27-4		
Dibromomethane	Not detected	300		ug/kg	55.3	74-95-3		
cis-1,3-Dichloropropene	Not detected	60		ug/kg	55.3	10061-01-5		
Toluene	Not detected	60		ug/kg	55.3	108-88-3		
trans-1,3-Dichloropropene	Not detected	60		ug/kg	55.3	10061-02-6		
1,1,2-Trichloroethane	Not detected	60		ug/kg	55.3	79-00-5		
Tetrachloroethene	Not detected	60		ug/kg	55.3	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	55.3	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	55.3	106-93-4	M	
Chlorobenzene	Not detected	60		ug/kg	55.3	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	55.3	630-20-6		
Ethylbenzene	Not detected	60		ug/kg	55.3	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	55.3			
o-Xylene	Not detected	60		ug/kg	55.3	95-47-6		
Styrene	Not detected	60		ug/kg	55.3	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	55.3	98-82-8		
Bromoform	Not detected	100		ug/kg	55.3	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	60		ug/kg	55.3	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	55.3	96-18-4		
n-Propylbenzene	Not detected	60		ug/kg	55.3	103-65-1		
Bromobenzene	Not detected	100		ug/kg	55.3	108-86-1		
1,3,5-Trimethylbenzene	Not detected	60		ug/kg	55.3	108-67-8		
tert-Butylbenzene	Not detected	60		ug/kg	55.3	98-06-6		
1,2,4-Trimethylbenzene	Not detected	60		ug/kg	55.3	95-63-6		
sec-Butylbenzene	Not detected	60		ug/kg	55.3	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	55.3	99-87-6		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43599.26 (continued)

Sample Tag: AOC12-TP03-W

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 11:16, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3-Dichlorobenzene	Not detected	100		ug/kg	55.3	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	55.3	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	55.3	95-50-1		
1,2,3-Trimethylbenzene	Not detected	60		ug/kg	55.3	526-73-8		
n-Butylbenzene	Not detected	60		ug/kg	55.3	104-51-8		
1,2,4-Trichlorobenzene	Not detected	360		ug/kg	55.3	120-82-1		
1,2,3-Trichlorobenzene	Not detected	360		ug/kg	55.3	87-61-6		
Naphthalene	Not detected	300		ug/kg	55.3	91-20-3		
Acrolein	Not detected	60		ug/kg	55.3	107-02-8		
2-Chlorotoluene	Not detected	60		ug/kg	55.3	95-49-8		
4-Chlorotoluene	Not detected	60		ug/kg	55.3	106-43-4		
1,3-Dichloropropane	Not detected	60		ug/kg	55.3	142-28-9		
1,1-Dichloropropene	Not detected	60		ug/kg	55.3	563-58-6		
2,2-Dichloropropane	Not detected	60		ug/kg	55.3	594-20-7		
Hexachlorobutadiene	Not detected	60		ug/kg	55.3	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	60		ug/kg	55.3	76-13-1		

Other / Misc.

Method: , Run Date: 12/29/22 19:21, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 01/04/23 18:07, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43599.27

Sample Tag: AOC12-TP03-N

Collected Date/Time: 12/15/2022 12:45

Matrix: Soil

COC Reference: 158671

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.7	IR
3	4oz Glass	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	01/03/23 09:30	JRH	
BNA Extraction*	Completed	SW3546	12/28/22 15:30	JWR	
Extraction, PCB*	Completed	SW3546	12/28/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	13.747/13	SW5035A	12/16/22 17:18	JKJ	
Mercury Digestion	Completed	SW7471B	12/20/22 14:23	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 19:53, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Metals

Method: SW6020A, Run Date: 01/04/23 14:22, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,250	1.0		mg/kg	292	7429-90-5		
Antimony	Not detected	0.50		mg/kg	292	7440-36-0		
Arsenic	0.82	0.20		mg/kg	292	7440-38-2		
Beryllium	Not detected	0.20		mg/kg	292	7440-41-7		
Boron	Not detected	2.0		mg/kg	292	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	292	7440-43-9		
Chromium	3.08	0.50		mg/kg	292	7440-47-3		
Cobalt	1.08	0.50		mg/kg	292	7440-48-4		
Copper	2.14	0.50		mg/kg	292	7440-50-8		
Iron	2,640	1.0		mg/kg	292	7439-89-6		
Lead	1.81	0.30		mg/kg	292	7439-92-1		
Manganese	95.8	0.50		mg/kg	292	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	292	7439-98-7		
Nickel	2.95	0.50		mg/kg	292	7440-02-0		
Selenium	Not detected	0.40		mg/kg	292	7782-49-2		
Silver	Not detected	0.20		mg/kg	292	7440-22-4		
Strontium	22.0	0.50		mg/kg	292	7440-24-6		
Thallium	Not detected	0.20		mg/kg	292	7440-28-0		
Titanium	28.9	1.0		mg/kg	292	7440-32-6		
Vanadium	3.73	0.50		mg/kg	292	7440-62-2		
Zinc	7.80	0.50		mg/kg	292	7440-66-6		

Method: SW6020A, Run Date: 01/04/23 16:14, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Barium	5.82	1.0		mg/kg	292	7440-39-3		
Tin	Not detected	2.0		mg/kg	292	7440-31-5		



Analytical Laboratory Report

Lab Sample ID: S43599.27 (continued)

Sample Tag: AOC12-TP03-N

Method: SW6020A, Run Date: 01/05/23 11:04, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	23,300	20		mg/kg	292	7440-70-2		
Magnesium	4,520	20		mg/kg	292	7439-95-4		
Potassium	109	20		mg/kg	292	7440-09-7		
Sodium	23.3	20		mg/kg	292	7440-23-5		

Method: SW7471B, Run Date: 12/20/22 16:17, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	75	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/29/22 13:29, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/08/23 03:31, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8		
Anthracene	Not detected	330		ug/kg	7.5	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	440	330		ug/kg	7.5	205-99-2	p	
Benzo(k)fluoranthene	450	330		ug/kg	7.5	207-08-9	p	
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3		
Chrysene	Not detected	330		ug/kg	7.5	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3		

p-Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.



Analytical Laboratory Report

Lab Sample ID: S43599.27 (continued)

Sample Tag: AOC12-TP03-N

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/08/23 03:31, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1		
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0		
Fluoranthene	540	330		ug/kg	7.5	206-44-0		
Fluorene	Not detected	330		ug/kg	7.5	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5		
Isophorone	Not detected	330		ug/kg	7.5	78-59-1		
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5		
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8		
Phenol	Not detected	330		ug/kg	7.5	108-95-2		
Pyrene	450	330		ug/kg	7.5	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2		
Benzidine	Not detected	330		ug/kg	7.5	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 01/08/23 03:31, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	7.5			
Fluoranthene	Found			ug/kg	7.5	206-44-0		
Pyrene	Found			ug/kg	7.5	129-00-0		
Chrysene	Found			ug/kg	7.5	218-01-9		
Benzo(a)anthracene	Found			ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	7.5	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	7.5	207-08-9		
Benzo(a)pyrene	Found			ug/kg	7.5	50-32-8		
Benzo(e)pyrene	Found			ug/kg	7.5	192-97-2		
Phenanthrene	Found			ug/kg	7.5	85-01-8		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/29/22 11:40, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	52.4	108-20-3		
TICs*	None Found			ug/kg	52.4			



Analytical Laboratory Report

Lab Sample ID: S43599.27 (continued)

Sample Tag: AOC12-TP03-N

Method: SW8260B - SIM, Run Date: 12/25/22 23:34, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	52.4	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	52.4	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 11:40, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	52.4	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	52.4	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	52.4	107-13-1		
2-Butanone (MEK)	Not detected	790		ug/kg	52.4	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	52.4	75-71-8		
Chloromethane	Not detected	300		ug/kg	52.4	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	52.4	75-01-4		
Bromomethane	Not detected	200		ug/kg	52.4	74-83-9		
Chloroethane	Not detected	300		ug/kg	52.4	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	52.4	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	52.4	75-35-4		
Methylene chloride	Not detected	100		ug/kg	52.4	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	52.4	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	52.4	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	52.4	156-59-2		
Chloroform	Not detected	50		ug/kg	52.4	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	52.4	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	52.4	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	52.4	56-23-5		
Benzene	Not detected	50		ug/kg	52.4	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	52.4	107-06-2		
Trichloroethene	Not detected	50		ug/kg	52.4	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	52.4	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	52.4	75-27-4		
Dibromomethane	Not detected	300		ug/kg	52.4	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	52.4	10061-01-5		
Toluene	Not detected	50		ug/kg	52.4	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	52.4	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	52.4	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	52.4	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	52.4	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	52.4	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	52.4	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	52.4	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	52.4	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	52.4			
o-Xylene	Not detected	50		ug/kg	52.4	95-47-6		
Styrene	Not detected	50		ug/kg	52.4	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	52.4	98-82-8		
Bromoform	Not detected	100		ug/kg	52.4	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	52.4	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	52.4	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	52.4	103-65-1		
Bromobenzene	Not detected	100		ug/kg	52.4	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43599.27 (continued)

Sample Tag: AOC12-TP03-N

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 11:40, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	52.4	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	52.4	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	52.4	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	52.4	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	52.4	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	52.4	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	52.4	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	52.4	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	52.4	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	52.4	104-51-8		
1,2,4-Trichlorobenzene	Not detected	350		ug/kg	52.4	120-82-1		
1,2,3-Trichlorobenzene	Not detected	350		ug/kg	52.4	87-61-6		
Naphthalene	Not detected	300		ug/kg	52.4	91-20-3		
Acrolein	Not detected	50		ug/kg	52.4	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	52.4	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	52.4	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	52.4	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	52.4	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	52.4	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	52.4	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	52.4	76-13-1		

Other / Misc.

Method: , Run Date: 12/27/22 17:02, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 01/04/23 18:11, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43599.28

Sample Tag: AOC12-TP03-S

Collected Date/Time: 12/15/2022 12:45

Matrix: Soil

COC Reference: 158671

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.7	IR
3	4oz Glass	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	01/03/23 09:30	JRH	
BNA Extraction*	Completed	SW3546	12/28/22 15:30	JWR	
Extraction, PCB*	Completed	SW3546	12/28/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	13.953/13	SW5035A	12/16/22 17:18	JKJ	
Mercury Digestion	Completed	SW7471B	12/20/22 14:23	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 19:53, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Metals

Method: SW6020A, Run Date: 01/04/23 14:24, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	1,570	1.0		mg/kg	299	7429-90-5		
Antimony	Not detected	0.50		mg/kg	299	7440-36-0		
Arsenic	0.99	0.20		mg/kg	299	7440-38-2		
Beryllium	Not detected	0.20		mg/kg	299	7440-41-7		
Boron	Not detected	2.0		mg/kg	299	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	299	7440-43-9		
Chromium	3.25	0.50		mg/kg	299	7440-47-3		
Cobalt	1.23	0.50		mg/kg	299	7440-48-4		
Copper	2.44	0.50		mg/kg	299	7440-50-8		
Iron	3,120	1.0		mg/kg	299	7439-89-6		
Lead	2.48	0.30		mg/kg	299	7439-92-1		
Manganese	78.5	0.50		mg/kg	299	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	299	7439-98-7		
Nickel	3.31	0.50		mg/kg	299	7440-02-0		
Selenium	Not detected	0.40		mg/kg	299	7782-49-2		
Silver	Not detected	0.20		mg/kg	299	7440-22-4		
Strontium	19.7	0.50		mg/kg	299	7440-24-6		
Thallium	Not detected	0.20		mg/kg	299	7440-28-0		
Titanium	21.3	1.0		mg/kg	299	7440-32-6		
Vanadium	4.36	0.50		mg/kg	299	7440-62-2		
Zinc	10.5	0.50		mg/kg	299	7440-66-6		

Method: SW6020A, Run Date: 01/04/23 16:16, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Barium	7.41	1.0		mg/kg	299	7440-39-3		
Tin	Not detected	2.0		mg/kg	299	7440-31-5		



Analytical Laboratory Report

Lab Sample ID: S43599.28 (continued)

Sample Tag: AOC12-TP03-S

Method: SW6020A, Run Date: 01/05/23 11:06, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	20,400	20		mg/kg	299	7440-70-2		
Magnesium	4,910	20		mg/kg	299	7439-95-4		
Potassium	112	20		mg/kg	299	7440-09-7		
Sodium	25.6	20		mg/kg	299	7440-23-5		

Method: SW7471B, Run Date: 12/20/22 16:20, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	0.257	0.050		mg/kg	84	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/29/22 13:42, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/08/23 04:02, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8		
Anthracene	Not detected	330		ug/kg	7.5	120-12-7		
Benzo(a)anthracene	Not detected	330		ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	Not detected	330		ug/kg	7.5	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2		
Benzo(a)pyrene	Not detected	330		ug/kg	7.5	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3		
Chrysene	Not detected	330		ug/kg	7.5	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9		
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43599.28 (continued)

Sample Tag: AOC12-TP03-S

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/08/23 04:02, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0		
Fluoranthene	Not detected	330		ug/kg	7.5	206-44-0		
Fluorene	Not detected	330		ug/kg	7.5	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5		
Isophorone	Not detected	330		ug/kg	7.5	78-59-1		
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5		
Phenanthrene	Not detected	330		ug/kg	7.5	85-01-8		
Phenol	Not detected	330		ug/kg	7.5	108-95-2		
Pyrene	Not detected	330		ug/kg	7.5	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2		
Benzidine	Not detected	330		ug/kg	7.5	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 01/08/23 04:02, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	7.5			
Fluoranthene	Found			ug/kg	7.5	206-44-0		
Pyrene	Found			ug/kg	7.5	129-00-0		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/29/22 12:04, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	52.7	108-20-3		
TICs*	None Found			ug/kg	52.7			

Method: SW8260B - SIM, Run Date: 12/25/22 23:55, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	3		ug/kg	52.7	96-12-8		
1,4-Dioxane*	Not detected	50		ug/kg	52.7	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 12:04, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	52.7	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	52.7	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	52.7	107-13-1		
2-Butanone (MEK)	Not detected	790		ug/kg	52.7	78-93-3		



Analytical Laboratory Report

Lab Sample ID: S43599.28 (continued)

Sample Tag: AOC12-TP03-S

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 12:04, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Dichlorodifluoromethane	Not detected	300		ug/kg	52.7	75-71-8		
Chloromethane	Not detected	300		ug/kg	52.7	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	52.7	75-01-4		
Bromomethane	Not detected	200		ug/kg	52.7	74-83-9		
Chloroethane	Not detected	300		ug/kg	52.7	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	52.7	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	52.7	75-35-4		
Methylene chloride	Not detected	100		ug/kg	52.7	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	52.7	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	52.7	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	52.7	156-59-2		
Chloroform	Not detected	50		ug/kg	52.7	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	52.7	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	52.7	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	52.7	56-23-5		
Benzene	Not detected	50		ug/kg	52.7	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	52.7	107-06-2		
Trichloroethene	Not detected	50		ug/kg	52.7	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	52.7	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	52.7	75-27-4		
Dibromomethane	Not detected	300		ug/kg	52.7	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	52.7	10061-01-5		
Toluene	Not detected	50		ug/kg	52.7	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	52.7	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	52.7	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	52.7	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	52.7	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	52.7	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	52.7	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	52.7	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	52.7	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	52.7			
o-Xylene	Not detected	50		ug/kg	52.7	95-47-6		
Styrene	Not detected	50		ug/kg	52.7	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	52.7	98-82-8		
Bromoform	Not detected	100		ug/kg	52.7	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	52.7	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	52.7	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	52.7	103-65-1		
Bromobenzene	Not detected	100		ug/kg	52.7	108-86-1		
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	52.7	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	52.7	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	52.7	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	52.7	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	52.7	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	52.7	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	52.7	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	52.7	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	52.7	526-73-8		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43599.28 (continued)

Sample Tag: AOC12-TP03-S

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 12:04, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
n-Butylbenzene	Not detected	50		ug/kg	52.7	104-51-8		
1,2,4-Trichlorobenzene	Not detected	350		ug/kg	52.7	120-82-1		
1,2,3-Trichlorobenzene	Not detected	350		ug/kg	52.7	87-61-6		
Naphthalene	Not detected	300		ug/kg	52.7	91-20-3		
Acrolein	Not detected	50		ug/kg	52.7	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	52.7	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	52.7	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	52.7	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	52.7	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	52.7	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	52.7	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	52.7	76-13-1		

Other / Misc.

Method: , Run Date: 12/27/22 17:23, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 01/04/23 18:14, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43599.29

Sample Tag: AOC12-TP03-B

Collected Date/Time: 12/15/2022 13:05

Matrix: Soil

COC Reference: 158671

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
2	40ml Glass	MeOH	Yes	3.7	IR
3	4oz Glass	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	01/04/23 10:05	JRH	
BNA Extraction*	Completed	SW3546	12/29/22 12:00	TAW	
Extraction, PCB*	Completed	SW3546	12/28/22 14:00	JWR	
Sample wt. (g) / Methanol (ml)*	7.850/10	SW5035A	12/16/22 17:18	JKJ	
Mercury Digestion	Completed	SW7471B	12/21/22 12:14	CTV	

Inorganics

Method: SM2540B, Run Date: 12/16/22 20:35, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	92	1		%	1			

Metals

Method: SW6020A, Run Date: 01/05/23 11:20, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium	5,110	20		mg/kg	304	7440-70-2		
Magnesium	1,200	20		mg/kg	304	7439-95-4		
Potassium	130	20		mg/kg	304	7440-09-7		
Sodium	Not detected	20		mg/kg	304	7440-23-5		

Method: SW6020A, Run Date: 01/04/23 13:18, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	2,510	1.0		mg/kg	304	7429-90-5		
Antimony	Not detected	0.50		mg/kg	304	7440-36-0		
Arsenic	1.14	0.20		mg/kg	304	7440-38-2		
Beryllium	Not detected	0.20		mg/kg	304	7440-41-7		
Boron	Not detected	2.0		mg/kg	304	7440-42-8		
Cadmium	Not detected	0.20		mg/kg	304	7440-43-9		
Chromium	6.14	0.50		mg/kg	304	7440-47-3		
Cobalt	1.09	0.50		mg/kg	304	7440-48-4		
Copper	4.74	0.50		mg/kg	304	7440-50-8		
Iron	3,280	1.0		mg/kg	304	7439-89-6		
Lead	9.92	0.30		mg/kg	304	7439-92-1		
Manganese	59.3	0.50		mg/kg	304	7439-96-5		
Molybdenum	Not detected	0.50		mg/kg	304	7439-98-7		
Nickel	3.09	0.50		mg/kg	304	7440-02-0		
Selenium	Not detected	0.40		mg/kg	304	7782-49-2		
Silver	Not detected	0.20		mg/kg	304	7440-22-4		
Strontium	18.1	0.50		mg/kg	304	7440-24-6		
Thallium	Not detected	0.20		mg/kg	304	7440-28-0		
Titanium	31.7	1.0		mg/kg	304	7440-32-6		
Vanadium	5.90	0.50		mg/kg	304	7440-62-2		



Analytical Laboratory Report

Lab Sample ID: S43599.29 (continued)

Sample Tag: AOC12-TP03-B

Method: SW6020A, Run Date: 01/04/23 13:18, Analyst: JRH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Zinc	19.5	0.50		mg/kg	304	7440-66-6		

Method: SW6020A, Run Date: 01/04/23 15:37, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Barium	16.2	1.0		mg/kg	304	7440-39-3		
Tin	Not detected	2.0		mg/kg	304	7440-31-5		

Method: SW7471B, Run Date: 12/21/22 14:30, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.050		mg/kg	83	7439-97-6		

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/29/22 13:54, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/09/23 17:07, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acenaphthene	Not detected	330		ug/kg	7.5	83-32-9		
Acenaphthylene	Not detected	330		ug/kg	7.5	208-96-8		
Anthracene	Not detected	330		ug/kg	7.5	120-12-7		
Benzo(a)anthracene	370	330		ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	350	330		ug/kg	7.5	205-99-2		
Benzo(k)fluoranthene	Not detected	330		ug/kg	7.5	207-08-9		
Benzo(ghi)perylene	Not detected	330		ug/kg	7.5	191-24-2		
Benzo(a)pyrene	360	330		ug/kg	7.5	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	330		ug/kg	7.5	111-91-1		
bis(2-Chloroethyl)ether	Not detected	330		ug/kg	7.5	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	330		ug/kg	7.5	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	330		ug/kg	7.5	117-81-7		
4-Bromophenyl phenyl ether	Not detected	330		ug/kg	7.5	101-55-3		
Butyl benzyl phthalate	Not detected	330		ug/kg	7.5	85-68-7		
2-Chloronaphthalene	Not detected	330		ug/kg	7.5	91-58-7		
4-Chloro-3-methylphenol	Not detected	280		ug/kg	7.5	59-50-7		
2-Chlorophenol	Not detected	330		ug/kg	7.5	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	330		ug/kg	7.5	7005-72-3		
Chrysene	380	330		ug/kg	7.5	218-01-9		
Dibenzo(ah)anthracene	Not detected	330		ug/kg	7.5	53-70-3		
di-n-Butyl phthalate*	Not detected	330		ug/kg	7.5	84-74-2		
3,3'-Dichlorobenzidine	Not detected	2,000		ug/kg	7.5	91-94-1		
2,4-Dichlorophenol	Not detected	330		ug/kg	7.5	120-83-2		
Diethyl phthalate	Not detected	330		ug/kg	7.5	84-66-2		
2,4-Dimethylphenol	Not detected	330		ug/kg	7.5	105-67-9		



Analytical Laboratory Report

Lab Sample ID: S43599.29 (continued)

Sample Tag: AOC12-TP03-B

Semi-Volatile Organics, Method: SW8270D, Run Date: 01/09/23 17:07, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Dimethyl phthalate	Not detected	330		ug/kg	7.5	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	830		ug/kg	7.5	534-52-1		
2,4-Dinitrophenol	Not detected	830		ug/kg	7.5	51-28-5		
2,4-Dinitrotoluene	Not detected	330		ug/kg	7.5	121-14-2		
2,6-Dinitrotoluene	Not detected	330		ug/kg	7.5	606-20-2		
di-n-Octyl phthalate	Not detected	330		ug/kg	7.5	117-84-0		
Fluoranthene	790	330		ug/kg	7.5	206-44-0		
Fluorene	Not detected	330		ug/kg	7.5	86-73-7		
Hexachlorobenzene	Not detected	330		ug/kg	7.5	118-74-1		
Hexachlorobutadiene	Not detected	330		ug/kg	7.5	87-68-3		
Hexachlorocyclopentadiene	Not detected	330		ug/kg	7.5	77-47-4		
Hexachloroethane	Not detected	330		ug/kg	7.5	67-72-1		
Indeno(1,2,3-cd)pyrene	Not detected	330		ug/kg	7.5	193-39-5		
Isophorone	Not detected	330		ug/kg	7.5	78-59-1		
Naphthalene	Not detected	330		ug/kg	7.5	91-20-3		
Nitrobenzene	Not detected	330		ug/kg	7.5	98-95-3		
2-Nitrophenol	Not detected	330		ug/kg	7.5	88-75-5		
4-Nitrophenol	Not detected	830		ug/kg	7.5	100-02-7		
N-Nitrosodiphenylamine	Not detected	330		ug/kg	7.5	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	330		ug/kg	7.5	621-64-7		
Pentachlorophenol	Not detected	330		ug/kg	7.5	87-86-5		
Phenanthrene	450	330		ug/kg	7.5	85-01-8		
Phenol	Not detected	330		ug/kg	7.5	108-95-2		
Pyrene	650	330		ug/kg	7.5	129-00-0		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	7.5	120-82-1		
2,4,6-Trichlorophenol	Not detected	330		ug/kg	7.5	88-06-2		
Benzidine	Not detected	330		ug/kg	7.5	92-87-5		
N-Nitrosodimethylamine	Not detected	330		ug/kg	7.5	62-75-9		

TICs Semi-Volatiles, Method: SW8270D, Run Date: 01/09/23 17:07, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Found			ug/kg	7.5			
Fluoranthene	Found			ug/kg	7.5	206-44-0		
Pyrene	Found			ug/kg	7.5	129-00-0		
Phenanthrene	Found			ug/kg	7.5	85-01-8		
1,2:3,4-Dibenzpyrene	Found			ug/kg	7.5			
Chrysene	Found			ug/kg	7.5	218-01-9		
Benzo(a)anthracene	Found			ug/kg	7.5	56-55-3		
Benzo(b)fluoranthene	Found			ug/kg	7.5	205-99-2		
Benzo(k)fluoranthene	Found			ug/kg	7.5	207-08-9		
Benzo(a)pyrene	Found			ug/kg	7.5	50-32-8		
Benzo(e)pyrene	Found			ug/kg	7.5	192-97-2		

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/29/22 21:39, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	400		ug/kg	73.6	108-20-3		
TICs*	None Found			ug/kg	73.6			



Analytical Laboratory Report

Lab Sample ID: S43599.29 (continued)

Sample Tag: AOC12-TP03-B

Method: SW8260B - SIM, Run Date: 12/26/22 00:15, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	4		ug/kg	73.6	96-12-8		
1,4-Dioxane*	Not detected	70		ug/kg	73.6	123-91-1		

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 21:39, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	1,000		ug/kg	73.6	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	300		ug/kg	73.6	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	73.6	107-13-1		
2-Butanone (MEK)	Not detected	1,100		ug/kg	73.6	78-93-3		
Dichlorodifluoromethane	Not detected	400		ug/kg	73.6	75-71-8		
Chloromethane	Not detected	400		ug/kg	73.6	74-87-3		
Vinyl chloride	Not detected	70		ug/kg	73.6	75-01-4		
Bromomethane	Not detected	300		ug/kg	73.6	74-83-9		
Chloroethane	Not detected	400		ug/kg	73.6	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	73.6	75-69-4		
1,1-Dichloroethene	Not detected	70		ug/kg	73.6	75-35-4		
Methylene chloride	Not detected	100		ug/kg	73.6	75-09-2		
trans-1,2-Dichloroethene	Not detected	70		ug/kg	73.6	156-60-5		
1,1-Dichloroethane	Not detected	70		ug/kg	73.6	75-34-3		
cis-1,2-Dichloroethene	Not detected	70		ug/kg	73.6	156-59-2		
Chloroform	Not detected	70		ug/kg	73.6	67-66-3		
1,1,1-Trichloroethane	Not detected	70		ug/kg	73.6	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	4,000		ug/kg	73.6	108-10-1		
Carbon tetrachloride	Not detected	70		ug/kg	73.6	56-23-5		
Benzene	Not detected	70		ug/kg	73.6	71-43-2		
1,2-Dichloroethane	Not detected	70		ug/kg	73.6	107-06-2		
Trichloroethene	Not detected	70		ug/kg	73.6	79-01-6		
1,2-Dichloropropane	Not detected	70		ug/kg	73.6	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	73.6	75-27-4		
Dibromomethane	Not detected	400		ug/kg	73.6	74-95-3		
cis-1,3-Dichloropropene	Not detected	70		ug/kg	73.6	10061-01-5		
Toluene	Not detected	70		ug/kg	73.6	108-88-3		
trans-1,3-Dichloropropene	Not detected	70		ug/kg	73.6	10061-02-6		
1,1,2-Trichloroethane	Not detected	70		ug/kg	73.6	79-00-5		
Tetrachloroethene	Not detected	70		ug/kg	73.6	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	73.6	124-48-1		
1,2-Dibromoethane	Not detected	30		ug/kg	73.6	106-93-4	M	
Chlorobenzene	Not detected	70		ug/kg	73.6	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	73.6	630-20-6		
Ethylbenzene	Not detected	70		ug/kg	73.6	100-41-4		
p,m-Xylene	Not detected	100		ug/kg	73.6			
o-Xylene	Not detected	70		ug/kg	73.6	95-47-6		
Styrene	Not detected	70		ug/kg	73.6	100-42-5		
Isopropylbenzene	Not detected	400		ug/kg	73.6	98-82-8		
Bromoform	Not detected	100		ug/kg	73.6	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	70		ug/kg	73.6	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	73.6	96-18-4		
n-Propylbenzene	Not detected	70		ug/kg	73.6	103-65-1		
Bromobenzene	Not detected	100		ug/kg	73.6	108-86-1		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43599.29 (continued)

Sample Tag: AOC12-TP03-B

Volatile Organics 5035, Method: SW5035A/8260C, Run Date: 12/29/22 21:39, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,3,5-Trimethylbenzene	Not detected	70		ug/kg	73.6	108-67-8		
tert-Butylbenzene	Not detected	70		ug/kg	73.6	98-06-6		
1,2,4-Trimethylbenzene	Not detected	70		ug/kg	73.6	95-63-6		
sec-Butylbenzene	Not detected	70		ug/kg	73.6	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	73.6	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	73.6	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	73.6	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	73.6	95-50-1		
1,2,3-Trimethylbenzene	Not detected	70		ug/kg	73.6	526-73-8		
n-Butylbenzene	Not detected	70		ug/kg	73.6	104-51-8		
1,2,4-Trichlorobenzene	Not detected	490		ug/kg	73.6	120-82-1		
1,2,3-Trichlorobenzene	Not detected	490		ug/kg	73.6	87-61-6		
Naphthalene	Not detected	400		ug/kg	73.6	91-20-3		
Acrolein	Not detected	70		ug/kg	73.6	107-02-8		
2-Chlorotoluene	Not detected	70		ug/kg	73.6	95-49-8		
4-Chlorotoluene	Not detected	70		ug/kg	73.6	106-43-4		
1,3-Dichloropropane	Not detected	70		ug/kg	73.6	142-28-9		
1,1-Dichloropropene	Not detected	70		ug/kg	73.6	563-58-6		
2,2-Dichloropropane	Not detected	70		ug/kg	73.6	594-20-7		
Hexachlorobutadiene	Not detected	70		ug/kg	73.6	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	70		ug/kg	73.6	76-13-1		

Other / Misc.

Method: , Run Date: 12/27/22 17:44, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 01/04/23 18:18, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43599.30

Sample Tag: COMP-02

Collected Date/Time: 12/16/2022 10:00

Matrix: Soil

COC Reference: 158671

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	32oz Glass	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
TCLP Zero Headspace Ext.	Completed	SW1311	12/20/22 19:30	DMP	
Metal Digestion*	Completed	SW3015A	12/22/22 10:40	CCM	
TCLP/SPLP BNA Extraction*	Completed	SW3535A	12/28/22 09:00	PTW	
Extraction, PCB*	Completed	SW3546	12/28/22 14:00	JWR	
Mercury Digestion	Completed	SW7471B	12/22/22 12:44	CTV	

TCLP Extraction

Parameter	Result	Method	Run Date	Analyst	Flags
Initial Sample pH	9.40	SW1311	12/20/22 19:30 - 12/21/22	DMP	
pH after 3.5 ml HCl	1.92	SW1311	12/20/22 19:30 - 12/21/22	DMP	
% Solids	100	SW1311	12/20/22 19:30 - 12/21/22	DMP	
Sample Used g	100	SW1311	12/20/22 19:30 - 12/21/22	DMP	
Final Volume mL	2000	SW1311	12/20/22 19:30 - 12/21/22	DMP	
TCLP Extraction Fluid	1	SW1311	12/20/22 19:30 - 12/21/22	DMP	
Final Extract pH	5.26	SW1311	12/20/22 19:30 - 12/21/22	DMP	

Inorganics

Method: SM2540B, Run Date: 12/16/22 20:35, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	91	1		%	1			

Metals

Method: SW6020A, Run Date: 12/22/22 12:04, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Arsenic, TCLP	Not detected	0.02		mg/L	25	7440-38-2		5.0
Barium, TCLP	0.34	0.05		mg/L	25	7440-39-3		100.0
Cadmium, TCLP	Not detected	0.005		mg/L	25	7440-43-9		1.0
Chromium, TCLP	Not detected	0.05		mg/L	25	7440-47-3		5.0
Lead, TCLP	Not detected	0.03		mg/L	25	7439-92-1		5.0
Selenium, TCLP	Not detected	0.05		mg/L	25	7782-49-2		1.0
Silver, TCLP	Not detected	0.005		mg/L	25	7440-22-4		5.0

Method: SW7471B, Run Date: 12/22/22 14:51, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury, TCLP	Not detected	0.0005		mg/L	2	7439-97-6		0.2

Organics - PCBs/Pesticides

PCB List, Method: SW8082A, Run Date: 12/29/22 14:05, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	330		ug/kg	10	12674-11-2		
PCB-1242	Not detected	330		ug/kg	10	53469-21-9		
PCB-1221	Not detected	330		ug/kg	10	11104-28-2		



Analytical Laboratory Report

Lab Sample ID: S43599.30 (continued)

Sample Tag: COMP-02

PCB List, Method: SW8082A, Run Date: 12/29/22 14:05, Analyst: JANB (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1232	Not detected	330		ug/kg	10	11141-16-5		
PCB-1248	Not detected	330		ug/kg	10	12672-29-6		
PCB-1254	Not detected	330		ug/kg	10	11097-69-1		
PCB-1260	Not detected	330		ug/kg	10	11096-82-5		

Organics - Semi-Volatiles

TCLP Semi Volatiles, Method: SW8270D, Run Date: 12/28/22 21:29, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2-Methylphenol (o-Cresol)	Not detected	1,000		ug/L	10	95-48-7		200,000
3-, 4-Methylphenol (p,m-Cresol)	Not detected	1,000		ug/L	10	3/4-CRESOL		200,000
Pentachlorophenol	Not detected	1,000		ug/L	10	87-86-5		100,000
2,4,5-Trichlorophenol	Not detected	1,000		ug/L	10	95-95-4		400,000
2,4,6-Trichlorophenol	Not detected	1,000		ug/L	10	88-06-2		2,000
2,4-Dinitrotoluene	Not detected	90		ug/L	10	121-14-2		130
Hexachlorobenzene	Not detected	90		ug/L	10	118-74-1		130
Hexachlorobutadiene	Not detected	100		ug/L	10	87-68-3		500
Hexachloroethane	Not detected	100		ug/L	10	67-72-1		3,000
Nitrobenzene	Not detected	100		ug/L	10	98-95-3		2,000
Pyridine	Not detected	100		ug/L	10	110-86-1		5,000

Organics - Volatiles

TCLP Volatiles, Method: SW5030C/8260C, Run Date: 12/22/22 17:08, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Benzene*	Not detected	100		ug/L	100	71-43-2		500
Carbon tetrachloride*	Not detected	100		ug/L	100	56-23-5		500
Chlorobenzene*	Not detected	100		ug/L	100	108-90-7		100,000
Chloroform*	Not detected	100		ug/L	100	67-66-3		6,000
1,4-Dichlorobenzene*	Not detected	100		ug/L	100	106-46-7		7,500
1,2-Dichloroethane*	Not detected	100		ug/L	100	107-06-2		500
1,1-Dichloroethene*	Not detected	100		ug/L	100	75-35-4		700
2-Butanone (MEK)*	Not detected	1,000		ug/L	100	78-93-3		200,000
Tetrachloroethene*	Not detected	100		ug/L	100	127-18-4		700
Trichloroethene*	Not detected	100		ug/L	100	79-01-6		500
Vinyl chloride*	Not detected	100		ug/L	100	75-01-4		200



Analytical Laboratory Report

Lab Sample ID: S43599.31

Sample Tag: TRIP BLANK-TB

Collected Date/Time: 12/16/2022 10:00

Matrix: Methanol

COC Reference: 158671

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	MeOH	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Sample wt. (g) / Methanol (ml)*	10/10	SW5035A	12/16/22 17:57	JKJ	

Organics - Volatiles

Method: SW5035A/8260C, Run Date: 12/29/22 22:03, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)*	Not detected	300		ug/kg	50	108-20-3		
Acetone	Not detected	1,000		ug/kg	50	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	200		ug/kg	50	1634-04-4		
Acrylonitrile	Not detected	100		ug/kg	50	107-13-1		
2-Butanone (MEK)	Not detected	750		ug/kg	50	78-93-3		
Dichlorodifluoromethane	Not detected	300		ug/kg	50	75-71-8		
Chloromethane	Not detected	300		ug/kg	50	74-87-3		
Vinyl chloride	Not detected	50		ug/kg	50	75-01-4		
Bromomethane	Not detected	200		ug/kg	50	74-83-9		
Chloroethane	Not detected	300		ug/kg	50	75-00-3		
Trichlorofluoromethane	Not detected	100		ug/kg	50	75-69-4		
1,1-Dichloroethene	Not detected	50		ug/kg	50	75-35-4		
Methylene chloride	Not detected	100		ug/kg	50	75-09-2		
trans-1,2-Dichloroethene	Not detected	50		ug/kg	50	156-60-5		
1,1-Dichloroethane	Not detected	50		ug/kg	50	75-34-3		
cis-1,2-Dichloroethene	Not detected	50		ug/kg	50	156-59-2		
Chloroform	Not detected	50		ug/kg	50	67-66-3		
1,1,1-Trichloroethane	Not detected	50		ug/kg	50	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	3,000		ug/kg	50	108-10-1		
Carbon tetrachloride	Not detected	50		ug/kg	50	56-23-5		
Benzene	Not detected	50		ug/kg	50	71-43-2		
1,2-Dichloroethane	Not detected	50		ug/kg	50	107-06-2		
Trichloroethene	Not detected	50		ug/kg	50	79-01-6		
1,2-Dichloropropane	Not detected	50		ug/kg	50	78-87-5		
Bromodichloromethane	Not detected	100		ug/kg	50	75-27-4		
Dibromomethane	Not detected	300		ug/kg	50	74-95-3		
cis-1,3-Dichloropropene	Not detected	50		ug/kg	50	10061-01-5		
Toluene	Not detected	50		ug/kg	50	108-88-3		
trans-1,3-Dichloropropene	Not detected	50		ug/kg	50	10061-02-6		
1,1,2-Trichloroethane	Not detected	50		ug/kg	50	79-00-5		
Tetrachloroethene	Not detected	50		ug/kg	50	127-18-4		
Dibromochloromethane	Not detected	100		ug/kg	50	124-48-1		
1,2-Dibromoethane	Not detected	20		ug/kg	50	106-93-4	M	
Chlorobenzene	Not detected	50		ug/kg	50	108-90-7		
1,1,1,2-Tetrachloroethane	Not detected	100		ug/kg	50	630-20-6		
Ethylbenzene	Not detected	50		ug/kg	50	100-41-4		

M-Result reported to MDL not RDL



Analytical Laboratory Report

Lab Sample ID: S43599.31 (continued)

Sample Tag: TRIP BLANK-TB

Method: SW5035A/8260C, Run Date: 12/29/22 22:03, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
p,m-Xylene	Not detected	100		ug/kg	50			
o-Xylene	Not detected	50		ug/kg	50	95-47-6		
Styrene	Not detected	50		ug/kg	50	100-42-5		
Isopropylbenzene	Not detected	300		ug/kg	50	98-82-8		
Bromoform	Not detected	100		ug/kg	50	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	50		ug/kg	50	79-34-5		
1,2,3-Trichloropropane	Not detected	100		ug/kg	50	96-18-4		
n-Propylbenzene	Not detected	50		ug/kg	50	103-65-1		
Bromobenzene	Not detected	100		ug/kg	50	108-86-1		
1,3,5-Trimethylbenzene	Not detected	50		ug/kg	50	108-67-8		
tert-Butylbenzene	Not detected	50		ug/kg	50	98-06-6		
1,2,4-Trimethylbenzene	Not detected	50		ug/kg	50	95-63-6		
sec-Butylbenzene	Not detected	50		ug/kg	50	135-98-8		
p-Isopropyltoluene	Not detected	100		ug/kg	50	99-87-6		
1,3-Dichlorobenzene	Not detected	100		ug/kg	50	541-73-1		
1,4-Dichlorobenzene	Not detected	100		ug/kg	50	106-46-7		
1,2-Dichlorobenzene	Not detected	100		ug/kg	50	95-50-1		
1,2,3-Trimethylbenzene	Not detected	50		ug/kg	50	526-73-8		
n-Butylbenzene	Not detected	50		ug/kg	50	104-51-8		
1,2,4-Trichlorobenzene	Not detected	330		ug/kg	50	120-82-1		
1,2,3-Trichlorobenzene	Not detected	330		ug/kg	50	87-61-6		
Naphthalene	Not detected	300		ug/kg	50	91-20-3		
Acrolein	Not detected	50		ug/kg	50	107-02-8		
2-Chlorotoluene	Not detected	50		ug/kg	50	95-49-8		
4-Chlorotoluene	Not detected	50		ug/kg	50	106-43-4		
1,3-Dichloropropane	Not detected	50		ug/kg	50	142-28-9		
1,1-Dichloropropene	Not detected	50		ug/kg	50	563-58-6		
2,2-Dichloropropane	Not detected	50		ug/kg	50	594-20-7		
Hexachlorobutadiene	Not detected	50		ug/kg	50	87-68-3		
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	50		ug/kg	50	76-13-1		

Merit Laboratories Login Checklist

Lab Set ID:S43599

Client:TRC (TRC)

Project: Det. Axle Southern Bound.

Submitted: 12/16/2022 12:00 Login User: MMC

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place

Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Selection	Description	Note
-----------	-------------	------

Sample Receiving

- | | | |
|-----|--|--|
| 01. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples are received at 4C +/- 2C Thermometer # IR 3.7 |
| 02. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Received on ice/ cooling process begun |
| 03. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples shipped |
| 04. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples left in 24 hr. drop box |
| 05. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Are there custody seals/tape or is the drop box locked |

Chain of Custody

- | | | |
|-----|--|---|
| 06. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC adequately filled out |
| 07. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC signed and relinquished to the lab |
| 08. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sample tag on bottles match COC |
| 09. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Subcontracting needed? Subcontracted to: Eurofins |

Preservation

- | | | |
|-----|--|---|
| 10. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Do sample have correct chemical preservation |
| 11. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Completed pH checks on preserved samples? (no VOAs) |
| 12. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Did any samples need to be preserved in the lab? |

Bottle Conditions

- | | | |
|-----|--|---|
| 13. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | All bottles intact |
| 14. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Appropriate analytical bottles are used |
| 15. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Merit bottles used |
| 16. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sufficient sample volume received |
| 17. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples require laboratory filtration |
| 18. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples submitted within holding time |
| 19. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Do water VOC or TOX bottles contain headspace |

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____



2680 East Lansing Dr., East Lansing, MI 48823
 Phone (517) 332-0167 Fax (517) 332-4034
 www.meritlabs.com

C.O.C. PAGE # _____ OF _____ 144467

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME **K. CRATSENBURG**
 COMPANY **TRC**
 ADDRESS **1540 EISENHOWER PL**
 CITY **ANN ARBOR** STATE **MI** ZIP CODE **48108**
 PHONE NO. _____ FAX NO. _____ P.O. NO. **193431**
 E-MAIL ADDRESS **Kcratsenburg@trccompanies.com** QUOTE NO. _____

CONTACT NAME _____ SAME
 COMPANY _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP CODE _____
 PHONE NO. _____ E-MAIL ADDRESS _____

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME **DET. AXLE SOUTHERN BOUND.** SAMPLER(S) - PLEASE PRINT/SIGN NAME **B. YELEN**
 TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____
 DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER **TRC EDD**

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

Containers & Preservatives

MERIT LAB NO. FOR LAB USE ONLY	YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	VOC + TICs 1,1,1,2,2,2 Fluor	SVOC + TICs	METALS *	THORIUM	31 PFAS	3 ALCOHOLS	PCB	TEMP. VOC, METALS, SVOC, PCB	Certifications	Project Locations	Special Instructions
	DATE	TIME																					
43599/43600	.01	12/15/22	0910	AOC10-MW-22-17(2-4)	S	8	6				2		X	X	X	X	X	X	X				* SEE SOUTHERN
	.02		0920	AOC10-MW-22-17(8-10)									X	X	X	X	X	X	X				BOUNDARY SOIL
	.03		1040	AOC8-MW-22-18(2-4)									X	X	X	X	X	X	X				SCOPE
	.04		1050	AOC8-MW-22-18(8-10)									X	X	X	X	X	X	X				
	.05		1250	AOC8-MW-22-19(2-4)									X	X	X	Y	X	Y	X				
	.06		1300	AOC8-MW-22-19(8-10)									X	X	X	Y	X	Y	X				
	.07		1430	AOC12-MW-22-20(2-4)									X	X	X	Y	X	Y	X				
	.08		1510	AOC12-MW-22-20(10-12)									X	X	X	Y	X	Y	X				
	.09	12/16/22	0810	AOC12-MW-22-21(2-4)									X	X	X	Y	X	Y	X				
	.10		0820	AOC12-MW-22-21(8-10)									X	X	X	Y	X	Y	X				
43599	.11		1000	TRIP BLANK-MW		1					1		X										VOC ONLY
	.12		1000	COMP-01	S	1	1																

RELINQUISHED BY: **B. YELEN** (Sampler) DATE **12.16.22** TIME **1037**
 RECEIVED BY: _____ DATE _____ TIME _____
 SIGNATURE/Organization _____

RELINQUISHED BY: _____ DATE **12/16/22** TIME **1200**
 RECEIVED BY: **M. Chilcote** DATE **12/16/22** TIME **1200**
 SIGNATURE/Organization _____

SEAL NO. _____ SEAL INTACT YES NO INITIALS _____ NOTES: TEMP. ON ARRIVAL **3.7**

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Lab Results
Merit Laboratories
2680 E Lansing Drive
East Lansing, Michigan 48823

Generated 2/2/2023 5:13:27 AM

JOB DESCRIPTION

S43599

JOB NUMBER

190-30672-1

Eurofins Michigan

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

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Authorization



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Authorized for release by
Sue Schafer, Project Manager II
Sue.Schafer@et.eurofinsus.com
(810)229-2763



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Sample Summary

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
190-30672-1	S43599.01	Solid	12/15/22 09:10	12/19/22 14:46
190-30672-2	S43599.02	Solid	12/15/22 09:20	12/19/22 14:46
190-30672-3	S43599.03	Solid	12/15/22 10:40	12/19/22 14:46
190-30672-4	S43599.04	Solid	12/15/22 10:50	12/19/22 14:46
190-30672-5	S43599.05	Solid	12/15/22 12:50	12/19/22 14:46
190-30672-6	S43599.06	Solid	12/15/22 13:00	12/19/22 14:46
190-30672-7	S43599.07	Solid	12/15/22 14:30	12/19/22 14:46
190-30672-8	S43599.08	Solid	12/15/22 15:10	12/19/22 14:46
190-30672-9	S43599.09	Solid	12/15/22 08:10	12/19/22 14:46
190-30672-10	S43599.10	Solid	12/15/22 08:20	12/19/22 14:46
190-30672-13	S43599.14	Solid	12/15/22 09:07	12/19/22 14:46
190-30672-14	S43599.15	Solid	12/15/22 09:21	12/19/22 14:46
190-30672-15	S43599.16	Solid	12/15/22 09:27	12/19/22 14:46
190-30672-16	S43599.17	Solid	12/15/22 10:00	12/19/22 14:46
190-30672-17	S43599.18	Solid	12/15/22 00:01	12/19/22 14:46
190-30672-18	S43599.19	Solid	12/15/22 10:42	12/19/22 14:46
190-30672-19	S43599.20	Solid	12/15/22 10:52	12/19/22 14:46
190-30672-20	S43599.21	Solid	12/15/22 11:00	12/19/22 14:46
190-30672-21	S43599.22	Solid	12/15/22 11:00	12/19/22 14:46
190-30672-22	S43599.23	Solid	12/15/22 11:16	12/19/22 14:46
190-30672-23	S43599.24	Solid	12/15/22 00:01	12/19/22 14:46
190-30672-24	S43599.25	Solid	12/15/22 12:30	12/19/22 14:46
190-30672-25	S43599.26	Solid	12/15/22 12:35	12/19/22 14:46
190-30672-26	S43599.27	Solid	12/15/22 12:45	12/19/22 14:46
190-30672-27	S43599.28	Solid	12/15/22 12:45	12/19/22 14:46
190-30672-28	S43599.29	Solid	12/15/22 13:05	12/19/22 14:46

Case Narrative

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Job ID: 190-30672-1

Laboratory: Eurofins Michigan

Narrative

**Job Narrative
190-30672-1**

Receipt

The samples were received on 12/19/2022 2:46 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 9.0°C

Receipt Exceptions

The following samples were listed on the Chain of Custody (COC); however, no samples were received: S43599.12 (190-30672-11), S43599.13 (190-30672-12), S43599.17 (190-30672-16), and S43599.30 (190-30672-29) for Thorium.

The following samples were listed on the Chain of Custody (COC); however, no samples were received: S43599.12 (190-30672-11), S43599.13 (190-30672-12), and S43599.30 (190-30672-29) for Alcohols.

GC Semi VOA

Method 8015C_DAI: Spike compounds were inadvertently omitted during the extraction process for the matrix spike/matrix spike duplicate (MS/MSD); therefore, matrix spike recoveries are unavailable for preparation batch 680-756440 and analytical batch 680-756844. The associated laboratory control sample (LCS) met acceptance criteria.

Method 8015C_DAI: Spike compounds were inadvertently omitted during the extraction process for the matrix spike/matrix spike duplicate (MS/MSD); therefore, matrix spike recoveries are unavailable for preparation batch 680-756439 and analytical batch 680-757056. The associated laboratory control sample (LCS) met acceptance criteria.

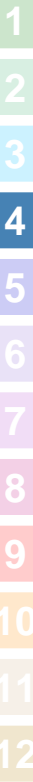
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.



Client Sample Results

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Client Sample ID: S43599.01

Lab Sample ID: 190-30672-1

Date Collected: 12/15/22 09:10

Matrix: Solid

Date Received: 12/19/22 14:46

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	11.8		0.1	%			12/21/22 14:21	1
Percent Solids (EPA Moisture)	88.2		0.1	%			12/21/22 14:21	1
Percent Moisture (SM Moisture - 2540)	13		0.10	%			12/20/22 17:32	1
Percent Solids (SM Moisture - 2540)	87		0.10	%			12/20/22 17:32	1

Client Sample ID: S43599.01

Lab Sample ID: 190-30672-1

Date Collected: 12/15/22 09:10

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 86.9

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.4		5.4	mg/Kg	☼		12/28/22 17:23	1
Methanol	<2.2		2.2	mg/Kg	☼		12/28/22 17:23	1
n-Butanol	<5.4		5.4	mg/Kg	☼		12/28/22 17:23	1

Client Sample ID: S43599.01

Lab Sample ID: 190-30672-1

Date Collected: 12/15/22 09:10

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 88.2

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.7		0.20	mg/Kg	☼	01/03/23 07:53	01/04/23 15:50	2

Client Sample ID: S43599.02

Lab Sample ID: 190-30672-2

Date Collected: 12/15/22 09:20

Matrix: Solid

Date Received: 12/19/22 14:46

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	9.0		0.1	%			12/21/22 14:21	1
Percent Solids (EPA Moisture)	91.0		0.1	%			12/21/22 14:21	1
Percent Moisture (SM Moisture - 2540)	7.7		0.10	%			12/20/22 17:32	1
Percent Solids (SM Moisture - 2540)	92		0.10	%			12/20/22 17:32	1

Client Sample ID: S43599.02

Lab Sample ID: 190-30672-2

Date Collected: 12/15/22 09:20

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 91.0

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.1		0.20	mg/Kg	☼	01/03/23 07:53	01/04/23 16:07	2

Client Sample ID: S43599.02

Lab Sample ID: 190-30672-2

Date Collected: 12/15/22 09:20

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 92.3

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.4		5.4	mg/Kg	☼		12/28/22 17:44	1

Eurofins Michigan

Client Sample Results

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Client Sample ID: S43599.02

Lab Sample ID: 190-30672-2

Date Collected: 12/15/22 09:20

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 92.3

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<2.2		2.2	mg/Kg	☼		12/28/22 17:44	1
n-Butanol	<5.4		5.4	mg/Kg	☼		12/28/22 17:44	1

Client Sample ID: S43599.03

Lab Sample ID: 190-30672-3

Date Collected: 12/15/22 10:40

Matrix: Solid

Date Received: 12/19/22 14:46

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	10.4		0.1	%			12/21/22 14:21	1
Percent Solids (EPA Moisture)	89.6		0.1	%			12/21/22 14:21	1
Percent Moisture (SM Moisture - 2540)	8.9		0.10	%			12/20/22 17:32	1
Percent Solids (SM Moisture - 2540)	91		0.10	%			12/20/22 17:32	1

Client Sample ID: S43599.03

Lab Sample ID: 190-30672-3

Date Collected: 12/15/22 10:40

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 89.6

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.3		0.19	mg/Kg	☼	01/03/23 07:53	01/04/23 16:21	2

Client Sample ID: S43599.03

Lab Sample ID: 190-30672-3

Date Collected: 12/15/22 10:40

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 91.1

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.3		5.3	mg/Kg	☼		12/28/22 18:06	1
Methanol	<2.1		2.1	mg/Kg	☼		12/28/22 18:06	1
n-Butanol	<5.3		5.3	mg/Kg	☼		12/28/22 18:06	1

Client Sample ID: S43599.04

Lab Sample ID: 190-30672-4

Date Collected: 12/15/22 10:50

Matrix: Solid

Date Received: 12/19/22 14:46

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	4.4		0.1	%			12/21/22 14:21	1
Percent Solids (EPA Moisture)	95.6		0.1	%			12/21/22 14:21	1
Percent Moisture (SM Moisture - 2540)	11		0.10	%			12/20/22 17:32	1
Percent Solids (SM Moisture - 2540)	89		0.10	%			12/20/22 17:32	1

Client Sample Results

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Client Sample ID: S43599.04

Lab Sample ID: 190-30672-4

Date Collected: 12/15/22 10:50

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 89.3

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.4		5.4	mg/Kg	☼		12/28/22 18:27	1
Methanol	<2.2		2.2	mg/Kg	☼		12/28/22 18:27	1
n-Butanol	<5.4		5.4	mg/Kg	☼		12/28/22 18:27	1

Client Sample ID: S43599.04

Lab Sample ID: 190-30672-4

Date Collected: 12/15/22 10:50

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 95.6

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.2		0.19	mg/Kg	☼	01/03/23 07:53	01/04/23 16:24	2

Client Sample ID: S43599.05

Lab Sample ID: 190-30672-5

Date Collected: 12/15/22 12:50

Matrix: Solid

Date Received: 12/19/22 14:46

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	5.5		0.1	%			12/21/22 14:21	1
Percent Solids (EPA Moisture)	94.5		0.1	%			12/21/22 14:21	1
Percent Moisture (SM Moisture - 2540)	5.8		0.10	%			12/20/22 17:32	1
Percent Solids (SM Moisture - 2540)	94		0.10	%			12/20/22 17:32	1

Client Sample ID: S43599.05

Lab Sample ID: 190-30672-5

Date Collected: 12/15/22 12:50

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 94.2

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.2		5.2	mg/Kg	☼		12/28/22 18:49	1
Methanol	<2.1		2.1	mg/Kg	☼		12/28/22 18:49	1
n-Butanol	<5.2		5.2	mg/Kg	☼		12/28/22 18:49	1

Client Sample ID: S43599.05

Lab Sample ID: 190-30672-5

Date Collected: 12/15/22 12:50

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 94.5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.5		0.20	mg/Kg	☼	01/03/23 07:53	01/04/23 16:28	2

Client Sample ID: S43599.06

Lab Sample ID: 190-30672-6

Date Collected: 12/15/22 13:00

Matrix: Solid

Date Received: 12/19/22 14:46

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	5.3		0.1	%			12/21/22 14:21	1
Percent Solids (EPA Moisture)	94.7		0.1	%			12/21/22 14:21	1
Percent Moisture (SM Moisture - 2540)	5.3		0.10	%			12/20/22 17:32	1

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Client Sample Results

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Client Sample ID: S43599.06

Lab Sample ID: 190-30672-6

Date Collected: 12/15/22 13:00

Matrix: Solid

Date Received: 12/19/22 14:46

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM Moisture - 2540)	95		0.10	%			12/20/22 17:32	1

Client Sample ID: S43599.06

Lab Sample ID: 190-30672-6

Date Collected: 12/15/22 13:00

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 94.7

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.1		5.1	mg/Kg	✱		12/28/22 19:10	1
Methanol	<2.1		2.1	mg/Kg	✱		12/28/22 19:10	1
n-Butanol	<5.1		5.1	mg/Kg	✱		12/28/22 19:10	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.1		0.19	mg/Kg	✱	01/03/23 07:53	01/04/23 16:31	2

Client Sample ID: S43599.07

Lab Sample ID: 190-30672-7

Date Collected: 12/15/22 14:30

Matrix: Solid

Date Received: 12/19/22 14:46

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	5.8		0.1	%			12/21/22 14:21	1
Percent Solids (EPA Moisture)	94.2		0.1	%			12/21/22 14:21	1
Percent Moisture (SM Moisture - 2540)	7.2		0.10	%			12/20/22 17:32	1
Percent Solids (SM Moisture - 2540)	93		0.10	%			12/20/22 17:32	1

Client Sample ID: S43599.07

Lab Sample ID: 190-30672-7

Date Collected: 12/15/22 14:30

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 92.8

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.2		5.2	mg/Kg	✱		12/28/22 19:32	1
Methanol	<2.1		2.1	mg/Kg	✱		12/28/22 19:32	1
n-Butanol	<5.2		5.2	mg/Kg	✱		12/28/22 19:32	1

Client Sample ID: S43599.07

Lab Sample ID: 190-30672-7

Date Collected: 12/15/22 14:30

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 94.2

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.2		0.19	mg/Kg	✱	01/03/23 07:53	01/04/23 16:35	2

Client Sample Results

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Client Sample ID: S43599.08

Lab Sample ID: 190-30672-8

Date Collected: 12/15/22 15:10

Matrix: Solid

Date Received: 12/19/22 14:46

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	14.7		0.1	%			12/21/22 14:21	1
Percent Solids (EPA Moisture)	85.3		0.1	%			12/21/22 14:21	1
Percent Moisture (SM Moisture - 2540)	16		0.10	%			12/20/22 17:32	1
Percent Solids (SM Moisture - 2540)	84		0.10	%			12/20/22 17:32	1

Client Sample ID: S43599.08

Lab Sample ID: 190-30672-8

Date Collected: 12/15/22 15:10

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 83.7

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.7		5.7	mg/Kg	✱		12/28/22 19:53	1
Methanol	<2.3		2.3	mg/Kg	✱		12/28/22 19:53	1
n-Butanol	<5.7		5.7	mg/Kg	✱		12/28/22 19:53	1

Client Sample ID: S43599.08

Lab Sample ID: 190-30672-8

Date Collected: 12/15/22 15:10

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 85.3

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.91		0.22	mg/Kg	✱	01/03/23 07:53	01/04/23 16:38	2

Client Sample ID: S43599.09

Lab Sample ID: 190-30672-9

Date Collected: 12/15/22 08:10

Matrix: Solid

Date Received: 12/19/22 14:46

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	7.3		0.1	%			12/21/22 14:21	1
Percent Solids (EPA Moisture)	92.7		0.1	%			12/21/22 14:21	1
Percent Moisture (SM Moisture - 2540)	8.3		0.10	%			12/20/22 17:32	1
Percent Solids (SM Moisture - 2540)	92		0.10	%			12/20/22 17:32	1

Client Sample ID: S43599.09

Lab Sample ID: 190-30672-9

Date Collected: 12/15/22 08:10

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 91.7

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.4		5.4	mg/Kg	✱		12/28/22 20:15	1
Methanol	<2.2		2.2	mg/Kg	✱		12/28/22 20:15	1
n-Butanol	<5.4		5.4	mg/Kg	✱		12/28/22 20:15	1

Client Sample Results

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Client Sample ID: S43599.09

Lab Sample ID: 190-30672-9

Date Collected: 12/15/22 08:10

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 92.7

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.2		0.20	mg/Kg	☼	01/03/23 07:53	01/04/23 16:42	2

Client Sample ID: S43599.10

Lab Sample ID: 190-30672-10

Date Collected: 12/15/22 08:20

Matrix: Solid

Date Received: 12/19/22 14:46

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	10.5		0.1	%			12/21/22 14:21	1
Percent Solids (EPA Moisture)	89.5		0.1	%			12/21/22 14:21	1
Percent Moisture (SM Moisture - 2540)	11		0.10	%			12/20/22 17:32	1
Percent Solids (SM Moisture - 2540)	89		0.10	%			12/20/22 17:32	1

Client Sample ID: S43599.10

Lab Sample ID: 190-30672-10

Date Collected: 12/15/22 08:20

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 88.7

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.5		5.5	mg/Kg	☼		12/28/22 20:36	1
Methanol	<2.2		2.2	mg/Kg	☼		12/28/22 20:36	1
n-Butanol	<5.5		5.5	mg/Kg	☼		12/28/22 20:36	1

Client Sample ID: S43599.10

Lab Sample ID: 190-30672-10

Date Collected: 12/15/22 08:20

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 89.5

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	4.5		0.21	mg/Kg	☼	01/03/23 07:53	01/04/23 16:45	2

Client Sample ID: S43599.14

Lab Sample ID: 190-30672-13

Date Collected: 12/15/22 09:07

Matrix: Solid

Date Received: 12/19/22 14:46

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	16.2		0.1	%			12/21/22 14:21	1
Percent Solids (EPA Moisture)	83.8		0.1	%			12/21/22 14:21	1
Percent Moisture (SM Moisture - 2540)	12		0.10	%			12/20/22 17:32	1
Percent Solids (SM Moisture - 2540)	88		0.10	%			12/20/22 17:32	1

Client Sample ID: S43599.14

Lab Sample ID: 190-30672-13

Date Collected: 12/15/22 09:07

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 83.8

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	2.6		0.23	mg/Kg	☼	01/03/23 07:53	01/04/23 16:52	2

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Client Sample Results

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Client Sample ID: S43599.14

Lab Sample ID: 190-30672-13

Date Collected: 12/15/22 09:07

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 88.3

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.5		5.5	mg/Kg	☼		12/28/22 20:58	1
Methanol	<2.2		2.2	mg/Kg	☼		12/28/22 20:58	1
n-Butanol	<5.5		5.5	mg/Kg	☼		12/28/22 20:58	1

Client Sample ID: S43599.15

Lab Sample ID: 190-30672-14

Date Collected: 12/15/22 09:21

Matrix: Solid

Date Received: 12/19/22 14:46

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	12.4		0.1	%			12/21/22 14:21	1
Percent Solids (EPA Moisture)	87.6		0.1	%			12/21/22 14:21	1
Percent Moisture (SM Moisture - 2540)	13		0.10	%			12/20/22 17:32	1
Percent Solids (SM Moisture - 2540)	87		0.10	%			12/20/22 17:32	1

Client Sample ID: S43599.15

Lab Sample ID: 190-30672-14

Date Collected: 12/15/22 09:21

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 87.0

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.5		5.5	mg/Kg	☼		12/28/22 21:19	1
Methanol	<2.2		2.2	mg/Kg	☼		12/28/22 21:19	1
n-Butanol	<5.5		5.5	mg/Kg	☼		12/28/22 21:19	1

Client Sample ID: S43599.15

Lab Sample ID: 190-30672-14

Date Collected: 12/15/22 09:21

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 87.6

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.7		0.20	mg/Kg	☼	01/03/23 07:53	01/04/23 17:06	2

Client Sample ID: S43599.16

Lab Sample ID: 190-30672-15

Date Collected: 12/15/22 09:27

Matrix: Solid

Date Received: 12/19/22 14:46

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	35.9		0.1	%			01/09/23 16:16	1
Percent Solids (EPA Moisture)	64.1		0.1	%			01/09/23 16:16	1
Percent Moisture (SM Moisture - 2540)	14		0.10	%			12/20/22 17:32	1
Percent Solids (SM Moisture - 2540)	86		0.10	%			12/20/22 17:32	1

Client Sample Results

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Client Sample ID: S43599.16

Lab Sample ID: 190-30672-15

Date Collected: 12/15/22 09:27

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 64.1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	2.0		0.31	mg/Kg	☼	01/10/23 08:01	01/10/23 13:51	2

Client Sample ID: S43599.16

Lab Sample ID: 190-30672-15

Date Collected: 12/15/22 09:27

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 86.5

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.8		5.8	mg/Kg	☼		12/28/22 21:40	1
Methanol	<2.3		2.3	mg/Kg	☼		12/28/22 21:40	1
n-Butanol	<5.8		5.8	mg/Kg	☼		12/28/22 21:40	1

Client Sample ID: S43599.17

Lab Sample ID: 190-30672-16

Date Collected: 12/15/22 10:00

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 85.8

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.6		5.6	mg/Kg	☼		12/28/22 22:02	1
Methanol	<2.2		2.2	mg/Kg	☼		12/28/22 22:02	1
n-Butanol	<5.6		5.6	mg/Kg	☼		12/28/22 22:02	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (SM Moisture - 2540)	14		0.10	%			12/20/22 17:32	1
Percent Solids (SM Moisture - 2540)	86		0.10	%			12/20/22 17:32	1

Client Sample ID: S43599.18

Lab Sample ID: 190-30672-17

Date Collected: 12/15/22 00:01

Matrix: Solid

Date Received: 12/19/22 14:46

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	9.3		0.1	%			12/21/22 14:21	1
Percent Solids (EPA Moisture)	90.7		0.1	%			12/21/22 14:21	1
Percent Moisture (SM Moisture - 2540)	9.6		0.10	%			12/20/22 17:32	1
Percent Solids (SM Moisture - 2540)	90		0.10	%			12/20/22 17:32	1

Client Sample ID: S43599.18

Lab Sample ID: 190-30672-17

Date Collected: 12/15/22 00:01

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 90.4

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.2		5.2	mg/Kg	☼		12/28/22 22:23	1
Methanol	<2.1		2.1	mg/Kg	☼		12/28/22 22:23	1
n-Butanol	<5.2		5.2	mg/Kg	☼		12/28/22 22:23	1

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Client Sample Results

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Client Sample ID: S43599.18

Lab Sample ID: 190-30672-17

Date Collected: 12/15/22 00:01

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 90.7

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.3		0.19	mg/Kg	☼	01/03/23 07:53	01/04/23 17:09	2

Client Sample ID: S43599.19

Lab Sample ID: 190-30672-18

Date Collected: 12/15/22 10:42

Matrix: Solid

Date Received: 12/19/22 14:46

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	3.6		0.1	%			12/21/22 14:21	1
Percent Solids (EPA Moisture)	96.4		0.1	%			12/21/22 14:21	1
Percent Moisture (SM Moisture - 2540)	2.8		0.10	%			12/20/22 17:32	1
Percent Solids (SM Moisture - 2540)	97		0.10	%			12/20/22 17:32	1

Client Sample ID: S43599.19

Lab Sample ID: 190-30672-18

Date Collected: 12/15/22 10:42

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 96.4

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.5		0.19	mg/Kg	☼	01/03/23 07:53	01/04/23 17:12	2

Client Sample ID: S43599.19

Lab Sample ID: 190-30672-18

Date Collected: 12/15/22 10:42

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 97.2

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.1		5.1	mg/Kg	☼		12/28/22 22:45	1
Methanol	<2.0		2.0	mg/Kg	☼		12/28/22 22:45	1
n-Butanol	<5.1		5.1	mg/Kg	☼		12/28/22 22:45	1

Client Sample ID: S43599.20

Lab Sample ID: 190-30672-19

Date Collected: 12/15/22 10:52

Matrix: Solid

Date Received: 12/19/22 14:46

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	6.7		0.1	%			12/21/22 14:21	1
Percent Solids (EPA Moisture)	93.3		0.1	%			12/21/22 14:21	1
Percent Moisture (SM Moisture - 2540)	8.1		0.10	%			12/21/22 16:33	1
Percent Solids (SM Moisture - 2540)	92		0.10	%			12/21/22 16:33	1

Client Sample ID: S43599.20

Lab Sample ID: 190-30672-19

Date Collected: 12/15/22 10:52

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 91.9

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.4		5.4	mg/Kg	☼		12/28/22 23:06	1

Eurofins Michigan

Client Sample Results

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Client Sample ID: S43599.20

Lab Sample ID: 190-30672-19

Date Collected: 12/15/22 10:52

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 91.9

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	4.0		2.2	mg/Kg	☼		12/28/22 23:06	1
n-Butanol	<5.4		5.4	mg/Kg	☼		12/28/22 23:06	1

Client Sample ID: S43599.20

Lab Sample ID: 190-30672-19

Date Collected: 12/15/22 10:52

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 93.3

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.6		0.20	mg/Kg	☼	01/03/23 07:53	01/04/23 17:16	2

Client Sample ID: S43599.21

Lab Sample ID: 190-30672-20

Date Collected: 12/15/22 11:00

Matrix: Solid

Date Received: 12/19/22 14:46

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	8.7		0.1	%			12/21/22 14:21	1
Percent Solids (EPA Moisture)	91.3		0.1	%			12/21/22 14:21	1
Percent Moisture (SM Moisture - 2540)	8.4		0.10	%			12/21/22 16:33	1
Percent Solids (SM Moisture - 2540)	92		0.10	%			12/21/22 16:33	1

Client Sample ID: S43599.21

Lab Sample ID: 190-30672-20

Date Collected: 12/15/22 11:00

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 91.3

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.7		0.21	mg/Kg	☼	01/03/23 07:53	01/04/23 17:19	2

Client Sample ID: S43599.21

Lab Sample ID: 190-30672-20

Date Collected: 12/15/22 11:00

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 91.6

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.4		5.4	mg/Kg	☼		12/28/22 23:27	1
Methanol	3.9		2.2	mg/Kg	☼		12/28/22 23:27	1
n-Butanol	<5.4		5.4	mg/Kg	☼		12/28/22 23:27	1

Client Sample ID: S43599.22

Lab Sample ID: 190-30672-21

Date Collected: 12/15/22 11:00

Matrix: Solid

Date Received: 12/19/22 14:46

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	9.2		0.1	%			12/21/22 14:21	1
Percent Solids (EPA Moisture)	90.8		0.1	%			12/21/22 14:21	1
Percent Moisture (SM Moisture - 2540)	9.5		0.10	%			12/21/22 16:33	1

Eurofins Michigan

Client Sample Results

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Client Sample ID: S43599.22

Lab Sample ID: 190-30672-21

Date Collected: 12/15/22 11:00

Matrix: Solid

Date Received: 12/19/22 14:46

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM Moisture - 2540)	91		0.10	%			12/21/22 16:33	1

Client Sample ID: S43599.22

Lab Sample ID: 190-30672-21

Date Collected: 12/15/22 11:00

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 90.5

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.4		5.4	mg/Kg	☼		12/28/22 23:49	1
Methanol	3.0		2.2	mg/Kg	☼		12/28/22 23:49	1
n-Butanol	<5.4		5.4	mg/Kg	☼		12/28/22 23:49	1

Client Sample ID: S43599.22

Lab Sample ID: 190-30672-21

Date Collected: 12/15/22 11:00

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 90.8

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.8		0.20	mg/Kg	☼	01/03/23 07:53	01/04/23 17:23	2

Client Sample ID: S43599.23

Lab Sample ID: 190-30672-22

Date Collected: 12/15/22 11:16

Matrix: Solid

Date Received: 12/19/22 14:46

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	8.6		0.1	%			12/21/22 14:21	1
Percent Solids (EPA Moisture)	91.4		0.1	%			12/21/22 14:21	1
Percent Moisture (SM Moisture - 2540)	8.9		0.10	%			12/21/22 16:33	1
Percent Solids (SM Moisture - 2540)	91		0.10	%			12/21/22 16:33	1

Client Sample ID: S43599.23

Lab Sample ID: 190-30672-22

Date Collected: 12/15/22 11:16

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 91.1

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.4	F1	5.4	mg/Kg	☼		12/29/22 00:10	1
Methanol	3.6	F1	2.1	mg/Kg	☼		12/29/22 00:10	1
n-Butanol	<5.4	F1	5.4	mg/Kg	☼		12/29/22 00:10	1

Client Sample ID: S43599.23

Lab Sample ID: 190-30672-22

Date Collected: 12/15/22 11:16

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 91.4

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.2		0.19	mg/Kg	☼	01/03/23 07:53	01/04/23 17:26	2

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Client Sample Results

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Client Sample ID: S43599.24

Lab Sample ID: 190-30672-23

Date Collected: 12/15/22 00:01

Matrix: Solid

Date Received: 12/19/22 14:46

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	3.9		0.1	%			12/21/22 14:21	1
Percent Solids (EPA Moisture)	96.1		0.1	%			12/21/22 14:21	1
Percent Moisture (SM Moisture - 2540)	3.7		0.10	%			12/21/22 16:33	1
Percent Solids (SM Moisture - 2540)	96		0.10	%			12/21/22 16:33	1

Client Sample ID: S43599.24

Lab Sample ID: 190-30672-23

Date Collected: 12/15/22 00:01

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 96.1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.1		0.19	mg/Kg	☆	01/03/23 07:53	01/04/23 17:30	2

Client Sample ID: S43599.24

Lab Sample ID: 190-30672-23

Date Collected: 12/15/22 00:01

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 96.3

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.2		5.2	mg/Kg	☆		12/27/22 15:59	1
Methanol	<2.1		2.1	mg/Kg	☆		12/27/22 15:59	1
n-Butanol	<5.2		5.2	mg/Kg	☆		12/27/22 15:59	1

Client Sample ID: S43599.25

Lab Sample ID: 190-30672-24

Date Collected: 12/15/22 12:30

Matrix: Solid

Date Received: 12/19/22 14:46

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	4.8		0.1	%			12/21/22 14:21	1
Percent Solids (EPA Moisture)	95.2		0.1	%			12/21/22 14:21	1
Percent Moisture (SM Moisture - 2540)	5.9		0.10	%			12/21/22 16:33	1
Percent Solids (SM Moisture - 2540)	94		0.10	%			12/21/22 16:33	1

Client Sample ID: S43599.25

Lab Sample ID: 190-30672-24

Date Collected: 12/15/22 12:30

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 94.1

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.1		5.1	mg/Kg	☆		12/27/22 16:20	1
Methanol	<2.1		2.1	mg/Kg	☆		12/27/22 16:20	1
n-Butanol	<5.1		5.1	mg/Kg	☆		12/27/22 16:20	1

Client Sample Results

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Client Sample ID: S43599.25

Lab Sample ID: 190-30672-24

Date Collected: 12/15/22 12:30

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 95.2

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.0		0.19	mg/Kg	☼	01/03/23 07:56	01/04/23 17:50	2

Client Sample ID: S43599.26

Lab Sample ID: 190-30672-25

Date Collected: 12/15/22 12:35

Matrix: Solid

Date Received: 12/19/22 14:46

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	6.3		0.1	%			12/21/22 14:50	1
Percent Solids (EPA Moisture)	93.7		0.1	%			12/21/22 14:50	1
Percent Moisture (SM Moisture - 2540)	7.0		0.10	%			12/21/22 16:33	1
Percent Solids (SM Moisture - 2540)	93		0.10	%			12/21/22 16:33	1

Client Sample ID: S43599.26

Lab Sample ID: 190-30672-25

Date Collected: 12/15/22 12:35

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 93.0

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.4		5.4	mg/Kg	☼		12/29/22 19:21	1
Methanol	<2.2		2.2	mg/Kg	☼		12/29/22 19:21	1
n-Butanol	<5.4		5.4	mg/Kg	☼		12/29/22 19:21	1

Client Sample ID: S43599.26

Lab Sample ID: 190-30672-25

Date Collected: 12/15/22 12:35

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 93.7

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.2		0.18	mg/Kg	☼	01/03/23 07:56	01/04/23 18:07	2

Client Sample ID: S43599.27

Lab Sample ID: 190-30672-26

Date Collected: 12/15/22 12:45

Matrix: Solid

Date Received: 12/19/22 14:46

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	5.3		0.1	%			12/21/22 14:50	1
Percent Solids (EPA Moisture)	94.7		0.1	%			12/21/22 14:50	1
Percent Moisture (SM Moisture - 2540)	5.7		0.10	%			12/21/22 16:33	1
Percent Solids (SM Moisture - 2540)	94		0.10	%			12/21/22 16:33	1

Client Sample ID: S43599.27

Lab Sample ID: 190-30672-26

Date Collected: 12/15/22 12:45

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 94.3

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.2		5.2	mg/Kg	☼		12/27/22 17:02	1

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Client Sample Results

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Client Sample ID: S43599.27

Lab Sample ID: 190-30672-26

Date Collected: 12/15/22 12:45

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 94.3

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<2.1		2.1	mg/Kg	☼		12/27/22 17:02	1
n-Butanol	<5.2		5.2	mg/Kg	☼		12/27/22 17:02	1

Client Sample ID: S43599.27

Lab Sample ID: 190-30672-26

Date Collected: 12/15/22 12:45

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 94.7

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.1		0.18	mg/Kg	☼	01/03/23 07:56	01/04/23 18:11	2

Client Sample ID: S43599.28

Lab Sample ID: 190-30672-27

Date Collected: 12/15/22 12:45

Matrix: Solid

Date Received: 12/19/22 14:46

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	7.4		0.1	%			12/21/22 14:50	1
Percent Solids (EPA Moisture)	92.6		0.1	%			12/21/22 14:50	1
Percent Moisture (SM Moisture - 2540)	5.5		0.10	%			12/21/22 16:33	1
Percent Solids (SM Moisture - 2540)	95		0.10	%			12/21/22 16:33	1

Client Sample ID: S43599.28

Lab Sample ID: 190-30672-27

Date Collected: 12/15/22 12:45

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 92.6

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	0.96		0.20	mg/Kg	☼	01/03/23 07:56	01/04/23 18:14	2

Client Sample ID: S43599.28

Lab Sample ID: 190-30672-27

Date Collected: 12/15/22 12:45

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 94.5

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.1		5.1	mg/Kg	☼		12/27/22 17:23	1
Methanol	2.7		2.1	mg/Kg	☼		12/27/22 17:23	1
n-Butanol	<5.1		5.1	mg/Kg	☼		12/27/22 17:23	1

Client Sample ID: S43599.29

Lab Sample ID: 190-30672-28

Date Collected: 12/15/22 13:05

Matrix: Solid

Date Received: 12/19/22 14:46

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	7.9		0.1	%			12/21/22 14:50	1
Percent Solids (EPA Moisture)	92.1		0.1	%			12/21/22 14:50	1
Percent Moisture (SM Moisture - 2540)	7.6		0.10	%			12/21/22 16:33	1

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Client Sample Results

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Client Sample ID: S43599.29

Lab Sample ID: 190-30672-28

Date Collected: 12/15/22 13:05

Matrix: Solid

Date Received: 12/19/22 14:46

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM Moisture - 2540)	92		0.10	%			12/21/22 16:33	1

Client Sample ID: S43599.29

Lab Sample ID: 190-30672-28

Date Collected: 12/15/22 13:05

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 92.1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.5		0.19	mg/Kg	✱	01/03/23 07:56	01/04/23 18:18	2

Client Sample ID: S43599.29

Lab Sample ID: 190-30672-28

Date Collected: 12/15/22 13:05

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 92.4

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.2	F1	5.2	mg/Kg	✱		12/27/22 17:44	1
Methanol	<2.1	F1	2.1	mg/Kg	✱		12/27/22 17:44	1
n-Butanol	<5.2	F1	5.2	mg/Kg	✱		12/27/22 17:44	1

QC Sample Results

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Lab Sample ID: MB 680-756440/1-A
Matrix: Solid
Analysis Batch: 756844

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.0		5.0	mg/Kg			12/27/22 15:38	1
Methanol	<2.0		2.0	mg/Kg			12/27/22 15:38	1
n-Butanol	<5.0		5.0	mg/Kg			12/27/22 15:38	1

Lab Sample ID: LCS 680-756440/2-A
Matrix: Solid
Analysis Batch: 756844

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methanol	19.8	18.9		mg/Kg		95	59 - 153

Lab Sample ID: LCSD 680-756440/3-A
Matrix: Solid
Analysis Batch: 756844

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methanol	19.8	21.5		mg/Kg		109	59 - 153	13	50

Lab Sample ID: 190-30672-28 MS
Matrix: Solid
Analysis Batch: 756844

Client Sample ID: S43599.29
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Methanol	<2.1	F1	20.6	<2.1	F1	mg/Kg	✱	0	59 - 153

Lab Sample ID: 190-30672-28 MSD
Matrix: Solid
Analysis Batch: 756844

Client Sample ID: S43599.29
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methanol	<2.1	F1	20.6	<2.1	F1	mg/Kg	✱	0	59 - 153	NC	50

Lab Sample ID: MB 680-756439/1-A
Matrix: Solid
Analysis Batch: 757056

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<5.0		5.0	mg/Kg			12/28/22 17:01	1
Methanol	<2.0		2.0	mg/Kg			12/28/22 17:01	1
n-Butanol	<5.0		5.0	mg/Kg			12/28/22 17:01	1

Lab Sample ID: LCS 680-756439/2-A
Matrix: Solid
Analysis Batch: 757056

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methanol	19.5	17.6		mg/Kg		90	59 - 153

QC Sample Results

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection) (Continued)

Lab Sample ID: LCSD 680-756439/3-A
Matrix: Solid
Analysis Batch: 757056

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methanol	19.7	18.1		mg/Kg		92	59 - 153	3	50

Lab Sample ID: 190-30672-22 MS
Matrix: Solid
Analysis Batch: 757056

Client Sample ID: S43599.23
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Methanol	3.6	F1	20.9	3.26	F1	mg/Kg	✱	-1	59 - 153

Lab Sample ID: 190-30672-22 MSD
Matrix: Solid
Analysis Batch: 757056

Client Sample ID: S43599.23
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methanol	3.6	F1	21.6	4.22	F1	mg/Kg	✱	3	59 - 153	26	50

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 160-595290/1-A
Matrix: Solid
Analysis Batch: 595520

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 595290

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<0.17		0.17	mg/Kg		01/03/23 07:53	01/04/23 15:43	2

Lab Sample ID: LCS 160-595290/2-A
Matrix: Solid
Analysis Batch: 595520

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 595290

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Thorium	85.7	88.9		mg/Kg		104	80 - 120

Lab Sample ID: 190-30672-1 MS
Matrix: Solid
Analysis Batch: 595520

Client Sample ID: S43599.01
Prep Type: Total/NA
Prep Batch: 595290

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Thorium	1.7		96.6	101		mg/Kg	✱	103	75 - 125

Lab Sample ID: 190-30672-1 MSD
Matrix: Solid
Analysis Batch: 595520

Client Sample ID: S43599.01
Prep Type: Total/NA
Prep Batch: 595290

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Thorium	1.7		108	116		mg/Kg	✱	106	75 - 125	14	30

QC Sample Results

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 160-595291/1-A
Matrix: Solid
Analysis Batch: 595520

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 595291

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<0.18		0.18	mg/Kg		01/03/23 07:56	01/04/23 17:33	2

Lab Sample ID: LCS 160-595291/2-A
Matrix: Solid
Analysis Batch: 595520

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 595291

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Thorium	96.9	99.9		mg/Kg		103	80 - 120

Lab Sample ID: 190-30672-24 MS
Matrix: Solid
Analysis Batch: 595520

Client Sample ID: S43599.25
Prep Type: Total/NA
Prep Batch: 595291

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Thorium	1.0		96.4	97.4		mg/Kg	⊛	100	75 - 125

Lab Sample ID: 190-30672-24 MSD
Matrix: Solid
Analysis Batch: 595520

Client Sample ID: S43599.25
Prep Type: Total/NA
Prep Batch: 595291

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Thorium	1.0		103	107		mg/Kg	⊛	102	75 - 125	9	30

Lab Sample ID: MB 160-596234/1-A
Matrix: Solid
Analysis Batch: 596409

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 596234

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<0.20		0.20	mg/Kg		01/10/23 08:01	01/10/23 12:52	2

Lab Sample ID: LCS 160-596234/2-A
Matrix: Solid
Analysis Batch: 596409

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 596234

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Thorium	84.7	87.8		mg/Kg		104	80 - 120

Method: Moisture - Percent Moisture

Lab Sample ID: 190-30672-1 DU
Matrix: Solid
Analysis Batch: 594463

Client Sample ID: S43599.01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	11.8		11.7		%		1	30
Percent Solids	88.2		88.3		%		0.2	30

QC Sample Results

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Method: Moisture - Percent Moisture (Continued)

Lab Sample ID: 190-30672-25 DU
Matrix: Solid
Analysis Batch: 594472

Client Sample ID: S43599.26
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Percent Moisture	6.3		6.4		%		1	30
Percent Solids	93.7		93.6		%		0.08	30

Method: Moisture - 2540 - Percent Moisture

Lab Sample ID: MB 680-756199/1
Matrix: Solid
Analysis Batch: 756199

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Percent Moisture	<0.10		0.10	%			12/20/22 17:32	1
Percent Solids	100		0.10	%			12/20/22 17:32	1

Lab Sample ID: 190-30672-2 DU
Matrix: Solid
Analysis Batch: 756199

Client Sample ID: S43599.02
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Percent Moisture	7.7		8.0		%		4	5
Percent Solids	92		92		%		0.3	

Lab Sample ID: MB 680-756412/1
Matrix: Solid
Analysis Batch: 756412

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Percent Moisture	<0.10		0.10	%			12/21/22 16:33	1
Percent Solids	100		0.10	%			12/21/22 16:33	1

Lab Sample ID: 190-30672-22 DU
Matrix: Solid
Analysis Batch: 756412

Client Sample ID: S43599.23
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Percent Moisture	8.9		9.3		%		4	5
Percent Solids	91		91		%		0.4	

Definitions/Glossary

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Association Summary

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

GC Semi VOA

Leach Batch: 756439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30672-1	S43599.01	Soluble	Solid	DI Leach	
190-30672-2	S43599.02	Soluble	Solid	DI Leach	
190-30672-3	S43599.03	Soluble	Solid	DI Leach	
190-30672-4	S43599.04	Soluble	Solid	DI Leach	
190-30672-5	S43599.05	Soluble	Solid	DI Leach	
190-30672-6	S43599.06	Soluble	Solid	DI Leach	
190-30672-7	S43599.07	Soluble	Solid	DI Leach	
190-30672-8	S43599.08	Soluble	Solid	DI Leach	
190-30672-9	S43599.09	Soluble	Solid	DI Leach	
190-30672-10	S43599.10	Soluble	Solid	DI Leach	
190-30672-13	S43599.14	Soluble	Solid	DI Leach	
190-30672-14	S43599.15	Soluble	Solid	DI Leach	
190-30672-15	S43599.16	Soluble	Solid	DI Leach	
190-30672-16	S43599.17	Soluble	Solid	DI Leach	
190-30672-17	S43599.18	Soluble	Solid	DI Leach	
190-30672-18	S43599.19	Soluble	Solid	DI Leach	
190-30672-19	S43599.20	Soluble	Solid	DI Leach	
190-30672-20	S43599.21	Soluble	Solid	DI Leach	
190-30672-21	S43599.22	Soluble	Solid	DI Leach	
190-30672-22	S43599.23	Soluble	Solid	DI Leach	
MB 680-756439/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 680-756439/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 680-756439/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
190-30672-22 MS	S43599.23	Soluble	Solid	DI Leach	
190-30672-22 MSD	S43599.23	Soluble	Solid	DI Leach	

Leach Batch: 756440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30672-23	S43599.24	Soluble	Solid	DI Leach	
190-30672-24	S43599.25	Soluble	Solid	DI Leach	
190-30672-25	S43599.26	Soluble	Solid	DI Leach	
190-30672-26	S43599.27	Soluble	Solid	DI Leach	
190-30672-27	S43599.28	Soluble	Solid	DI Leach	
190-30672-28	S43599.29	Soluble	Solid	DI Leach	
MB 680-756440/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 680-756440/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 680-756440/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
190-30672-28 MS	S43599.29	Soluble	Solid	DI Leach	
190-30672-28 MSD	S43599.29	Soluble	Solid	DI Leach	

Analysis Batch: 756844

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30672-23	S43599.24	Soluble	Solid	8015C	756440
190-30672-24	S43599.25	Soluble	Solid	8015C	756440
190-30672-26	S43599.27	Soluble	Solid	8015C	756440
190-30672-27	S43599.28	Soluble	Solid	8015C	756440
190-30672-28	S43599.29	Soluble	Solid	8015C	756440
MB 680-756440/1-A	Method Blank	Soluble	Solid	8015C	756440
LCS 680-756440/2-A	Lab Control Sample	Soluble	Solid	8015C	756440
LCSD 680-756440/3-A	Lab Control Sample Dup	Soluble	Solid	8015C	756440
190-30672-28 MS	S43599.29	Soluble	Solid	8015C	756440

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QC Association Summary

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

GC Semi VOA (Continued)

Analysis Batch: 756844 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30672-28 MSD	S43599.29	Soluble	Solid	8015C	756440

Analysis Batch: 757056

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30672-1	S43599.01	Soluble	Solid	8015C	756439
190-30672-2	S43599.02	Soluble	Solid	8015C	756439
190-30672-3	S43599.03	Soluble	Solid	8015C	756439
190-30672-4	S43599.04	Soluble	Solid	8015C	756439
190-30672-5	S43599.05	Soluble	Solid	8015C	756439
190-30672-6	S43599.06	Soluble	Solid	8015C	756439
190-30672-7	S43599.07	Soluble	Solid	8015C	756439
190-30672-8	S43599.08	Soluble	Solid	8015C	756439
190-30672-9	S43599.09	Soluble	Solid	8015C	756439
190-30672-10	S43599.10	Soluble	Solid	8015C	756439
190-30672-13	S43599.14	Soluble	Solid	8015C	756439
190-30672-14	S43599.15	Soluble	Solid	8015C	756439
190-30672-15	S43599.16	Soluble	Solid	8015C	756439
190-30672-16	S43599.17	Soluble	Solid	8015C	756439
190-30672-17	S43599.18	Soluble	Solid	8015C	756439
190-30672-18	S43599.19	Soluble	Solid	8015C	756439
190-30672-19	S43599.20	Soluble	Solid	8015C	756439
190-30672-20	S43599.21	Soluble	Solid	8015C	756439
190-30672-21	S43599.22	Soluble	Solid	8015C	756439
190-30672-22	S43599.23	Soluble	Solid	8015C	756439
MB 680-756439/1-A	Method Blank	Soluble	Solid	8015C	756439
LCS 680-756439/2-A	Lab Control Sample	Soluble	Solid	8015C	756439
LCSD 680-756439/3-A	Lab Control Sample Dup	Soluble	Solid	8015C	756439
190-30672-22 MS	S43599.23	Soluble	Solid	8015C	756439
190-30672-22 MSD	S43599.23	Soluble	Solid	8015C	756439

Analysis Batch: 757245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30672-25	S43599.26	Soluble	Solid	8015C	756440

Metals

Prep Batch: 595290

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30672-1	S43599.01	Total/NA	Solid	3050B	
190-30672-2	S43599.02	Total/NA	Solid	3050B	
190-30672-3	S43599.03	Total/NA	Solid	3050B	
190-30672-4	S43599.04	Total/NA	Solid	3050B	
190-30672-5	S43599.05	Total/NA	Solid	3050B	
190-30672-6	S43599.06	Total/NA	Solid	3050B	
190-30672-7	S43599.07	Total/NA	Solid	3050B	
190-30672-8	S43599.08	Total/NA	Solid	3050B	
190-30672-9	S43599.09	Total/NA	Solid	3050B	
190-30672-10	S43599.10	Total/NA	Solid	3050B	
190-30672-13	S43599.14	Total/NA	Solid	3050B	
190-30672-14	S43599.15	Total/NA	Solid	3050B	
190-30672-17	S43599.18	Total/NA	Solid	3050B	

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QC Association Summary

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Metals (Continued)

Prep Batch: 595290 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30672-18	S43599.19	Total/NA	Solid	3050B	
190-30672-19	S43599.20	Total/NA	Solid	3050B	
190-30672-20	S43599.21	Total/NA	Solid	3050B	
190-30672-21	S43599.22	Total/NA	Solid	3050B	
190-30672-22	S43599.23	Total/NA	Solid	3050B	
190-30672-23	S43599.24	Total/NA	Solid	3050B	
MB 160-595290/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 160-595290/2-A	Lab Control Sample	Total/NA	Solid	3050B	
190-30672-1 MS	S43599.01	Total/NA	Solid	3050B	
190-30672-1 MSD	S43599.01	Total/NA	Solid	3050B	

Prep Batch: 595291

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30672-24	S43599.25	Total/NA	Solid	3050B	
190-30672-25	S43599.26	Total/NA	Solid	3050B	
190-30672-26	S43599.27	Total/NA	Solid	3050B	
190-30672-27	S43599.28	Total/NA	Solid	3050B	
190-30672-28	S43599.29	Total/NA	Solid	3050B	
MB 160-595291/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 160-595291/2-A	Lab Control Sample	Total/NA	Solid	3050B	
190-30672-24 MS	S43599.25	Total/NA	Solid	3050B	
190-30672-24 MSD	S43599.25	Total/NA	Solid	3050B	

Analysis Batch: 595520

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30672-1	S43599.01	Total/NA	Solid	6020B	595290
190-30672-2	S43599.02	Total/NA	Solid	6020B	595290
190-30672-3	S43599.03	Total/NA	Solid	6020B	595290
190-30672-4	S43599.04	Total/NA	Solid	6020B	595290
190-30672-5	S43599.05	Total/NA	Solid	6020B	595290
190-30672-6	S43599.06	Total/NA	Solid	6020B	595290
190-30672-7	S43599.07	Total/NA	Solid	6020B	595290
190-30672-8	S43599.08	Total/NA	Solid	6020B	595290
190-30672-9	S43599.09	Total/NA	Solid	6020B	595290
190-30672-10	S43599.10	Total/NA	Solid	6020B	595290
190-30672-13	S43599.14	Total/NA	Solid	6020B	595290
190-30672-14	S43599.15	Total/NA	Solid	6020B	595290
190-30672-17	S43599.18	Total/NA	Solid	6020B	595290
190-30672-18	S43599.19	Total/NA	Solid	6020B	595290
190-30672-19	S43599.20	Total/NA	Solid	6020B	595290
190-30672-20	S43599.21	Total/NA	Solid	6020B	595290
190-30672-21	S43599.22	Total/NA	Solid	6020B	595290
190-30672-22	S43599.23	Total/NA	Solid	6020B	595290
190-30672-23	S43599.24	Total/NA	Solid	6020B	595290
190-30672-24	S43599.25	Total/NA	Solid	6020B	595291
190-30672-25	S43599.26	Total/NA	Solid	6020B	595291
190-30672-26	S43599.27	Total/NA	Solid	6020B	595291
190-30672-27	S43599.28	Total/NA	Solid	6020B	595291
190-30672-28	S43599.29	Total/NA	Solid	6020B	595291
MB 160-595290/1-A	Method Blank	Total/NA	Solid	6020B	595290
MB 160-595291/1-A	Method Blank	Total/NA	Solid	6020B	595291

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QC Association Summary

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Metals (Continued)

Analysis Batch: 595520 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 160-595290/2-A	Lab Control Sample	Total/NA	Solid	6020B	595290
LCS 160-595291/2-A	Lab Control Sample	Total/NA	Solid	6020B	595291
190-30672-1 MS	S43599.01	Total/NA	Solid	6020B	595290
190-30672-1 MSD	S43599.01	Total/NA	Solid	6020B	595290
190-30672-24 MS	S43599.25	Total/NA	Solid	6020B	595291
190-30672-24 MSD	S43599.25	Total/NA	Solid	6020B	595291

Prep Batch: 596234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30672-15	S43599.16	Total/NA	Solid	3050B	
MB 160-596234/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 160-596234/2-A	Lab Control Sample	Total/NA	Solid	3050B	

Analysis Batch: 596409

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30672-15	S43599.16	Total/NA	Solid	6020B	596234
MB 160-596234/1-A	Method Blank	Total/NA	Solid	6020B	596234
LCS 160-596234/2-A	Lab Control Sample	Total/NA	Solid	6020B	596234

General Chemistry

Analysis Batch: 594463

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30672-1	S43599.01	Total/NA	Solid	Moisture	
190-30672-2	S43599.02	Total/NA	Solid	Moisture	
190-30672-3	S43599.03	Total/NA	Solid	Moisture	
190-30672-4	S43599.04	Total/NA	Solid	Moisture	
190-30672-5	S43599.05	Total/NA	Solid	Moisture	
190-30672-6	S43599.06	Total/NA	Solid	Moisture	
190-30672-7	S43599.07	Total/NA	Solid	Moisture	
190-30672-8	S43599.08	Total/NA	Solid	Moisture	
190-30672-9	S43599.09	Total/NA	Solid	Moisture	
190-30672-10	S43599.10	Total/NA	Solid	Moisture	
190-30672-13	S43599.14	Total/NA	Solid	Moisture	
190-30672-14	S43599.15	Total/NA	Solid	Moisture	
190-30672-17	S43599.18	Total/NA	Solid	Moisture	
190-30672-18	S43599.19	Total/NA	Solid	Moisture	
190-30672-19	S43599.20	Total/NA	Solid	Moisture	
190-30672-20	S43599.21	Total/NA	Solid	Moisture	
190-30672-21	S43599.22	Total/NA	Solid	Moisture	
190-30672-22	S43599.23	Total/NA	Solid	Moisture	
190-30672-23	S43599.24	Total/NA	Solid	Moisture	
190-30672-24	S43599.25	Total/NA	Solid	Moisture	
190-30672-1 DU	S43599.01	Total/NA	Solid	Moisture	

Analysis Batch: 594472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30672-25	S43599.26	Total/NA	Solid	Moisture	
190-30672-26	S43599.27	Total/NA	Solid	Moisture	
190-30672-27	S43599.28	Total/NA	Solid	Moisture	
190-30672-28	S43599.29	Total/NA	Solid	Moisture	

Eurofins Michigan

QC Association Summary

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

General Chemistry (Continued)

Analysis Batch: 594472 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30672-25 DU	S43599.26	Total/NA	Solid	Moisture	

Analysis Batch: 596162

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30672-15	S43599.16	Total/NA	Solid	Moisture	

Analysis Batch: 756199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30672-1	S43599.01	Total/NA	Solid	Moisture - 2540	
190-30672-2	S43599.02	Total/NA	Solid	Moisture - 2540	
190-30672-3	S43599.03	Total/NA	Solid	Moisture - 2540	
190-30672-4	S43599.04	Total/NA	Solid	Moisture - 2540	
190-30672-5	S43599.05	Total/NA	Solid	Moisture - 2540	
190-30672-6	S43599.06	Total/NA	Solid	Moisture - 2540	
190-30672-7	S43599.07	Total/NA	Solid	Moisture - 2540	
190-30672-8	S43599.08	Total/NA	Solid	Moisture - 2540	
190-30672-9	S43599.09	Total/NA	Solid	Moisture - 2540	
190-30672-10	S43599.10	Total/NA	Solid	Moisture - 2540	
190-30672-13	S43599.14	Total/NA	Solid	Moisture - 2540	
190-30672-14	S43599.15	Total/NA	Solid	Moisture - 2540	
190-30672-15	S43599.16	Total/NA	Solid	Moisture - 2540	
190-30672-16	S43599.17	Total/NA	Solid	Moisture - 2540	
190-30672-17	S43599.18	Total/NA	Solid	Moisture - 2540	
190-30672-18	S43599.19	Total/NA	Solid	Moisture - 2540	
MB 680-756199/1	Method Blank	Total/NA	Solid	Moisture - 2540	
190-30672-2 DU	S43599.02	Total/NA	Solid	Moisture - 2540	

Analysis Batch: 756412

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30672-19	S43599.20	Total/NA	Solid	Moisture - 2540	
190-30672-20	S43599.21	Total/NA	Solid	Moisture - 2540	
190-30672-21	S43599.22	Total/NA	Solid	Moisture - 2540	
190-30672-22	S43599.23	Total/NA	Solid	Moisture - 2540	
190-30672-23	S43599.24	Total/NA	Solid	Moisture - 2540	
190-30672-24	S43599.25	Total/NA	Solid	Moisture - 2540	
190-30672-25	S43599.26	Total/NA	Solid	Moisture - 2540	
190-30672-26	S43599.27	Total/NA	Solid	Moisture - 2540	
190-30672-27	S43599.28	Total/NA	Solid	Moisture - 2540	
190-30672-28	S43599.29	Total/NA	Solid	Moisture - 2540	
MB 680-756412/1	Method Blank	Total/NA	Solid	Moisture - 2540	
190-30672-22 DU	S43599.23	Total/NA	Solid	Moisture - 2540	

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Client Sample ID: S43599.01

Lab Sample ID: 190-30672-1

Date Collected: 12/15/22 09:10

Matrix: Solid

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594463	JML	EET SL	12/21/22 14:21
Total/NA	Analysis	Moisture - 2540		1	756199	PG	EET SAV	12/20/22 17:32

Client Sample ID: S43599.01

Lab Sample ID: 190-30672-1

Date Collected: 12/15/22 09:10

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 86.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			756439	GEM	EET SAV	12/21/22 19:54
Soluble	Analysis	8015C		1	757056	GEM	EET SAV	12/28/22 17:23

Client Sample ID: S43599.01

Lab Sample ID: 190-30672-1

Date Collected: 12/15/22 09:10

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 88.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595290	LKP	EET SL	01/03/23 07:53
Total/NA	Analysis	6020B		2	595520	CGB	EET SL	01/04/23 15:50

Client Sample ID: S43599.02

Lab Sample ID: 190-30672-2

Date Collected: 12/15/22 09:20

Matrix: Solid

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594463	JML	EET SL	12/21/22 14:21
Total/NA	Analysis	Moisture - 2540		1	756199	PG	EET SAV	12/20/22 17:32

Client Sample ID: S43599.02

Lab Sample ID: 190-30672-2

Date Collected: 12/15/22 09:20

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 91.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595290	LKP	EET SL	01/03/23 07:53
Total/NA	Analysis	6020B		2	595520	CGB	EET SL	01/04/23 16:07

Client Sample ID: S43599.02

Lab Sample ID: 190-30672-2

Date Collected: 12/15/22 09:20

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 92.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			756439	GEM	EET SAV	12/21/22 19:54
Soluble	Analysis	8015C		1	757056	GEM	EET SAV	12/28/22 17:44

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Client Sample ID: S43599.03

Lab Sample ID: 190-30672-3

Date Collected: 12/15/22 10:40

Matrix: Solid

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594463	JML	EET SL	12/21/22 14:21
Total/NA	Analysis	Moisture - 2540		1	756199	PG	EET SAV	12/20/22 17:32

Client Sample ID: S43599.03

Lab Sample ID: 190-30672-3

Date Collected: 12/15/22 10:40

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 89.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595290	LKP	EET SL	01/03/23 07:53
Total/NA	Analysis	6020B		2	595520	CGB	EET SL	01/04/23 16:21

Client Sample ID: S43599.03

Lab Sample ID: 190-30672-3

Date Collected: 12/15/22 10:40

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 91.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			756439	GEM	EET SAV	12/21/22 19:54
Soluble	Analysis	8015C		1	757056	GEM	EET SAV	12/28/22 18:06

Client Sample ID: S43599.04

Lab Sample ID: 190-30672-4

Date Collected: 12/15/22 10:50

Matrix: Solid

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594463	JML	EET SL	12/21/22 14:21
Total/NA	Analysis	Moisture - 2540		1	756199	PG	EET SAV	12/20/22 17:32

Client Sample ID: S43599.04

Lab Sample ID: 190-30672-4

Date Collected: 12/15/22 10:50

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 89.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			756439	GEM	EET SAV	12/21/22 19:54
Soluble	Analysis	8015C		1	757056	GEM	EET SAV	12/28/22 18:27

Client Sample ID: S43599.04

Lab Sample ID: 190-30672-4

Date Collected: 12/15/22 10:50

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 95.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595290	LKP	EET SL	01/03/23 07:53
Total/NA	Analysis	6020B		2	595520	CGB	EET SL	01/04/23 16:24

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Client Sample ID: S43599.05

Lab Sample ID: 190-30672-5

Date Collected: 12/15/22 12:50

Matrix: Solid

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594463	JML	EET SL	12/21/22 14:21
Total/NA	Analysis	Moisture - 2540		1	756199	PG	EET SAV	12/20/22 17:32

Client Sample ID: S43599.05

Lab Sample ID: 190-30672-5

Date Collected: 12/15/22 12:50

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 94.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			756439	GEM	EET SAV	12/21/22 19:54
Soluble	Analysis	8015C		1	757056	GEM	EET SAV	12/28/22 18:49

Client Sample ID: S43599.05

Lab Sample ID: 190-30672-5

Date Collected: 12/15/22 12:50

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 94.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595290	LKP	EET SL	01/03/23 07:53
Total/NA	Analysis	6020B		2	595520	CGB	EET SL	01/04/23 16:28

Client Sample ID: S43599.06

Lab Sample ID: 190-30672-6

Date Collected: 12/15/22 13:00

Matrix: Solid

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594463	JML	EET SL	12/21/22 14:21
Total/NA	Analysis	Moisture - 2540		1	756199	PG	EET SAV	12/20/22 17:32

Client Sample ID: S43599.06

Lab Sample ID: 190-30672-6

Date Collected: 12/15/22 13:00

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 94.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			756439	GEM	EET SAV	12/21/22 19:54
Soluble	Analysis	8015C		1	757056	GEM	EET SAV	12/28/22 19:10
Total/NA	Prep	3050B			595290	LKP	EET SL	01/03/23 07:53
Total/NA	Analysis	6020B		2	595520	CGB	EET SL	01/04/23 16:31

Client Sample ID: S43599.07

Lab Sample ID: 190-30672-7

Date Collected: 12/15/22 14:30

Matrix: Solid

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594463	JML	EET SL	12/21/22 14:21
Total/NA	Analysis	Moisture - 2540		1	756199	PG	EET SAV	12/20/22 17:32

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Client Sample ID: S43599.07

Lab Sample ID: 190-30672-7

Date Collected: 12/15/22 14:30

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 92.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			756439	GEM	EET SAV	12/21/22 19:54
Soluble	Analysis	8015C		1	757056	GEM	EET SAV	12/28/22 19:32

Client Sample ID: S43599.07

Lab Sample ID: 190-30672-7

Date Collected: 12/15/22 14:30

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 94.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595290	LKP	EET SL	01/03/23 07:53
Total/NA	Analysis	6020B		2	595520	CGB	EET SL	01/04/23 16:35

Client Sample ID: S43599.08

Lab Sample ID: 190-30672-8

Date Collected: 12/15/22 15:10

Matrix: Solid

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594463	JML	EET SL	12/21/22 14:21
Total/NA	Analysis	Moisture - 2540		1	756199	PG	EET SAV	12/20/22 17:32

Client Sample ID: S43599.08

Lab Sample ID: 190-30672-8

Date Collected: 12/15/22 15:10

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 83.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			756439	GEM	EET SAV	12/21/22 19:54
Soluble	Analysis	8015C		1	757056	GEM	EET SAV	12/28/22 19:53

Client Sample ID: S43599.08

Lab Sample ID: 190-30672-8

Date Collected: 12/15/22 15:10

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 85.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595290	LKP	EET SL	01/03/23 07:53
Total/NA	Analysis	6020B		2	595520	CGB	EET SL	01/04/23 16:38

Client Sample ID: S43599.09

Lab Sample ID: 190-30672-9

Date Collected: 12/15/22 08:10

Matrix: Solid

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594463	JML	EET SL	12/21/22 14:21
Total/NA	Analysis	Moisture - 2540		1	756199	PG	EET SAV	12/20/22 17:32

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Client Sample ID: S43599.09

Lab Sample ID: 190-30672-9

Date Collected: 12/15/22 08:10

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 91.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			756439	GEM	EET SAV	12/21/22 19:54
Soluble	Analysis	8015C		1	757056	GEM	EET SAV	12/28/22 20:15

Client Sample ID: S43599.09

Lab Sample ID: 190-30672-9

Date Collected: 12/15/22 08:10

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 92.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595290	LKP	EET SL	01/03/23 07:53
Total/NA	Analysis	6020B		2	595520	CGB	EET SL	01/04/23 16:42

Client Sample ID: S43599.10

Lab Sample ID: 190-30672-10

Date Collected: 12/15/22 08:20

Matrix: Solid

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594463	JML	EET SL	12/21/22 14:21
Total/NA	Analysis	Moisture - 2540		1	756199	PG	EET SAV	12/20/22 17:32

Client Sample ID: S43599.10

Lab Sample ID: 190-30672-10

Date Collected: 12/15/22 08:20

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 88.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			756439	GEM	EET SAV	12/21/22 19:54
Soluble	Analysis	8015C		1	757056	GEM	EET SAV	12/28/22 20:36

Client Sample ID: S43599.10

Lab Sample ID: 190-30672-10

Date Collected: 12/15/22 08:20

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 89.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595290	LKP	EET SL	01/03/23 07:53
Total/NA	Analysis	6020B		2	595520	CGB	EET SL	01/04/23 16:45

Client Sample ID: S43599.14

Lab Sample ID: 190-30672-13

Date Collected: 12/15/22 09:07

Matrix: Solid

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594463	JML	EET SL	12/21/22 14:21
Total/NA	Analysis	Moisture - 2540		1	756199	PG	EET SAV	12/20/22 17:32

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Client Sample ID: S43599.14

Lab Sample ID: 190-30672-13

Date Collected: 12/15/22 09:07

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 83.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595290	LKP	EET SL	01/03/23 07:53
Total/NA	Analysis	6020B		2	595520	CGB	EET SL	01/04/23 16:52

Client Sample ID: S43599.14

Lab Sample ID: 190-30672-13

Date Collected: 12/15/22 09:07

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 88.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			756439	GEM	EET SAV	12/21/22 19:54
Soluble	Analysis	8015C		1	757056	GEM	EET SAV	12/28/22 20:58

Client Sample ID: S43599.15

Lab Sample ID: 190-30672-14

Date Collected: 12/15/22 09:21

Matrix: Solid

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594463	JML	EET SL	12/21/22 14:21
Total/NA	Analysis	Moisture - 2540		1	756199	PG	EET SAV	12/20/22 17:32

Client Sample ID: S43599.15

Lab Sample ID: 190-30672-14

Date Collected: 12/15/22 09:21

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 87.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			756439	GEM	EET SAV	12/21/22 19:54
Soluble	Analysis	8015C		1	757056	GEM	EET SAV	12/28/22 21:19

Client Sample ID: S43599.15

Lab Sample ID: 190-30672-14

Date Collected: 12/15/22 09:21

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 87.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595290	LKP	EET SL	01/03/23 07:53
Total/NA	Analysis	6020B		2	595520	CGB	EET SL	01/04/23 17:06

Client Sample ID: S43599.16

Lab Sample ID: 190-30672-15

Date Collected: 12/15/22 09:27

Matrix: Solid

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	596162	SRE	EET SL	01/09/23 16:16
Total/NA	Analysis	Moisture - 2540		1	756199	PG	EET SAV	12/20/22 17:32

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Client Sample ID: S43599.16

Lab Sample ID: 190-30672-15

Date Collected: 12/15/22 09:27

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 64.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			596234	LKP	EET SL	01/10/23 08:01
Total/NA	Analysis	6020B		2	596409	CGB	EET SL	01/10/23 13:51

Client Sample ID: S43599.16

Lab Sample ID: 190-30672-15

Date Collected: 12/15/22 09:27

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 86.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			756439	GEM	EET SAV	12/21/22 19:54
Soluble	Analysis	8015C		1	757056	GEM	EET SAV	12/28/22 21:40

Client Sample ID: S43599.17

Lab Sample ID: 190-30672-16

Date Collected: 12/15/22 10:00

Matrix: Solid

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture - 2540		1	756199	PG	EET SAV	12/20/22 17:32

Client Sample ID: S43599.17

Lab Sample ID: 190-30672-16

Date Collected: 12/15/22 10:00

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 85.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			756439	GEM	EET SAV	12/21/22 19:54
Soluble	Analysis	8015C		1	757056	GEM	EET SAV	12/28/22 22:02

Client Sample ID: S43599.18

Lab Sample ID: 190-30672-17

Date Collected: 12/15/22 00:01

Matrix: Solid

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594463	JML	EET SL	12/21/22 14:21
Total/NA	Analysis	Moisture - 2540		1	756199	PG	EET SAV	12/20/22 17:32

Client Sample ID: S43599.18

Lab Sample ID: 190-30672-17

Date Collected: 12/15/22 00:01

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 90.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			756439	GEM	EET SAV	12/21/22 19:54
Soluble	Analysis	8015C		1	757056	GEM	EET SAV	12/28/22 22:23

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Client Sample ID: S43599.18

Lab Sample ID: 190-30672-17

Date Collected: 12/15/22 00:01

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 90.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595290	LKP	EET SL	01/03/23 07:53
Total/NA	Analysis	6020B		2	595520	CGB	EET SL	01/04/23 17:09

Client Sample ID: S43599.19

Lab Sample ID: 190-30672-18

Date Collected: 12/15/22 10:42

Matrix: Solid

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594463	JML	EET SL	12/21/22 14:21
Total/NA	Analysis	Moisture - 2540		1	756199	PG	EET SAV	12/20/22 17:32

Client Sample ID: S43599.19

Lab Sample ID: 190-30672-18

Date Collected: 12/15/22 10:42

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 96.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595290	LKP	EET SL	01/03/23 07:53
Total/NA	Analysis	6020B		2	595520	CGB	EET SL	01/04/23 17:12

Client Sample ID: S43599.19

Lab Sample ID: 190-30672-18

Date Collected: 12/15/22 10:42

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 97.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			756439	GEM	EET SAV	12/21/22 19:54
Soluble	Analysis	8015C		1	757056	GEM	EET SAV	12/28/22 22:45

Client Sample ID: S43599.20

Lab Sample ID: 190-30672-19

Date Collected: 12/15/22 10:52

Matrix: Solid

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594463	JML	EET SL	12/21/22 14:21
Total/NA	Analysis	Moisture - 2540		1	756412	PG	EET SAV	12/21/22 16:33

Client Sample ID: S43599.20

Lab Sample ID: 190-30672-19

Date Collected: 12/15/22 10:52

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 91.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			756439	GEM	EET SAV	12/21/22 19:54
Soluble	Analysis	8015C		1	757056	GEM	EET SAV	12/28/22 23:06

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Client Sample ID: S43599.20

Lab Sample ID: 190-30672-19

Date Collected: 12/15/22 10:52

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 93.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595290	LKP	EET SL	01/03/23 07:53
Total/NA	Analysis	6020B		2	595520	CGB	EET SL	01/04/23 17:16

Client Sample ID: S43599.21

Lab Sample ID: 190-30672-20

Date Collected: 12/15/22 11:00

Matrix: Solid

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594463	JML	EET SL	12/21/22 14:21
Total/NA	Analysis	Moisture - 2540		1	756412	PG	EET SAV	12/21/22 16:33

Client Sample ID: S43599.21

Lab Sample ID: 190-30672-20

Date Collected: 12/15/22 11:00

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 91.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595290	LKP	EET SL	01/03/23 07:53
Total/NA	Analysis	6020B		2	595520	CGB	EET SL	01/04/23 17:19

Client Sample ID: S43599.21

Lab Sample ID: 190-30672-20

Date Collected: 12/15/22 11:00

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 91.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			756439	GEM	EET SAV	12/21/22 19:54
Soluble	Analysis	8015C		1	757056	GEM	EET SAV	12/28/22 23:27

Client Sample ID: S43599.22

Lab Sample ID: 190-30672-21

Date Collected: 12/15/22 11:00

Matrix: Solid

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594463	JML	EET SL	12/21/22 14:21
Total/NA	Analysis	Moisture - 2540		1	756412	PG	EET SAV	12/21/22 16:33

Client Sample ID: S43599.22

Lab Sample ID: 190-30672-21

Date Collected: 12/15/22 11:00

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 90.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			756439	GEM	EET SAV	12/21/22 19:54
Soluble	Analysis	8015C		1	757056	GEM	EET SAV	12/28/22 23:49

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Client Sample ID: S43599.22

Lab Sample ID: 190-30672-21

Date Collected: 12/15/22 11:00

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 90.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595290	LKP	EET SL	01/03/23 07:53
Total/NA	Analysis	6020B		2	595520	CGB	EET SL	01/04/23 17:23

Client Sample ID: S43599.23

Lab Sample ID: 190-30672-22

Date Collected: 12/15/22 11:16

Matrix: Solid

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594463	JML	EET SL	12/21/22 14:21
Total/NA	Analysis	Moisture - 2540		1	756412	PG	EET SAV	12/21/22 16:33

Client Sample ID: S43599.23

Lab Sample ID: 190-30672-22

Date Collected: 12/15/22 11:16

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 91.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			756439	GEM	EET SAV	12/21/22 19:54
Soluble	Analysis	8015C		1	757056	GEM	EET SAV	12/29/22 00:10

Client Sample ID: S43599.23

Lab Sample ID: 190-30672-22

Date Collected: 12/15/22 11:16

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 91.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595290	LKP	EET SL	01/03/23 07:53
Total/NA	Analysis	6020B		2	595520	CGB	EET SL	01/04/23 17:26

Client Sample ID: S43599.24

Lab Sample ID: 190-30672-23

Date Collected: 12/15/22 00:01

Matrix: Solid

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594463	JML	EET SL	12/21/22 14:21
Total/NA	Analysis	Moisture - 2540		1	756412	PG	EET SAV	12/21/22 16:33

Client Sample ID: S43599.24

Lab Sample ID: 190-30672-23

Date Collected: 12/15/22 00:01

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 96.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595290	LKP	EET SL	01/03/23 07:53
Total/NA	Analysis	6020B		2	595520	CGB	EET SL	01/04/23 17:30

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Client Sample ID: S43599.24

Lab Sample ID: 190-30672-23

Date Collected: 12/15/22 00:01

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 96.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			756440	GEM	EET SAV	12/21/22 19:59
Soluble	Analysis	8015C		1	756844	JCK	EET SAV	12/27/22 15:59

Client Sample ID: S43599.25

Lab Sample ID: 190-30672-24

Date Collected: 12/15/22 12:30

Matrix: Solid

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594463	JML	EET SL	12/21/22 14:21
Total/NA	Analysis	Moisture - 2540		1	756412	PG	EET SAV	12/21/22 16:33

Client Sample ID: S43599.25

Lab Sample ID: 190-30672-24

Date Collected: 12/15/22 12:30

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 94.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			756440	GEM	EET SAV	12/21/22 19:59
Soluble	Analysis	8015C		1	756844	JCK	EET SAV	12/27/22 16:20

Client Sample ID: S43599.25

Lab Sample ID: 190-30672-24

Date Collected: 12/15/22 12:30

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 95.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595291	LKP	EET SL	01/03/23 07:56
Total/NA	Analysis	6020B		2	595520	CGB	EET SL	01/04/23 17:50

Client Sample ID: S43599.26

Lab Sample ID: 190-30672-25

Date Collected: 12/15/22 12:35

Matrix: Solid

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594472	JML	EET SL	12/21/22 14:50
Total/NA	Analysis	Moisture - 2540		1	756412	PG	EET SAV	12/21/22 16:33

Client Sample ID: S43599.26

Lab Sample ID: 190-30672-25

Date Collected: 12/15/22 12:35

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 93.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			756440	GEM	EET SAV	12/21/22 19:59
Soluble	Analysis	8015C		1	757245	JCK	EET SAV	12/29/22 19:21

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Client Sample ID: S43599.26

Lab Sample ID: 190-30672-25

Date Collected: 12/15/22 12:35

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 93.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595291	LKP	EET SL	01/03/23 07:56
Total/NA	Analysis	6020B		2	595520	CGB	EET SL	01/04/23 18:07

Client Sample ID: S43599.27

Lab Sample ID: 190-30672-26

Date Collected: 12/15/22 12:45

Matrix: Solid

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594472	JML	EET SL	12/21/22 14:50
Total/NA	Analysis	Moisture - 2540		1	756412	PG	EET SAV	12/21/22 16:33

Client Sample ID: S43599.27

Lab Sample ID: 190-30672-26

Date Collected: 12/15/22 12:45

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 94.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			756440	GEM	EET SAV	12/21/22 19:59
Soluble	Analysis	8015C		1	756844	JCK	EET SAV	12/27/22 17:02

Client Sample ID: S43599.27

Lab Sample ID: 190-30672-26

Date Collected: 12/15/22 12:45

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 94.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595291	LKP	EET SL	01/03/23 07:56
Total/NA	Analysis	6020B		2	595520	CGB	EET SL	01/04/23 18:11

Client Sample ID: S43599.28

Lab Sample ID: 190-30672-27

Date Collected: 12/15/22 12:45

Matrix: Solid

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594472	JML	EET SL	12/21/22 14:50
Total/NA	Analysis	Moisture - 2540		1	756412	PG	EET SAV	12/21/22 16:33

Client Sample ID: S43599.28

Lab Sample ID: 190-30672-27

Date Collected: 12/15/22 12:45

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 92.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595291	LKP	EET SL	01/03/23 07:56
Total/NA	Analysis	6020B		2	595520	CGB	EET SL	01/04/23 18:14

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Client Sample ID: S43599.28

Lab Sample ID: 190-30672-27

Date Collected: 12/15/22 12:45

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 94.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			756440	GEM	EET SAV	12/21/22 19:59
Soluble	Analysis	8015C		1	756844	JCK	EET SAV	12/27/22 17:23

Client Sample ID: S43599.29

Lab Sample ID: 190-30672-28

Date Collected: 12/15/22 13:05

Matrix: Solid

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	594472	JML	EET SL	12/21/22 14:50
Total/NA	Analysis	Moisture - 2540		1	756412	PG	EET SAV	12/21/22 16:33

Client Sample ID: S43599.29

Lab Sample ID: 190-30672-28

Date Collected: 12/15/22 13:05

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 92.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			595291	LKP	EET SL	01/03/23 07:56
Total/NA	Analysis	6020B		2	595520	CGB	EET SL	01/04/23 18:18

Client Sample ID: S43599.29

Lab Sample ID: 190-30672-28

Date Collected: 12/15/22 13:05

Matrix: Solid

Date Received: 12/19/22 14:46

Percent Solids: 92.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			756440	GEM	EET SAV	12/21/22 19:59
Soluble	Analysis	8015C		1	756844	JCK	EET SAV	12/27/22 17:44

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Analyst References:

Lab: EET SAV

Batch Type: Leach

GEM = Griffin Meincke

Batch Type: Analysis

GEM = Griffin Meincke

JCK = Joshua Kellar

PG = Patrick Gardner

Lab: EET SL

Batch Type: Prep

LKP = Laura Pemberton

Batch Type: Analysis

CGB = Cory Buffington

JML = Jessica LaDuron

SRE = Sabrina Early

Accreditation/Certification Summary

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Laboratory: Eurofins Savannah

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	SAVLAB	
Alabama	State	41450	06-30-23
ANAB	Dept. of Defense ELAP	L2463	09-22-24
Arkansas DEQ	State	19-015-0	02-01-23
California	State	2939	06-30-22 *
Connecticut	State	PH-0161	03-31-23
Florida	NELAP	E87052	01-09-23
Georgia	State	E87052	06-30-23
Georgia (DW)	State	803	06-30-23
Guam	State	19-007R	04-17-23
Hawaii	State	<cert No.>	06-30-23
Illinois	NELAP	200022	11-30-23
Indiana	State	C-GA-02	06-30-23
Iowa	State	353	07-01-23
Kentucky (UST)	State	NA	06-30-23
Louisiana	NELAP	30690	06-30-23
Louisiana (All)	NELAP	30690	06-30-23
Louisiana (DW)	State	LA009	12-31-22
Maine	State	GA00006	09-25-24
Maryland	State	250	12-31-23
Massachusetts	State	M-GA006	01-14-23
Michigan	State	9925	06-30-23
Mississippi	State	<cert No.>	06-30-23
Nebraska	State	NE-OS-7-04	06-30-23
New Jersey	NELAP	GA769	06-30-23
New Mexico	State	GA00006	06-30-23
New York	NELAP	10842	04-01-23
North Carolina (DW)	State	13701	07-31-23
North Carolina (WW/SW)	State	269	12-31-22
Pennsylvania	NELAP	68-00474	06-30-23
Puerto Rico	State	GA00006	12-30-22
South Carolina	State	98001	01-17-23
Tennessee	State	TN02961	06-30-23
Texas	NELAP	T1047004185-19-14	11-30-23
Texas	TCEQ Water Supply	T104704185	06-30-23
USDA	US Federal Programs	P330-18-00313	09-03-24
Virginia	NELAP	460161	06-14-23
Wisconsin	State	999819810	08-31-23
Wyoming	State	8TMS-L	06-30-23

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-23
California	Los Angeles County Sanitation Districts	10259	06-30-22 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Merit Laboratories
 Project/Site: S43599

Job ID: 190-30672-1

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2886	06-30-23
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-23
HI - RadChem Recognition	State	n/a	06-30-23
Illinois	NELAP	200023	11-30-23
Iowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-23
Kentucky (DW)	State	KY90125	12-31-23
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-23
Louisiana (All)	NELAP	04080	06-30-23
Louisiana (DW)	State	LA011	12-31-23
Maryland	State	310	09-30-23
MI - RadChem Recognition	State	9005	06-30-23
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-23
New Jersey	NELAP	MO002	06-30-23
New York	NELAP	11616	04-01-23
North Dakota	State	R-207	06-30-23
Oklahoma	NELAP	9997	08-31-23
Oregon	NELAP	4157	09-01-23
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-23
Texas	NELAP	T104704193	07-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-24
Washington	State	C592	08-30-23
West Virginia DEP	State	381	10-31-23

Method Summary

Client: Merit Laboratories
Project/Site: S43599

Job ID: 190-30672-1

Method	Method Description	Protocol	Laboratory
8015C	Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)	SW846	EET SAV
6020B	Metals (ICP/MS)	SW846	EET SL
Moisture	Percent Moisture	EPA	EET SL
Moisture - 2540	Percent Moisture	SM	EET SAV
3050B	Preparation, Metals	SW846	EET SL
DI Leach	Deionized Water Leaching Procedure	ASTM	EET SAV

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



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 Phone (517) 332-0167 Fax (517) 332-4034
 www.meritlabs.com

C.O.C. PAGE # 2 OF 3

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME: Project Management Team
 COMPANY: Merit Laboratories
 ADDRESS: 2680 East Lansing Drive
 CITY: East Lansing MI 48823
 PHONE NO.: 517-332-0167
 E-MAIL ADDRESS: results@meritlabs.com

CONTACT NAME: Julie Teague
 COMPANY: Merit Laboratories
 ADDRESS: 2680 East Lansing Drive
 CITY: East Lansing MI 48823
 PHONE NO.: 517-332-0167
 E-MAIL ADDRESS: juliet@meritlabs.com

PROJECT NO./NAME: S43599
 TURNAROUND TIME REQUIRED: 1 DAY 2 DAYS 3 DAYS STANDARD OTHER
 DELIVERABLES REQUIRED: STD LEVEL II LEVEL III LEVEL IV EDD OTHER

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	YEAR	DATE	TIME	IDENTIFICATION-DESCRIPTION	SAMPLE TAG	MTRX	# OF BOTTLES	NONE	HO	H ₂ O	H ₂ SO ₄	HNO ₃	MCH	OTHER	# Containers & Preservatives	
															W-WASTE	W-WASTE
	12/15/22	0907		S43599.14		S	2	2							Alcohols	✓
	12/15/22	0921		S43599.15		S	2	2							Alcohols	✓
	12/15/22	0927		S43599.16		S	2	2							Alcohols	✓
	12/15/22	1000		S43599.17		S	2	2							Alcohols	✓
	12/15/22	0001		S43599.18		S	2	2							Alcohols	✓
	12/15/22	1042		S43599.19		S	2	2							Alcohols	✓
	12/15/22	1052		S43599.20		S	2	2							Alcohols	✓
	12/15/22	1100		S43599.21		S	2	2							Alcohols	✓
	12/15/22	1100		S43599.22		S	2	2							Alcohols	✓
	12/15/22	1116		S43599.23		S	2	2							Alcohols	✓
	12/15/22	0001		S43599.24		S	2	2							Alcohols	✓
	12/15/22	1230		S43599.25		S	2	2							Alcohols	✓

RELINQUISHED BY: [Signature] DATE: 12/19/22 TIME: 13:17
 RECEIVED BY: [Signature] DATE: 12/19/22 TIME: 13:17

RELINQUISHED BY: [Signature] DATE: 12/19/22 TIME: 14:46
 RECEIVED BY: [Signature] DATE: 12/19/22 TIME: 14:46

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: OHIO VAP Drinking Water DoD NPDES Project Locations Detroit New York Other

Special Instructions: * Ethanol, Methanol, N-Butanol

SEAL INTACT: YES NO INITIALS: []

TEMP ON ARRIVAL: []

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE





Environment Testing
TestAmerica

SDS or Known Hazard Information Supplied by Client
 Discrepancies
 Short Hold
 Rush 24 Hr 2-Day 3-Day 5-Day Other:
Client ID: Merit
Work Order #: 301072
Receipt Evaluation Performed by: Initials: TH Date: 12/19/22 Time: 1446

Cooler / Sample Receipt

After hours receipt: complete gray areas. Place cooler in walk-in, place form in Receiving box. Date: _____ Time: _____

Method of Shipment:

Walk-In Client Eurofins TA Field/Courier
 Other Client / 3rd Party Courier: _____
Fed Ex Tracking #: _____
UPS Tracking #: _____
Other: _____

Shipping Container Type:

Cooler Box
 None Other: _____
Packing Materials:
 Plastic Bags Foam
 Bubble Wrap Paper
 Packing Peanuts None
 Other: _____

Custody Seals Intact:

Yes No
 NA (not used or required)

Cooling Materials:

Ice (Solid) Ice (Melted)
 Blue Ice None
 Other: _____

Bacteriological Samples	Temp Corrected (°C)	Frozen?		Rec'd Within 2 Hrs?		Sample Flagged?	
		Yes	No	Yes	No	Yes	No

Received on same day sampled? Yes No Additional Sheets Required? Yes No

Receipt Temperatures

Thermometer ID	Observed (°C)	Corrected (°C)	Temp Blank	Sample Temp	Acceptable	Cooler ID	Affected Samples
CP313207	9.0	9.0		X	X Y N		
					Y N		
					Y N		

Receipt Questions**	Y	N	NA	"No" answers require additional comment
CoC present and ETA receipt signature, date, and time properly documented?	X			
Containers and Labels in good condition? (unbroken, not leaking, appropriately filled, labels legible & attached)	X			See below*
Appropriate containers used and adequate volume provided?		X	*	Preserved bottles checked for pH? Yes No
Number of sample containers match CoC?	X	X		pH strip lot # _____
Samples received within hold?	X			
Samples submitted for GRO and Volatiles analysis (8260, 624, 524) received without headspace?			X	
Was a Trip Blank received with VOA samples?			X	
Were the samples free of any questionable physical conformities? (i.e.: field duplicates or multiple bottles of the same sample do not significantly vary in appearance - color, solid proportions, etc.)	X			
Were the CoC bottle labels and all other items free of all other discrepancies or issues that would need to be addressed with the Project Manager and/or Client?		X		543599.12 + 543599.30 were not sent with samples. Omitted
**May not be applicable if samples are not for compliance testing				*Excludes FOG, VOAs, TOC Vials, HEM

Client Contact Record

Contact Via: Phone Email Other: _____ Person Contacted: _____ Date/Time: _____
 Discrepancy allowance agreement is on record in the client project file

Discussion / Resolution

CoC has 543599.12 + 543599.30 listed no samples received omitted from log in.

Any additional documentation and clarification from the client must be noted in the narrative and/or scanned into the CoC directory.

Reviewed by A.H.O Date: 12/19/22

WI-MI-010_020720

Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:
Client Contact		Schafer, Sue	Schafer, Sue		190-34953.1
Shipping/Receiving		Phone:	E-Mail:	State of Origin:	Page
Company:			Sue.Schafer@et.eurofins.com	Michigan	Page 1 of 4
TestAmerica Laboratories, Inc.		Accelerators Required (See note):		Job #:	190-30672-1
Address:		Due Date Requested:	Preservation Codes:		
13715 Rider Trail North,		1/4/2023	M - Hexane N - None O - AsN ₂ O ₂ P - Na ₂ O ₄ S Q - Na ₂ SO ₃ R - Na ₂ SO ₃ S - H ₂ SO ₄ T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA Y - Trizma Z - other (specify)		
City:		TAT Requested (days):	Analysis Requested		
Earth City			Total Number of containers		
State, Zip:		PO #:	Field Filtered Sample (Yes or No)		
MO, 63045			Perform MS/MSD (Yes or No)		
Phone:		WO #:	6020B/3060B, 2% Specialty Metals		
314-298-8566(Tel) 314-298-8757(Fax)			Moisture		
Email:		Project #:	Matrix		
		19001249	(Hexane, 2-sec-butyl, 2-mercaptoethanol, 1,2-ethanediol, 4-mer)		
Project Name:		SSOW#:	Preservation Code:		
Mient Laboratories					
Site:		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Special Instructions/Note:
Sample Identification - Client ID (Lab ID)					
S43599.01 (190-30672-1)	12/15/22	09:10 Eastern	Solid	X	
S43599.02 (190-30672-2)	12/15/22	09:20 Eastern	Solid	X	
S43599.03 (190-30672-3)	12/15/22	10:40 Eastern	Solid	X	
S43599.04 (190-30672-4)	12/15/22	10:50 Eastern	Solid	X	
S43599.05 (190-30672-5)	12/15/22	12:50 Eastern	Solid	X	
S43599.06 (190-30672-6)	12/15/22	13:00 Eastern	Solid	X	
S43599.07 (190-30672-7)	12/15/22	14:30 Eastern	Solid	X	
S43599.08 (190-30672-8)	12/15/22	15:10 Eastern	Solid	X	
S43599.09 (190-30672-9)	12/15/22	08:10 Eastern	Solid	X	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification

Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) _____
 Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: _____ Date: 12/19/22 17:00
 Relinquished by: FGD GA Date: 12/20/22 9:40
 Relinquished by: _____ Date: _____
 Custody Seals Intact: _____
 Δ Yes Δ No _____
 Custody Seal No.: _____

Primary Deliverable Rank: 2
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
 Special Instructions/QC Requirements: _____
 Method of Shipment: _____
 Received by: FEDEX Date/Time: _____
 Received by: Biology Date/Time: 12/20/22 9:40
 Received by: _____ Date/Time: _____
 Cooler Temperature(s) °C and Other Remarks: _____



Analytical Laboratory Report

Report ID: S43600.01(01)
Generated on 01/18/2023

Report to
Attention: Kelly Cratsenburg
TRC
1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: 734-412-5424 FAX:
Email: KCratsenburg@trccompanies.com

Report produced by
Merit Laboratories, Inc.
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Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Additional Contacts: Vince Buening

Report Summary

Lab Sample ID(s): S43600.01-S43600.27
Project: Det. Axle Southern Bound.
Collected Date(s): 12/15/2022 - 12/16/2022
Submitted Date/Time: 12/16/2022 12:00
Sampled by: B. Yelen / H. Schnaidt
P.O. #: 193431

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Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
ASTM D7968-17M	ASTM Method D7968 - 17 Modified (Isotopic Dilution)
SM2540B	Standard Method 2540 B 2015

Parameter Summary

Parameter	Synonym	Cas #
PFBA	Perfluorobutanoic Acid	375-22-4
PFPeA	Perfluoropentanoic Acid	2706-90-3
4:2 FTSA	4:2 Fluorotelomer Sulfonic Acid	757124-72-4
PFHxA	Perfluorohexanoic Acid	307-24-4
PFBS	Perfluorobutane sulfonic Acid	375-73-5
PFHpA	Perfluoroheptanoic Acid	375-85-9
PFPeS	Perfluoropentane Sulfonic Acid	2706-91-4
6:2 FTSA	6:2 Fluorotelomer Sulfonic Acid	27619-97-2
PFOA	Perfluorooctanoic Acid	335-67-1
PFHxS	Perfluorohexane Sulfonic Acid	355-46-4
PFHxS-LN	Perfluorohexane Sulfonic Acid - LN	355-46-4-LN
PFHxS-BR	Perfluorohexane Sulfonic Acid - BR	355-46-4-BR
PFNA	Perfluorononanoic Acid	375-95-1
8:2 FTSA	8:2 Fluorotelomer Sulfonic Acid	39108-34-4
PFHpS	Perfluoroheptane Sulfonic Acid	375-92-8
PFDA	Perfluorodecanoic Acid	335-76-2
N-MeFOSAA	N-methyl perfluorooctanesulfonamidoacetic acid	2355-31-9
EtFOSAA	N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	2991-50-6
PFOS	Perfluorooctane Sulfonic Acid	1763-23-1
PFOS-LN	Perfluorooctane Sulfonic Acid - LN	1763-23-1-LN
PFOS-BR	Perfluorooctane Sulfonic Acid - BR	1763-23-1-BR
PFUnDA	Perfluoroundecanoic Acid	2058-94-8
PFNS	Perfluorononane Sulfonic Acid	68259-12-1
PFDoDA	Perfluorododecanoic Acid	307-55-1
PFDS	Perfluorodecane Sulfonic Acid	335-77-3
PFTTrDA	Perfluorotridecanoic Acid	72629-94-8
FOSA	Perfluorooctane Sulfonamide	754-91-6
PFTeDA	Perfluorotetradecanoic Acid	376-06-7
11Cl-PF3OUdS	11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	763051-92-9
9Cl-PF3ONS	9-chlorohexadecafluoro-3-oxanone1-sulfonic acid	756426-58-1
ADONA	4,8-dioxa-3H-perfluorononanoic acid	919005-14-4
HFPO-DA	Hexafluoropropylene oxide dimer	13252-13-6
PFECBS	Perfluoro-4-ethylcyclohexanesulfonate	67584-42-3
PFBSA	Perfluorobutanesulfonamide	30334-69-1
PFHxSA	Perfluorohexanesulfonamide	41997-13-1



Analytical Laboratory Report

Sample Summary (27 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S43600.01	AOC10-MW-22-17 (2-4)	Soil	12/15/22 09:10
S43600.02	AOC10-MW-22-17 (8-10)	Soil	12/15/22 09:20
S43600.03	AOC8-MW-22-18 (2-4)	Soil	12/15/22 10:40
S43600.04	AOC8-MW-22-18 (8-10)	Soil	12/15/22 10:50
S43600.05	AOC8-MW-22-19 (2-4)	Soil	12/15/22 12:50
S43600.06	AOC8-MW-22-19 (8-10)	Soil	12/15/22 13:00
S43600.07	AOC12-MW-22-20 (2-4)	Soil	12/15/22 14:30
S43600.08	AOC12-MW-22-20 (10-12)	Soil	12/15/22 15:10
S43600.09	AOC12-MW-22-21 (2-4)	Soil	12/16/22 08:10
S43600.10	AOC12-MW-22-21 (8-10)	Soil	12/16/22 08:20
S43600.11	AOC12-TP01-E	Soil	12/15/22 09:00
S43600.12	AOC12-TP01-W	Soil	12/15/22 09:07
S43600.13	AOC12-TP01-N	Soil	12/15/22 09:21
S43600.14	AOC12-TP01-S	Soil	12/15/22 09:27
S43600.15	AOC12-TP01-B	Soil	12/15/22 10:00
S43600.16	DUP-11S	Soil	12/15/22 00:01
S43600.17	AOC12-TP02-E	Soil	12/15/22 10:42
S43600.18	AOC12-TP02-W	Soil	12/15/22 10:52
S43600.19	AOC12-TP02-N	Soil	12/15/22 11:00
S43600.20	AOC12-TP02-S	Soil	12/15/22 11:00
S43600.21	AOC12-TP02-B	Soil	12/15/22 11:16
S43600.22	DUP-12S	Soil	12/15/22 00:01
S43600.23	AOC12-TP03-E	Soil	12/15/22 12:30
S43600.24	AOC12-TP03-W	Soil	12/15/22 12:35
S43600.25	AOC12-TP03-N	Soil	12/15/22 12:45
S43600.26	AOC12-TP03-S	Soil	12/15/22 12:45
S43600.27	AOC12-TP03-B	Soil	12/15/22 13:05



Analytical Laboratory Report

Lab Sample ID: S43600.01

Sample Tag: AOC10-MW-22-17 (2-4)

Collected Date/Time: 12/15/2022 09:10

Matrix: Soil

COC Reference: 144467

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.7	IR
1	250ml Plastic	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.27/6.56/10	ASTM D7968-17M	01/11/23 10:20	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 20:35, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	91	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/11/23 21:19, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	81		ng/kg	4.05	375-22-4		
PFPeA*	Not detected	41		ng/kg	4.05	2706-90-3		
4:2 FTSA*	Not detected	41		ng/kg	4.05	757124-72-4		
PFHxA*	Not detected	41		ng/kg	4.05	307-24-4		
PFBS*	Not detected	41		ng/kg	4.05	375-73-5		
PFHpA*	Not detected	41		ng/kg	4.05	375-85-9		
PFPeS*	Not detected	41		ng/kg	4.05	2706-91-4		
6:2 FTSA*	Not detected	41		ng/kg	4.05	27619-97-2		
PFOA*	41	41		ng/kg	4.05	335-67-1		
PFHxS*	Not detected	41		ng/kg	4.05	355-46-4		
PFHxS-LN*	Not detected	41		ng/kg	4.05	355-46-4-LN		
PFHxS-BR*	Not detected	41		ng/kg	4.05	355-46-4-BR		
PFNA*	76	41		ng/kg	4.05	375-95-1		
8:2 FTSA*	Not detected	41		ng/kg	4.05	39108-34-4		
PFHpS*	Not detected	41		ng/kg	4.05	375-92-8		
PFDA*	Not detected	41		ng/kg	4.05	335-76-2		
N-MeFOSAA*	Not detected	41		ng/kg	4.05	2355-31-9		
EtFOSAA*	Not detected	41		ng/kg	4.05	2991-50-6		
PFOS*	320	41		ng/kg	4.05	1763-23-1		
PFOS-LN*	220	41		ng/kg	4.05	1763-23-1-LN		
PFOS-BR*	98	41		ng/kg	4.05	1763-23-1-BR		
PFUnDA*	Not detected	41		ng/kg	4.05	2058-94-8		
PFNS*	Not detected	41		ng/kg	4.05	68259-12-1		
PFDaDA*	Not detected	41		ng/kg	4.05	307-55-1		
PFDS*	Not detected	41		ng/kg	4.05	335-77-3		
PFTTrDA*	Not detected	41		ng/kg	4.05	72629-94-8		
FOSA*	Not detected	41		ng/kg	4.05	754-91-6		
PFTeDA*	Not detected	41		ng/kg	4.05	376-06-7		
11Cl-PF3OUdS*	Not detected	41		ng/kg	4.05	763051-92-9		
9Cl-PF3ONS*	Not detected	41		ng/kg	4.05	756426-58-1		
ADONA*	Not detected	41		ng/kg	4.05	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43600.01 (continued)

Sample Tag: AOC10-MW-22-17 (2-4)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/11/23 21:19, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	41		ng/kg	4.05	13252-13-6		
PFECHS*	Not detected	41		ng/kg	4.05	67584-42-3		
PFBSA*	Not detected	41		ng/kg	4.05	30334-69-1		
PFHxSA*	Not detected	41		ng/kg	4.05	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43600.02

Sample Tag: AOC10-MW-22-17 (8-10)

Collected Date/Time: 12/15/2022 09:20

Matrix: Soil

COC Reference: 144467

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.7	IR
1	250ml Plastic	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.42/6.47/10	ASTM D7968-17M	01/11/23 10:20	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 20:35, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	92	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/11/23 21:58, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	110		ng/kg	5.57	375-22-4		
PFPeA*	Not detected	56		ng/kg	5.57	2706-90-3		
4:2 FTSA*	Not detected	56		ng/kg	5.57	757124-72-4		
PFHxA*	Not detected	56		ng/kg	5.57	307-24-4		
PFBS*	Not detected	56		ng/kg	5.57	375-73-5		
PFHpA*	Not detected	56		ng/kg	5.57	375-85-9		
PFPeS*	Not detected	56		ng/kg	5.57	2706-91-4		
6:2 FTSA*	Not detected	56		ng/kg	5.57	27619-97-2		
PFOA*	65	56		ng/kg	5.57	335-67-1		
PFHxS*	Not detected	56		ng/kg	5.57	355-46-4		
PFHxS-LN*	Not detected	56		ng/kg	5.57	355-46-4-LN		
PFHxS-BR*	Not detected	56		ng/kg	5.57	355-46-4-BR		
PFNA*	Not detected	56		ng/kg	5.57	375-95-1		
8:2 FTSA*	Not detected	56		ng/kg	5.57	39108-34-4		
PFHpS*	Not detected	56		ng/kg	5.57	375-92-8		
PFDA*	Not detected	56		ng/kg	5.57	335-76-2		
N-MeFOSAA*	Not detected	56		ng/kg	5.57	2355-31-9		
EtFOSAA*	Not detected	56		ng/kg	5.57	2991-50-6		
PFOS*	92	56		ng/kg	5.57	1763-23-1		
PFOS-LN*	Not detected	56		ng/kg	5.57	1763-23-1-LN		
PFOS-BR*	81	56		ng/kg	5.57	1763-23-1-BR		
PFUnDA*	Not detected	56		ng/kg	5.57	2058-94-8		
PFNS*	Not detected	56		ng/kg	5.57	68259-12-1		
PFDODA*	Not detected	56		ng/kg	5.57	307-55-1		
PFDS*	Not detected	56		ng/kg	5.57	335-77-3		
PFTTrDA*	Not detected	56		ng/kg	5.57	72629-94-8		
FOSA*	Not detected	56		ng/kg	5.57	754-91-6		
PFTeDA*	Not detected	56		ng/kg	5.57	376-06-7		
11Cl-PF3OUdS*	Not detected	56		ng/kg	5.57	763051-92-9		
9Cl-PF3ONS*	Not detected	56		ng/kg	5.57	756426-58-1		
ADONA*	Not detected	56		ng/kg	5.57	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43600.02 (continued)

Sample Tag: AOC10-MW-22-17 (8-10)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/11/23 21:58, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	56		ng/kg	5.57	13252-13-6		
PFECHS*	Not detected	56		ng/kg	5.57	67584-42-3		
PFBSA*	Not detected	56		ng/kg	5.57	30334-69-1		
PFHxSA*	Not detected	56		ng/kg	5.57	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43600.03

Sample Tag: AOC8-MW-22-18 (2-4)

Collected Date/Time: 12/15/2022 10:40

Matrix: Soil

COC Reference: 144467

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.7	IR
1	250ml Plastic	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	7.62/6.56/10	ASTM D7968-17M	01/11/23 10:20	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 20:35, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	91	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/11/23 22:37, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	210		ng/kg	10.4	375-22-4		
PFPeA*	Not detected	100		ng/kg	10.4	2706-90-3		
4:2 FTSA*	Not detected	100		ng/kg	10.4	757124-72-4		
PFHxA*	Not detected	100		ng/kg	10.4	307-24-4		
PFBS*	Not detected	100		ng/kg	10.4	375-73-5		
PFHpA*	Not detected	100		ng/kg	10.4	375-85-9		
PFPeS*	Not detected	100		ng/kg	10.4	2706-91-4		
6:2 FTSA*	Not detected	100		ng/kg	10.4	27619-97-2	I	
PFOA*	Not detected	100		ng/kg	10.4	335-67-1		
PFHxS*	Not detected	100		ng/kg	10.4	355-46-4		
PFHxS-LN*	Not detected	100		ng/kg	10.4	355-46-4-LN		
PFHxS-BR*	Not detected	100		ng/kg	10.4	355-46-4-BR		
PFNA*	Not detected	100		ng/kg	10.4	375-95-1		
8:2 FTSA*	Not detected	100		ng/kg	10.4	39108-34-4		
PFHpS*	Not detected	100		ng/kg	10.4	375-92-8		
PFDA*	Not detected	100		ng/kg	10.4	335-76-2		
N-MeFOSAA*	Not detected	100		ng/kg	10.4	2355-31-9		
EtFOSAA*	Not detected	100		ng/kg	10.4	2991-50-6		
PFOS*	Not detected	100		ng/kg	10.4	1763-23-1		
PFOS-LN*	Not detected	100		ng/kg	10.4	1763-23-1-LN		
PFOS-BR*	Not detected	100		ng/kg	10.4	1763-23-1-BR		
PFUnDA*	Not detected	100		ng/kg	10.4	2058-94-8		
PFNS*	Not detected	100		ng/kg	10.4	68259-12-1		
PFDODA*	Not detected	100		ng/kg	10.4	307-55-1		
PFDS*	Not detected	100		ng/kg	10.4	335-77-3		
PFTTrDA*	Not detected	100		ng/kg	10.4	72629-94-8		
FOSA*	Not detected	100		ng/kg	10.4	754-91-6		
PFTeDA*	Not detected	100		ng/kg	10.4	376-06-7		
11Cl-PF3OUdS*	Not detected	100		ng/kg	10.4	763051-92-9		
9Cl-PF3ONS*	Not detected	100		ng/kg	10.4	756426-58-1		

I-Matrix interference with internal standard



Analytical Laboratory Report

Lab Sample ID: S43600.03 (continued)

Sample Tag: AOC8-MW-22-18 (2-4)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/11/23 22:37, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
ADONA*	Not detected	100		ng/kg	10.4	919005-14-4		
HFPO-DA*	Not detected	100		ng/kg	10.4	13252-13-6		
PFECHS*	Not detected	100		ng/kg	10.4	67584-42-3		
PFBSA*	Not detected	100		ng/kg	10.4	30334-69-1		
PFHxSA*	Not detected	100		ng/kg	10.4	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43600.04

Sample Tag: AOC8-MW-22-18 (8-10)

Collected Date/Time: 12/15/2022 10:50

Matrix: Soil

COC Reference: 144467

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.7	IR
1	250ml Plastic	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.32/6.45/10	ASTM D7968-17M	01/11/23 10:20	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 20:35, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 09:27, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	110		ng/kg	5.69	375-22-4		
PFPeA*	Not detected	57		ng/kg	5.69	2706-90-3		
4:2 FTSA*	Not detected	57		ng/kg	5.69	757124-72-4		
PFHxA*	Not detected	57		ng/kg	5.69	307-24-4		
PFBS*	Not detected	57		ng/kg	5.69	375-73-5		
PFHpA*	Not detected	57		ng/kg	5.69	375-85-9		
PFPeS*	Not detected	57		ng/kg	5.69	2706-91-4		
6:2 FTSA*	Not detected	57		ng/kg	5.69	27619-97-2		
PFOA*	Not detected	57		ng/kg	5.69	335-67-1		
PFHxS*	Not detected	57		ng/kg	5.69	355-46-4		
PFHxS-LN*	Not detected	57		ng/kg	5.69	355-46-4-LN		
PFHxS-BR*	Not detected	57		ng/kg	5.69	355-46-4-BR		
PFNA*	Not detected	57		ng/kg	5.69	375-95-1		
8:2 FTSA*	Not detected	57		ng/kg	5.69	39108-34-4		
PFHpS*	Not detected	57		ng/kg	5.69	375-92-8		
PFDA*	Not detected	57		ng/kg	5.69	335-76-2		
N-MeFOSAA*	Not detected	57		ng/kg	5.69	2355-31-9		
EtFOSAA*	Not detected	57		ng/kg	5.69	2991-50-6		
PFOS*	Not detected	57		ng/kg	5.69	1763-23-1		
PFOS-LN*	Not detected	57		ng/kg	5.69	1763-23-1-LN		
PFOS-BR*	Not detected	57		ng/kg	5.69	1763-23-1-BR		
PFUnDA*	Not detected	57		ng/kg	5.69	2058-94-8		
PFNS*	Not detected	57		ng/kg	5.69	68259-12-1		
PFDODA*	Not detected	57		ng/kg	5.69	307-55-1		
PFDS*	Not detected	57		ng/kg	5.69	335-77-3		
PFTTrDA*	Not detected	57		ng/kg	5.69	72629-94-8		
FOSA*	Not detected	57		ng/kg	5.69	754-91-6		
PFTeDA*	Not detected	57		ng/kg	5.69	376-06-7		
11Cl-PF3OUdS*	Not detected	57		ng/kg	5.69	763051-92-9		
9Cl-PF3ONS*	Not detected	57		ng/kg	5.69	756426-58-1		
ADONA*	Not detected	57		ng/kg	5.69	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43600.04 (continued)

Sample Tag: AOC8-MW-22-18 (8-10)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 09:27, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	57		ng/kg	5.69	13252-13-6		
PFECHS*	Not detected	57		ng/kg	5.69	67584-42-3		
PFBSA*	Not detected	57		ng/kg	5.69	30334-69-1		
PFHxSA*	Not detected	57		ng/kg	5.69	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43600.05

Sample Tag: AOC8-MW-22-19 (2-4)

Collected Date/Time: 12/15/2022 12:50

Matrix: Soil

COC Reference: 144467

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.7	IR
1	250ml Plastic	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.79/6.56/10	ASTM D7968-17M	01/11/23 10:20	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 20:35, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 09:46, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	95		ng/kg	4.77	375-22-4		
PFPeA*	Not detected	48		ng/kg	4.77	2706-90-3		
4:2 FTSA*	Not detected	48		ng/kg	4.77	757124-72-4		
PFHxA*	Not detected	48		ng/kg	4.77	307-24-4		
PFBS*	Not detected	48		ng/kg	4.77	375-73-5		
PFHpA*	Not detected	48		ng/kg	4.77	375-85-9		
PFPeS*	Not detected	48		ng/kg	4.77	2706-91-4		
6:2 FTSA*	Not detected	48		ng/kg	4.77	27619-97-2		
PFOA*	Not detected	48		ng/kg	4.77	335-67-1		
PFHxS*	Not detected	48		ng/kg	4.77	355-46-4		
PFHxS-LN*	Not detected	48		ng/kg	4.77	355-46-4-LN		
PFHxS-BR*	Not detected	48		ng/kg	4.77	355-46-4-BR		
PFNA*	Not detected	48		ng/kg	4.77	375-95-1		
8:2 FTSA*	Not detected	48		ng/kg	4.77	39108-34-4		
PFHpS*	Not detected	48		ng/kg	4.77	375-92-8		
PFDA*	Not detected	48		ng/kg	4.77	335-76-2		
N-MeFOSAA*	Not detected	48		ng/kg	4.77	2355-31-9		
EtFOSAA*	Not detected	48		ng/kg	4.77	2991-50-6		
PFOS*	Not detected	48		ng/kg	4.77	1763-23-1		
PFOS-LN*	Not detected	48		ng/kg	4.77	1763-23-1-LN		
PFOS-BR*	Not detected	48		ng/kg	4.77	1763-23-1-BR		
PFUnDA*	Not detected	48		ng/kg	4.77	2058-94-8		
PFNS*	Not detected	48		ng/kg	4.77	68259-12-1		
PFDODA*	Not detected	48		ng/kg	4.77	307-55-1		
PFDS*	Not detected	48		ng/kg	4.77	335-77-3		
PFTTrDA*	Not detected	48		ng/kg	4.77	72629-94-8		
FOSA*	Not detected	48		ng/kg	4.77	754-91-6		
PFTeDA*	Not detected	48		ng/kg	4.77	376-06-7		
11Cl-PF3OUdS*	Not detected	48		ng/kg	4.77	763051-92-9		
9Cl-PF3ONS*	Not detected	48		ng/kg	4.77	756426-58-1		
ADONA*	Not detected	48		ng/kg	4.77	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43600.05 (continued)

Sample Tag: AOC8-MW-22-19 (2-4)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 09:46, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	48		ng/kg	4.77	13252-13-6		
PFECHS*	Not detected	48		ng/kg	4.77	67584-42-3		
PFBSA*	Not detected	48		ng/kg	4.77	30334-69-1		
PFHxSA*	Not detected	48		ng/kg	4.77	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43600.06

Sample Tag: AOC8-MW-22-19 (8-10)

Collected Date/Time: 12/15/2022 13:00

Matrix: Soil

COC Reference: 144467

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.7	IR
1	250ml Plastic	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.57/6.50/10	ASTM D7968-17M	01/11/23 10:20	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 20:35, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 10:06, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	100		ng/kg	5.09	375-22-4		
PFPeA*	Not detected	51		ng/kg	5.09	2706-90-3		
4:2 FTSA*	Not detected	51		ng/kg	5.09	757124-72-4		
PFHxA*	Not detected	51		ng/kg	5.09	307-24-4		
PFBS*	Not detected	51		ng/kg	5.09	375-73-5		
PFHpA*	Not detected	51		ng/kg	5.09	375-85-9		
PFPeS*	Not detected	51		ng/kg	5.09	2706-91-4		
6:2 FTSA*	Not detected	51		ng/kg	5.09	27619-97-2		
PFOA*	Not detected	51		ng/kg	5.09	335-67-1		
PFHxS*	Not detected	51		ng/kg	5.09	355-46-4		
PFHxS-LN*	Not detected	51		ng/kg	5.09	355-46-4-LN		
PFHxS-BR*	Not detected	51		ng/kg	5.09	355-46-4-BR		
PFNA*	Not detected	51		ng/kg	5.09	375-95-1		
8:2 FTSA*	Not detected	51		ng/kg	5.09	39108-34-4	I	
PFHpS*	Not detected	51		ng/kg	5.09	375-92-8		
PFDA*	Not detected	51		ng/kg	5.09	335-76-2		
N-MeFOSAA*	Not detected	51		ng/kg	5.09	2355-31-9		
EtFOSAA*	Not detected	51		ng/kg	5.09	2991-50-6		
PFOS*	89	51		ng/kg	5.09	1763-23-1		
PFOS-LN*	62	51		ng/kg	5.09	1763-23-1-LN		
PFOS-BR*	Not detected	51		ng/kg	5.09	1763-23-1-BR		
PFUnDA*	Not detected	51		ng/kg	5.09	2058-94-8		
PFNS*	Not detected	51		ng/kg	5.09	68259-12-1		
PFDODA*	Not detected	51		ng/kg	5.09	307-55-1		
PFDS*	Not detected	51		ng/kg	5.09	335-77-3		
PFTTrDA*	Not detected	51		ng/kg	5.09	72629-94-8		
FOSA*	Not detected	51		ng/kg	5.09	754-91-6		
PFTeDA*	Not detected	51		ng/kg	5.09	376-06-7		
11Cl-PF3OUdS*	Not detected	51		ng/kg	5.09	763051-92-9		
9Cl-PF3ONS*	Not detected	51		ng/kg	5.09	756426-58-1		

I-Matrix interference with internal standard



Analytical Laboratory Report

Lab Sample ID: S43600.06 (continued)

Sample Tag: AOC8-MW-22-19 (8-10)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 10:06, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
ADONA*	Not detected	51		ng/kg	5.09	919005-14-4		
HFPO-DA*	Not detected	51		ng/kg	5.09	13252-13-6		
PFECHS*	Not detected	51		ng/kg	5.09	67584-42-3		
PFBSA*	Not detected	51		ng/kg	5.09	30334-69-1		
PFHxSA*	Not detected	51		ng/kg	5.09	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43600.07

Sample Tag: AOC12-MW-22-20 (2-4)

Collected Date/Time: 12/15/2022 14:30

Matrix: Soil

COC Reference: 144467

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.7	IR
1	250ml Plastic	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.19/6.52/10	ASTM D7968-17M	01/11/23 10:20	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 20:35, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 10:25, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	80		ng/kg	3.98	375-22-4		
PFPeA*	Not detected	40		ng/kg	3.98	2706-90-3		
4:2 FTSA*	Not detected	40		ng/kg	3.98	757124-72-4		
PFHxA*	Not detected	40		ng/kg	3.98	307-24-4		
PFBS*	Not detected	40		ng/kg	3.98	375-73-5		
PFHpA*	Not detected	40		ng/kg	3.98	375-85-9		
PFPeS*	Not detected	40		ng/kg	3.98	2706-91-4		
6:2 FTSA*	Not detected	40		ng/kg	3.98	27619-97-2		
PFOA*	Not detected	40		ng/kg	3.98	335-67-1		
PFHxS*	Not detected	40		ng/kg	3.98	355-46-4		
PFHxS-LN*	Not detected	40		ng/kg	3.98	355-46-4-LN		
PFHxS-BR*	Not detected	40		ng/kg	3.98	355-46-4-BR		
PFNA*	Not detected	40		ng/kg	3.98	375-95-1		
8:2 FTSA*	Not detected	40		ng/kg	3.98	39108-34-4		
PFHpS*	Not detected	40		ng/kg	3.98	375-92-8		
PFDA*	Not detected	40		ng/kg	3.98	335-76-2		
N-MeFOSAA*	Not detected	40		ng/kg	3.98	2355-31-9		
EtFOSAA*	Not detected	40		ng/kg	3.98	2991-50-6		
PFOS*	130	40		ng/kg	3.98	1763-23-1		
PFOS-LN*	94	40		ng/kg	3.98	1763-23-1-LN		
PFOS-BR*	Not detected	40		ng/kg	3.98	1763-23-1-BR		
PFUnDA*	Not detected	40		ng/kg	3.98	2058-94-8		
PFNS*	Not detected	40		ng/kg	3.98	68259-12-1		
PFDODA*	Not detected	40		ng/kg	3.98	307-55-1		
PFDS*	Not detected	40		ng/kg	3.98	335-77-3		
PFTTrDA*	Not detected	40		ng/kg	3.98	72629-94-8		
FOSA*	Not detected	40		ng/kg	3.98	754-91-6		
PFTeDA*	Not detected	40		ng/kg	3.98	376-06-7		
11Cl-PF3OUdS*	Not detected	40		ng/kg	3.98	763051-92-9		
9Cl-PF3ONS*	Not detected	40		ng/kg	3.98	756426-58-1		
ADONA*	Not detected	40		ng/kg	3.98	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43600.07 (continued)

Sample Tag: AOC12-MW-22-20 (2-4)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 10:25, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	40		ng/kg	3.98	13252-13-6		
PFECHS*	Not detected	40		ng/kg	3.98	67584-42-3		
PFBSA*	Not detected	40		ng/kg	3.98	30334-69-1		
PFHxSA*	Not detected	40		ng/kg	3.98	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43600.08

Sample Tag: AOC12-MW-22-20 (10-12)

Collected Date/Time: 12/15/2022 15:10

Matrix: Soil

COC Reference: 144467

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.7	IR
1	250ml Plastic	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.03/6.50/10	ASTM D7968-17M	01/11/23 10:20	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 20:35, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	84	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 10:45, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	94		ng/kg	4.71	375-22-4		
PFPeA*	Not detected	47		ng/kg	4.71	2706-90-3		
4:2 FTSA*	Not detected	47		ng/kg	4.71	757124-72-4		
PFHxA*	Not detected	47		ng/kg	4.71	307-24-4		
PFBS*	Not detected	47		ng/kg	4.71	375-73-5		
PFHpA*	Not detected	47		ng/kg	4.71	375-85-9		
PFPeS*	Not detected	47		ng/kg	4.71	2706-91-4		
6:2 FTSA*	Not detected	47		ng/kg	4.71	27619-97-2	I	
PFOA*	Not detected	47		ng/kg	4.71	335-67-1		
PFHxS*	Not detected	47		ng/kg	4.71	355-46-4		
PFHxS-LN*	Not detected	47		ng/kg	4.71	355-46-4-LN		
PFHxS-BR*	Not detected	47		ng/kg	4.71	355-46-4-BR		
PFNA*	Not detected	47		ng/kg	4.71	375-95-1		
8:2 FTSA*	Not detected	47		ng/kg	4.71	39108-34-4		
PFHpS*	Not detected	47		ng/kg	4.71	375-92-8		
PFDA*	Not detected	47		ng/kg	4.71	335-76-2		
N-MeFOSAA*	Not detected	47		ng/kg	4.71	2355-31-9		
EtFOSAA*	480	47		ng/kg	4.71	2991-50-6		
PFOS*	99	47		ng/kg	4.71	1763-23-1		
PFOS-LN*	55	47		ng/kg	4.71	1763-23-1-LN		
PFOS-BR*	Not detected	47		ng/kg	4.71	1763-23-1-BR		
PFUnDA*	Not detected	47		ng/kg	4.71	2058-94-8		
PFNS*	Not detected	47		ng/kg	4.71	68259-12-1		
PFDODA*	Not detected	47		ng/kg	4.71	307-55-1		
PFDS*	93	47		ng/kg	4.71	335-77-3		
PFTTrDA*	Not detected	47		ng/kg	4.71	72629-94-8		
FOSA*	Not detected	47		ng/kg	4.71	754-91-6		
PFTeDA*	Not detected	47		ng/kg	4.71	376-06-7		
11Cl-PF3OUdS*	Not detected	47		ng/kg	4.71	763051-92-9		
9Cl-PF3ONS*	Not detected	47		ng/kg	4.71	756426-58-1		

I-Matrix interference with internal standard



Analytical Laboratory Report

Lab Sample ID: S43600.08 (continued)

Sample Tag: AOC12-MW-22-20 (10-12)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 10:45, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
ADONA*	Not detected	47		ng/kg	4.71	919005-14-4		
HFPO-DA*	Not detected	47		ng/kg	4.71	13252-13-6		
PFECHS*	Not detected	47		ng/kg	4.71	67584-42-3		
PFBSA*	Not detected	47		ng/kg	4.71	30334-69-1		
PFHxSA*	Not detected	47		ng/kg	4.71	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43600.09

Sample Tag: AOC12-MW-22-21 (2-4)

Collected Date/Time: 12/16/2022 08:10

Matrix: Soil

COC Reference: 144467

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.7	IR
1	250ml Plastic	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.90/6.45/10	ASTM D7968-17M	01/11/23 10:20	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 20:35, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	93	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 11:04, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	88		ng/kg	4.39	375-22-4		
PFPeA*	Not detected	44		ng/kg	4.39	2706-90-3		
4:2 FTSA*	Not detected	44		ng/kg	4.39	757124-72-4		
PFHxA*	Not detected	44		ng/kg	4.39	307-24-4		
PFBS*	Not detected	44		ng/kg	4.39	375-73-5		
PFHpA*	Not detected	44		ng/kg	4.39	375-85-9		
PFPeS*	Not detected	44		ng/kg	4.39	2706-91-4		
6:2 FTSA*	Not detected	44		ng/kg	4.39	27619-97-2		
PFOA*	46	44		ng/kg	4.39	335-67-1		
PFHxS*	Not detected	44		ng/kg	4.39	355-46-4		
PFHxS-LN*	Not detected	44		ng/kg	4.39	355-46-4-LN		
PFHxS-BR*	Not detected	44		ng/kg	4.39	355-46-4-BR		
PFNA*	Not detected	44		ng/kg	4.39	375-95-1		
8:2 FTSA*	Not detected	44		ng/kg	4.39	39108-34-4		
PFHpS*	Not detected	44		ng/kg	4.39	375-92-8		
PFDA*	Not detected	44		ng/kg	4.39	335-76-2		
N-MeFOSAA*	Not detected	44		ng/kg	4.39	2355-31-9		
EtFOSAA*	Not detected	44		ng/kg	4.39	2991-50-6		
PFOS*	260	44		ng/kg	4.39	1763-23-1		
PFOS-LN*	220	44		ng/kg	4.39	1763-23-1-LN		
PFOS-BR*	Not detected	44		ng/kg	4.39	1763-23-1-BR		
PFUnDA*	Not detected	44		ng/kg	4.39	2058-94-8		
PFNS*	Not detected	44		ng/kg	4.39	68259-12-1		
PFDODA*	Not detected	44		ng/kg	4.39	307-55-1		
PFDS*	Not detected	44		ng/kg	4.39	335-77-3		
PFTTrDA*	Not detected	44		ng/kg	4.39	72629-94-8		
FOSA*	Not detected	44		ng/kg	4.39	754-91-6		
PFTeDA*	Not detected	44		ng/kg	4.39	376-06-7		
11Cl-PF3OUdS*	Not detected	44		ng/kg	4.39	763051-92-9		
9Cl-PF3ONS*	Not detected	44		ng/kg	4.39	756426-58-1		
ADONA*	Not detected	44		ng/kg	4.39	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43600.09 (continued)

Sample Tag: AOC12-MW-22-21 (2-4)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 11:04, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	44		ng/kg	4.39	13252-13-6		
PFECHS*	Not detected	44		ng/kg	4.39	67584-42-3		
PFBSA*	Not detected	44		ng/kg	4.39	30334-69-1		
PFHxSA*	Not detected	44		ng/kg	4.39	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43600.10

Sample Tag: AOC12-MW-22-21 (8-10)

Collected Date/Time: 12/16/2022 08:20

Matrix: Soil

COC Reference: 144467

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.7	IR
1	250ml Plastic	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.64/6.46/10	ASTM D7968-17M	01/11/23 10:20	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 20:35, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	88	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 11:24, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	100		ng/kg	5.21	375-22-4		
PFPeA*	Not detected	52		ng/kg	5.21	2706-90-3		
4:2 FTSA*	Not detected	52		ng/kg	5.21	757124-72-4		
PFHxA*	Not detected	52		ng/kg	5.21	307-24-4		
PFBS*	Not detected	52		ng/kg	5.21	375-73-5		
PFHpA*	Not detected	52		ng/kg	5.21	375-85-9		
PFPeS*	Not detected	52		ng/kg	5.21	2706-91-4		
6:2 FTSA*	Not detected	52		ng/kg	5.21	27619-97-2	I	
PFOA*	Not detected	52		ng/kg	5.21	335-67-1		
PFHxS*	Not detected	52		ng/kg	5.21	355-46-4		
PFHxS-LN*	Not detected	52		ng/kg	5.21	355-46-4-LN		
PFHxS-BR*	Not detected	52		ng/kg	5.21	355-46-4-BR		
PFNA*	Not detected	52		ng/kg	5.21	375-95-1		
8:2 FTSA*	Not detected	52		ng/kg	5.21	39108-34-4	I	
PFHpS*	Not detected	52		ng/kg	5.21	375-92-8		
PFDA*	Not detected	52		ng/kg	5.21	335-76-2		
N-MeFOSAA*	350	52		ng/kg	5.21	2355-31-9		
EtFOSAA*	170	52		ng/kg	5.21	2991-50-6		
PFOS*	100	52		ng/kg	5.21	1763-23-1		
PFOS-LN*	78	52		ng/kg	5.21	1763-23-1-LN		
PFOS-BR*	Not detected	52		ng/kg	5.21	1763-23-1-BR		
PFUnDA*	Not detected	52		ng/kg	5.21	2058-94-8		
PFNS*	Not detected	52		ng/kg	5.21	68259-12-1		
PFDODA*	Not detected	52		ng/kg	5.21	307-55-1		
PFDS*	220	52		ng/kg	5.21	335-77-3		
PFTTrDA*	Not detected	52		ng/kg	5.21	72629-94-8		
FOSA*	Not detected	52		ng/kg	5.21	754-91-6		
PFTeDA*	Not detected	52		ng/kg	5.21	376-06-7		
11Cl-PF3OUdS*	Not detected	52		ng/kg	5.21	763051-92-9		
9Cl-PF3ONS*	Not detected	52		ng/kg	5.21	756426-58-1		

I-Matrix interference with internal standard



Analytical Laboratory Report

Lab Sample ID: S43600.10 (continued)

Sample Tag: AOC12-MW-22-21 (8-10)

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 11:24, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
ADONA*	Not detected	52		ng/kg	5.21	919005-14-4		
HFPO-DA*	Not detected	52		ng/kg	5.21	13252-13-6		
PFECHS*	Not detected	52		ng/kg	5.21	67584-42-3		
PFBSA*	Not detected	52		ng/kg	5.21	30334-69-1		
PFHxSA*	Not detected	52		ng/kg	5.21	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43600.11

Sample Tag: AOC12-TP01-E

Collected Date/Time: 12/15/2022 09:00

Matrix: Soil

COC Reference: 158669

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.7	IR
1	250ml Plastic	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.74/6.46/10	ASTM D7968-17M	01/11/23 10:20	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 20:35, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	85	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 11:43, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	100		ng/kg	5.16	375-22-4		
PFPeA*	Not detected	52		ng/kg	5.16	2706-90-3		
4:2 FTSA*	Not detected	52		ng/kg	5.16	757124-72-4	I	
PFHxA*	Not detected	52		ng/kg	5.16	307-24-4		
PFBS*	Not detected	52		ng/kg	5.16	375-73-5		
PFHpA*	Not detected	52		ng/kg	5.16	375-85-9		
PFPeS*	Not detected	52		ng/kg	5.16	2706-91-4		
6:2 FTSA*	Not detected	52		ng/kg	5.16	27619-97-2	I	
PFOA*	65	52		ng/kg	5.16	335-67-1		
PFHxS*	Not detected	52		ng/kg	5.16	355-46-4		
PFHxS-LN*	Not detected	52		ng/kg	5.16	355-46-4-LN		
PFHxS-BR*	Not detected	52		ng/kg	5.16	355-46-4-BR		
PFNA*	53	52		ng/kg	5.16	375-95-1		
8:2 FTSA*	Not detected	52		ng/kg	5.16	39108-34-4	I	
PFHpS*	Not detected	52		ng/kg	5.16	375-92-8		
PFDA*	170	52		ng/kg	5.16	335-76-2		
N-MeFOSAA*	Not detected	52		ng/kg	5.16	2355-31-9		
EtFOSAA*	Not detected	52		ng/kg	5.16	2991-50-6		
PFOS*	1,200	52		ng/kg	5.16	1763-23-1		
PFOS-LN*	940	52		ng/kg	5.16	1763-23-1-LN		
PFOS-BR*	210	52		ng/kg	5.16	1763-23-1-BR		
PFUnDA*	Not detected	52		ng/kg	5.16	2058-94-8		
PFNS*	Not detected	52		ng/kg	5.16	68259-12-1		
PFDODA*	62	52		ng/kg	5.16	307-55-1		
PFDS*	490	52		ng/kg	5.16	335-77-3		
PFTTrDA*	Not detected	52		ng/kg	5.16	72629-94-8		
FOSA*	Not detected	52		ng/kg	5.16	754-91-6		
PFTeDA*	Not detected	52		ng/kg	5.16	376-06-7		
11Cl-PF3OUdS*	Not detected	52		ng/kg	5.16	763051-92-9		
9Cl-PF3ONS*	Not detected	52		ng/kg	5.16	756426-58-1		

I-Matrix interference with internal standard



Analytical Laboratory Report

Lab Sample ID: S43600.11 (continued)

Sample Tag: AOC12-TP01-E

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 11:43, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
ADONA*	Not detected	52		ng/kg	5.16	919005-14-4		
HFPO-DA*	Not detected	52		ng/kg	5.16	13252-13-6		
PFECHS*	Not detected	52		ng/kg	5.16	67584-42-3		
PFBSA*	Not detected	52		ng/kg	5.16	30334-69-1		
PFHxSA*	Not detected	52		ng/kg	5.16	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43600.12

Sample Tag: AOC12-TP01-W

Collected Date/Time: 12/15/2022 09:07

Matrix: Soil

COC Reference: 158669

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.7	IR
1	250ml Plastic	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.24/6.53/10	ASTM D7968-17M	01/11/23 10:20	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 20:35, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	89	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 12:03, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	83		ng/kg	4.15	375-22-4		
PFPeA*	Not detected	42		ng/kg	4.15	2706-90-3		
4:2 FTSA*	Not detected	42		ng/kg	4.15	757124-72-4		
PFHxA*	Not detected	42		ng/kg	4.15	307-24-4		
PFBS*	Not detected	42		ng/kg	4.15	375-73-5		
PFHpA*	Not detected	42		ng/kg	4.15	375-85-9		
PFPeS*	Not detected	42		ng/kg	4.15	2706-91-4		
6:2 FTSA*	Not detected	42		ng/kg	4.15	27619-97-2		
PFOA*	Not detected	42		ng/kg	4.15	335-67-1		
PFHxS*	Not detected	42		ng/kg	4.15	355-46-4		
PFHxS-LN*	Not detected	42		ng/kg	4.15	355-46-4-LN		
PFHxS-BR*	Not detected	42		ng/kg	4.15	355-46-4-BR		
PFNA*	Not detected	42		ng/kg	4.15	375-95-1		
8:2 FTSA*	Not detected	42		ng/kg	4.15	39108-34-4		
PFHpS*	Not detected	42		ng/kg	4.15	375-92-8		
PFDA*	Not detected	42		ng/kg	4.15	335-76-2		
N-MeFOSAA*	Not detected	42		ng/kg	4.15	2355-31-9		
EtFOSAA*	Not detected	42		ng/kg	4.15	2991-50-6		
PFOS*	260	42		ng/kg	4.15	1763-23-1		
PFOS-LN*	190	42		ng/kg	4.15	1763-23-1-LN		
PFOS-BR*	65	42		ng/kg	4.15	1763-23-1-BR		
PFUnDA*	Not detected	42		ng/kg	4.15	2058-94-8		
PFNS*	Not detected	42		ng/kg	4.15	68259-12-1		
PFDODA*	Not detected	42		ng/kg	4.15	307-55-1		
PFDS*	Not detected	42		ng/kg	4.15	335-77-3		
PFTTrDA*	Not detected	42		ng/kg	4.15	72629-94-8		
FOSA*	Not detected	42		ng/kg	4.15	754-91-6		
PFTeDA*	Not detected	42		ng/kg	4.15	376-06-7		
11Cl-PF3OUdS*	Not detected	42		ng/kg	4.15	763051-92-9		
9Cl-PF3ONS*	Not detected	42		ng/kg	4.15	756426-58-1		
ADONA*	Not detected	42		ng/kg	4.15	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43600.12 (continued)

Sample Tag: AOC12-TP01-W

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 12:03, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	42		ng/kg	4.15	13252-13-6		
PFECHS*	Not detected	42		ng/kg	4.15	67584-42-3		
PFBSA*	Not detected	42		ng/kg	4.15	30334-69-1		
PFHxSA*	Not detected	42		ng/kg	4.15	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43600.13

Sample Tag: AOC12-TP01-N

Collected Date/Time: 12/15/2022 09:21

Matrix: Soil

COC Reference: 158669

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.7	IR
1	250ml Plastic	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.14/6.55/10	ASTM D7968-17M	01/11/23 10:20	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 20:35, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	87	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 12:22, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	140		ng/kg	7.23	375-22-4		
PFPeA*	Not detected	72		ng/kg	7.23	2706-90-3		
4:2 FTSA*	Not detected	72		ng/kg	7.23	757124-72-4	I	
PFHxA*	Not detected	72		ng/kg	7.23	307-24-4		
PFBS*	Not detected	72		ng/kg	7.23	375-73-5		
PFHpA*	Not detected	72		ng/kg	7.23	375-85-9		
PFPeS*	Not detected	72		ng/kg	7.23	2706-91-4		
6:2 FTSA*	Not detected	72		ng/kg	7.23	27619-97-2	I	
PFOA*	Not detected	72		ng/kg	7.23	335-67-1		
PFHxS*	Not detected	72		ng/kg	7.23	355-46-4		
PFHxS-LN*	Not detected	72		ng/kg	7.23	355-46-4-LN		
PFHxS-BR*	Not detected	72		ng/kg	7.23	355-46-4-BR		
PFNA*	Not detected	72		ng/kg	7.23	375-95-1		
8:2 FTSA*	Not detected	72		ng/kg	7.23	39108-34-4	I	
PFHpS*	Not detected	72		ng/kg	7.23	375-92-8		
PFDA*	120	72		ng/kg	7.23	335-76-2		
N-MeFOSAA*	Not detected	72		ng/kg	7.23	2355-31-9		
EtFOSAA*	Not detected	72		ng/kg	7.23	2991-50-6		
PFOS*	970	72		ng/kg	7.23	1763-23-1		
PFOS-LN*	790	72		ng/kg	7.23	1763-23-1-LN		
PFOS-BR*	180	72		ng/kg	7.23	1763-23-1-BR		
PFUnDA*	Not detected	72		ng/kg	7.23	2058-94-8		
PFNS*	Not detected	72		ng/kg	7.23	68259-12-1		
PFDODA*	Not detected	72		ng/kg	7.23	307-55-1		
PFDS*	310	72		ng/kg	7.23	335-77-3		
PFTTrDA*	Not detected	72		ng/kg	7.23	72629-94-8		
FOSA*	Not detected	72		ng/kg	7.23	754-91-6		
PFTeDA*	Not detected	72		ng/kg	7.23	376-06-7		
11Cl-PF3OUdS*	Not detected	72		ng/kg	7.23	763051-92-9		
9Cl-PF3ONS*	Not detected	72		ng/kg	7.23	756426-58-1		

I-Matrix interference with internal standard



Analytical Laboratory Report

Lab Sample ID: S43600.13 (continued)

Sample Tag: AOC12-TP01-N

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 12:22, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
ADONA*	Not detected	72		ng/kg	7.23	919005-14-4		
HFPO-DA*	Not detected	72		ng/kg	7.23	13252-13-6		
PFECHS*	Not detected	72		ng/kg	7.23	67584-42-3		
PFBSA*	Not detected	72		ng/kg	7.23	30334-69-1		
PFHxSA*	Not detected	72		ng/kg	7.23	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43600.14

Sample Tag: AOC12-TP01-S

Collected Date/Time: 12/15/2022 09:27

Matrix: Soil

COC Reference: 158669

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.7	IR
1	250ml Plastic	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.67/6.52/10	ASTM D7968-17M	01/11/23 10:20	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 20:35, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	86	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 12:42, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	110		ng/kg	5.41	375-22-4		
PFPeA*	Not detected	54		ng/kg	5.41	2706-90-3		
4:2 FTSA*	Not detected	54		ng/kg	5.41	757124-72-4	I	
PFHxA*	Not detected	54		ng/kg	5.41	307-24-4		
PFBS*	Not detected	54		ng/kg	5.41	375-73-5		
PFHpA*	Not detected	54		ng/kg	5.41	375-85-9		
PFPeS*	Not detected	54		ng/kg	5.41	2706-91-4		
6:2 FTSA*	Not detected	54		ng/kg	5.41	27619-97-2	I	
PFOA*	86	54		ng/kg	5.41	335-67-1		
PFHxS*	Not detected	54		ng/kg	5.41	355-46-4		
PFHxS-LN*	Not detected	54		ng/kg	5.41	355-46-4-LN		
PFHxS-BR*	Not detected	54		ng/kg	5.41	355-46-4-BR		
PFNA*	64	54		ng/kg	5.41	375-95-1		
8:2 FTSA*	Not detected	54		ng/kg	5.41	39108-34-4	I	
PFHpS*	Not detected	54		ng/kg	5.41	375-92-8		
PFDA*	140	54		ng/kg	5.41	335-76-2		
N-MeFOSAA*	Not detected	54		ng/kg	5.41	2355-31-9		
EtFOSAA*	Not detected	54		ng/kg	5.41	2991-50-6		
PFOS*	1,400	54		ng/kg	5.41	1763-23-1		
PFOS-LN*	1,100	54		ng/kg	5.41	1763-23-1-LN		
PFOS-BR*	330	54		ng/kg	5.41	1763-23-1-BR		
PFUnDA*	Not detected	54		ng/kg	5.41	2058-94-8		
PFNS*	Not detected	54		ng/kg	5.41	68259-12-1		
PFDODA*	57	54		ng/kg	5.41	307-55-1		
PFDS*	410	54		ng/kg	5.41	335-77-3		
PFTTrDA*	Not detected	54		ng/kg	5.41	72629-94-8		
FOSA*	Not detected	54		ng/kg	5.41	754-91-6		
PFTeDA*	Not detected	54		ng/kg	5.41	376-06-7		
11Cl-PF3OUdS*	Not detected	54		ng/kg	5.41	763051-92-9		
9Cl-PF3ONS*	Not detected	54		ng/kg	5.41	756426-58-1		

I-Matrix interference with internal standard



Analytical Laboratory Report

Lab Sample ID: S43600.14 (continued)

Sample Tag: AOC12-TP01-S

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 12:42, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
ADONA*	Not detected	54		ng/kg	5.41	919005-14-4		
HFPO-DA*	Not detected	54		ng/kg	5.41	13252-13-6		
PFECHS*	Not detected	54		ng/kg	5.41	67584-42-3		
PFBSA*	Not detected	54		ng/kg	5.41	30334-69-1		
PFHxSA*	Not detected	54		ng/kg	5.41	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43600.15

Sample Tag: AOC12-TP01-B

Collected Date/Time: 12/15/2022 10:00

Matrix: Soil

COC Reference: 158669

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.7	IR
1	250ml Plastic	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.06/6.51/10	ASTM D7968-17M	01/11/23 10:20	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 20:35, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	88	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 13:01, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	150		ng/kg	7.33	375-22-4		
PFPeA*	Not detected	73		ng/kg	7.33	2706-90-3		
4:2 FTSA*	Not detected	73		ng/kg	7.33	757124-72-4	I	
PFHxA*	Not detected	73		ng/kg	7.33	307-24-4		
PFBS*	Not detected	73		ng/kg	7.33	375-73-5		
PFHpA*	Not detected	73		ng/kg	7.33	375-85-9		
PFPeS*	Not detected	73		ng/kg	7.33	2706-91-4		
6:2 FTSA*	Not detected	73		ng/kg	7.33	27619-97-2	I	
PFOA*	Not detected	73		ng/kg	7.33	335-67-1		
PFHxS*	Not detected	73		ng/kg	7.33	355-46-4		
PFHxS-LN*	Not detected	73		ng/kg	7.33	355-46-4-LN		
PFHxS-BR*	Not detected	73		ng/kg	7.33	355-46-4-BR		
PFNA*	Not detected	73		ng/kg	7.33	375-95-1		
8:2 FTSA*	Not detected	73		ng/kg	7.33	39108-34-4	I	
PFHpS*	Not detected	73		ng/kg	7.33	375-92-8		
PFDA*	Not detected	73		ng/kg	7.33	335-76-2		
N-MeFOSAA*	81	73		ng/kg	7.33	2355-31-9	I	
EtFOSAA*	950	73		ng/kg	7.33	2991-50-6	I	
PFOS*	830	73		ng/kg	7.33	1763-23-1		
PFOS-LN*	610	73		ng/kg	7.33	1763-23-1-LN		
PFOS-BR*	220	73		ng/kg	7.33	1763-23-1-BR		
PFUnDA*	Not detected	73		ng/kg	7.33	2058-94-8		
PFNS*	Not detected	73		ng/kg	7.33	68259-12-1		
PFDODA*	Not detected	73		ng/kg	7.33	307-55-1		
PFDS*	480	73		ng/kg	7.33	335-77-3		
PFTTrDA*	Not detected	73		ng/kg	7.33	72629-94-8		
FOSA*	Not detected	73		ng/kg	7.33	754-91-6		
PFTeDA*	Not detected	73		ng/kg	7.33	376-06-7		
11Cl-PF3OUdS*	Not detected	73		ng/kg	7.33	763051-92-9		
9Cl-PF3ONS*	Not detected	73		ng/kg	7.33	756426-58-1		

I-Matrix interference with internal standard



Analytical Laboratory Report

Lab Sample ID: S43600.15 (continued)

Sample Tag: AOC12-TP01-B

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 13:01, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
ADONA*	Not detected	73		ng/kg	7.33	919005-14-4		
HFPO-DA*	Not detected	73		ng/kg	7.33	13252-13-6		
PFECHS*	Not detected	73		ng/kg	7.33	67584-42-3		
PFBSA*	Not detected	73		ng/kg	7.33	30334-69-1		
PFHxSA*	Not detected	73		ng/kg	7.33	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43600.16

Sample Tag: DUP-11S

Collected Date/Time: 12/15/2022 00:01

Matrix: Soil

COC Reference: 158669

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.7	IR
1	250ml Plastic	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.97/6.48/10	ASTM D7968-17M	01/11/23 10:20	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 20:35, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	85	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 13:21, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	94		ng/kg	4.72	375-22-4		
PFPeA*	Not detected	47		ng/kg	4.72	2706-90-3		
4:2 FTSA*	Not detected	47		ng/kg	4.72	757124-72-4	I	
PFHxA*	Not detected	47		ng/kg	4.72	307-24-4		
PFBS*	Not detected	47		ng/kg	4.72	375-73-5		
PFHpA*	Not detected	47		ng/kg	4.72	375-85-9		
PFPeS*	Not detected	47		ng/kg	4.72	2706-91-4		
6:2 FTSA*	Not detected	47		ng/kg	4.72	27619-97-2	I	
PFOA*	Not detected	47		ng/kg	4.72	335-67-1		
PFHxS*	Not detected	47		ng/kg	4.72	355-46-4		
PFHxS-LN*	Not detected	47		ng/kg	4.72	355-46-4-LN		
PFHxS-BR*	Not detected	47		ng/kg	4.72	355-46-4-BR		
PFNA*	Not detected	47		ng/kg	4.72	375-95-1		
8:2 FTSA*	Not detected	47		ng/kg	4.72	39108-34-4	I	
PFHpS*	Not detected	47		ng/kg	4.72	375-92-8		
PFDA*	96	47		ng/kg	4.72	335-76-2		
N-MeFOSAA*	Not detected	47		ng/kg	4.72	2355-31-9		
EtFOSAA*	Not detected	47		ng/kg	4.72	2991-50-6		
PFOS*	980	47		ng/kg	4.72	1763-23-1		
PFOS-LN*	800	47		ng/kg	4.72	1763-23-1-LN		
PFOS-BR*	180	47		ng/kg	4.72	1763-23-1-BR		
PFUnDA*	Not detected	47		ng/kg	4.72	2058-94-8		
PFNS*	Not detected	47		ng/kg	4.72	68259-12-1		
PFDODA*	Not detected	47		ng/kg	4.72	307-55-1		
PFDS*	400	47		ng/kg	4.72	335-77-3		
PFTTrDA*	Not detected	47		ng/kg	4.72	72629-94-8		
FOSA*	Not detected	47		ng/kg	4.72	754-91-6		
PFTeDA*	Not detected	47		ng/kg	4.72	376-06-7		
11Cl-PF3OUdS*	Not detected	47		ng/kg	4.72	763051-92-9		
9Cl-PF3ONS*	Not detected	47		ng/kg	4.72	756426-58-1		

I-Matrix interference with internal standard



Analytical Laboratory Report

Lab Sample ID: S43600.16 (continued)

Sample Tag: DUP-11S

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 13:21, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
ADONA*	Not detected	47		ng/kg	4.72	919005-14-4		
HFPO-DA*	Not detected	47		ng/kg	4.72	13252-13-6		
PFECHS*	Not detected	47		ng/kg	4.72	67584-42-3		
PFBSA*	Not detected	47		ng/kg	4.72	30334-69-1		
PFHxSA*	Not detected	47		ng/kg	4.72	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43600.17

Sample Tag: AOC12-TP02-E

Collected Date/Time: 12/15/2022 10:42

Matrix: Soil

COC Reference: 158669

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.7	IR
1	250ml Plastic	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.36/6.53/10	ASTM D7968-17M	01/11/23 10:20	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 20:35, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	96	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 13:40, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	74		ng/kg	3.68	375-22-4		
PFPeA*	Not detected	37		ng/kg	3.68	2706-90-3		
4:2 FTSA*	Not detected	37		ng/kg	3.68	757124-72-4		
PFHxA*	Not detected	37		ng/kg	3.68	307-24-4		
PFBS*	Not detected	37		ng/kg	3.68	375-73-5		
PFHpA*	Not detected	37		ng/kg	3.68	375-85-9		
PFPeS*	Not detected	37		ng/kg	3.68	2706-91-4		
6:2 FTSA*	Not detected	37		ng/kg	3.68	27619-97-2		
PFOA*	68	37		ng/kg	3.68	335-67-1		
PFHxS*	Not detected	37		ng/kg	3.68	355-46-4		
PFHxS-LN*	Not detected	37		ng/kg	3.68	355-46-4-LN		
PFHxS-BR*	Not detected	37		ng/kg	3.68	355-46-4-BR		
PFNA*	Not detected	37		ng/kg	3.68	375-95-1		
8:2 FTSA*	Not detected	37		ng/kg	3.68	39108-34-4		
PFHpS*	Not detected	37		ng/kg	3.68	375-92-8		
PFDA*	Not detected	37		ng/kg	3.68	335-76-2		
N-MeFOSAA*	Not detected	37		ng/kg	3.68	2355-31-9		
EtFOSAA*	Not detected	37		ng/kg	3.68	2991-50-6		
PFOS*	120	37		ng/kg	3.68	1763-23-1		
PFOS-LN*	Not detected	37		ng/kg	3.68	1763-23-1-LN		
PFOS-BR*	100	37		ng/kg	3.68	1763-23-1-BR		
PFUnDA*	Not detected	37		ng/kg	3.68	2058-94-8		
PFNS*	Not detected	37		ng/kg	3.68	68259-12-1		
PFDaDA*	Not detected	37		ng/kg	3.68	307-55-1		
PFDS*	Not detected	37		ng/kg	3.68	335-77-3		
PFTTrDA*	Not detected	37		ng/kg	3.68	72629-94-8		
FOSA*	Not detected	37		ng/kg	3.68	754-91-6		
PFTeDA*	Not detected	37		ng/kg	3.68	376-06-7		
11Cl-PF3OUdS*	Not detected	37		ng/kg	3.68	763051-92-9		
9Cl-PF3ONS*	Not detected	37		ng/kg	3.68	756426-58-1		
ADONA*	Not detected	37		ng/kg	3.68	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43600.17 (continued)

Sample Tag: AOC12-TP02-E

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 13:40, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	37		ng/kg	3.68	13252-13-6		
PFECHS*	Not detected	37		ng/kg	3.68	67584-42-3		
PFBSA*	Not detected	37		ng/kg	3.68	30334-69-1		
PFHxSA*	Not detected	37		ng/kg	3.68	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43600.18

Sample Tag: AOC12-TP02-W

Collected Date/Time: 12/15/2022 10:52

Matrix: Soil

COC Reference: 158669

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.7	IR
1	250ml Plastic	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.02/6.49/10	ASTM D7968-17M	01/11/23 10:20	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 20:35, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	93	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 14:00, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	85		ng/kg	4.25	375-22-4		
PFPeA*	Not detected	43		ng/kg	4.25	2706-90-3		
4:2 FTSA*	Not detected	43		ng/kg	4.25	757124-72-4		
PFHxA*	Not detected	43		ng/kg	4.25	307-24-4		
PFBS*	Not detected	43		ng/kg	4.25	375-73-5		
PFHpA*	Not detected	43		ng/kg	4.25	375-85-9		
PFPeS*	Not detected	43		ng/kg	4.25	2706-91-4		
6:2 FTSA*	Not detected	43		ng/kg	4.25	27619-97-2		
PFOA*	58	43		ng/kg	4.25	335-67-1		
PFHxS*	Not detected	43		ng/kg	4.25	355-46-4		
PFHxS-LN*	Not detected	43		ng/kg	4.25	355-46-4-LN		
PFHxS-BR*	Not detected	43		ng/kg	4.25	355-46-4-BR		
PFNA*	Not detected	43		ng/kg	4.25	375-95-1		
8:2 FTSA*	Not detected	43		ng/kg	4.25	39108-34-4		
PFHpS*	Not detected	43		ng/kg	4.25	375-92-8		
PFDA*	Not detected	43		ng/kg	4.25	335-76-2		
N-MeFOSAA*	Not detected	43		ng/kg	4.25	2355-31-9		
EtFOSAA*	Not detected	43		ng/kg	4.25	2991-50-6		
PFOS*	250	43		ng/kg	4.25	1763-23-1		
PFOS-LN*	72	43		ng/kg	4.25	1763-23-1-LN		
PFOS-BR*	170	43		ng/kg	4.25	1763-23-1-BR		
PFUnDA*	Not detected	43		ng/kg	4.25	2058-94-8		
PFNS*	Not detected	43		ng/kg	4.25	68259-12-1		
PFDaDA*	Not detected	43		ng/kg	4.25	307-55-1		
PFDS*	Not detected	43		ng/kg	4.25	335-77-3		
PFTTrDA*	Not detected	43		ng/kg	4.25	72629-94-8		
FOSA*	Not detected	43		ng/kg	4.25	754-91-6		
PFTeDA*	Not detected	43		ng/kg	4.25	376-06-7		
11Cl-PF3OUdS*	Not detected	43		ng/kg	4.25	763051-92-9		
9Cl-PF3ONS*	Not detected	43		ng/kg	4.25	756426-58-1		
ADONA*	Not detected	43		ng/kg	4.25	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43600.18 (continued)

Sample Tag: AOC12-TP02-W

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 14:00, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	43		ng/kg	4.25	13252-13-6		
PFECHS*	Not detected	43		ng/kg	4.25	67584-42-3		
PFBSA*	Not detected	43		ng/kg	4.25	30334-69-1		
PFHxSA*	Not detected	43		ng/kg	4.25	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43600.19

Sample Tag: AOC12-TP02-N

Collected Date/Time: 12/15/2022 11:00

Matrix: Soil

COC Reference: 158669

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.7	IR
1	250ml Plastic	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.98/6.51/10	ASTM D7968-17M	01/11/23 12:00	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 20:35, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	92	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 15:26, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	63		ng/kg	3.13	375-22-4		
PFPeA*	Not detected	31		ng/kg	3.13	2706-90-3		
4:2 FTSA*	Not detected	31		ng/kg	3.13	757124-72-4		
PFHxA*	Not detected	31		ng/kg	3.13	307-24-4		
PFBS*	Not detected	31		ng/kg	3.13	375-73-5		
PFHpA*	Not detected	31		ng/kg	3.13	375-85-9		
PFPeS*	Not detected	31		ng/kg	3.13	2706-91-4		
6:2 FTSA*	Not detected	31		ng/kg	3.13	27619-97-2		
PFOA*	Not detected	31		ng/kg	3.13	335-67-1		
PFHxS*	Not detected	31		ng/kg	3.13	355-46-4		
PFHxS-LN*	Not detected	31		ng/kg	3.13	355-46-4-LN		
PFHxS-BR*	Not detected	31		ng/kg	3.13	355-46-4-BR		
PFNA*	Not detected	31		ng/kg	3.13	375-95-1		
8:2 FTSA*	Not detected	31		ng/kg	3.13	39108-34-4		
PFHpS*	Not detected	31		ng/kg	3.13	375-92-8		
PFDA*	Not detected	31		ng/kg	3.13	335-76-2		
N-MeFOSAA*	Not detected	31		ng/kg	3.13	2355-31-9		
EtFOSAA*	Not detected	31		ng/kg	3.13	2991-50-6		
PFOS*	110	31		ng/kg	3.13	1763-23-1		
PFOS-LN*	Not detected	31		ng/kg	3.13	1763-23-1-LN		
PFOS-BR*	77	31		ng/kg	3.13	1763-23-1-BR		
PFUnDA*	Not detected	31		ng/kg	3.13	2058-94-8		
PFNS*	Not detected	31		ng/kg	3.13	68259-12-1		
PFDODA*	Not detected	31		ng/kg	3.13	307-55-1		
PFDS*	Not detected	31		ng/kg	3.13	335-77-3		
PFTTrDA*	Not detected	31		ng/kg	3.13	72629-94-8		
FOSA*	Not detected	31		ng/kg	3.13	754-91-6		
PFTeDA*	Not detected	31		ng/kg	3.13	376-06-7		
11Cl-PF3OUdS*	Not detected	31		ng/kg	3.13	763051-92-9		
9Cl-PF3ONS*	Not detected	31		ng/kg	3.13	756426-58-1		
ADONA*	Not detected	31		ng/kg	3.13	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43600.19 (continued)

Sample Tag: AOC12-TP02-N

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 15:26, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	31		ng/kg	3.13	13252-13-6		
PFECHS*	Not detected	31		ng/kg	3.13	67584-42-3		
PFBSA*	Not detected	31		ng/kg	3.13	30334-69-1		
PFHxSA*	Not detected	31		ng/kg	3.13	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43600.20

Sample Tag: AOC12-TP02-S

Collected Date/Time: 12/15/2022 11:00

Matrix: Soil

COC Reference: 158669

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.7	IR
1	250ml Plastic	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.21/6.51/10	ASTM D7968-17M	01/11/23 12:00	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 20:35, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	90	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 15:45, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	82		ng/kg	4.12	375-22-4		
PFPeA*	Not detected	41		ng/kg	4.12	2706-90-3		
4:2 FTSA*	Not detected	41		ng/kg	4.12	757124-72-4		
PFHxA*	Not detected	41		ng/kg	4.12	307-24-4		
PFBS*	Not detected	41		ng/kg	4.12	375-73-5		
PFHpA*	Not detected	41		ng/kg	4.12	375-85-9		
PFPeS*	Not detected	41		ng/kg	4.12	2706-91-4		
6:2 FTSA*	Not detected	41		ng/kg	4.12	27619-97-2		
PFOA*	73	41		ng/kg	4.12	335-67-1		
PFHxS*	Not detected	41		ng/kg	4.12	355-46-4		
PFHxS-LN*	Not detected	41		ng/kg	4.12	355-46-4-LN		
PFHxS-BR*	Not detected	41		ng/kg	4.12	355-46-4-BR		
PFNA*	Not detected	41		ng/kg	4.12	375-95-1		
8:2 FTSA*	Not detected	41		ng/kg	4.12	39108-34-4		
PFHpS*	Not detected	41		ng/kg	4.12	375-92-8		
PFDA*	Not detected	41		ng/kg	4.12	335-76-2		
N-MeFOSAA*	Not detected	41		ng/kg	4.12	2355-31-9		
EtFOSAA*	Not detected	41		ng/kg	4.12	2991-50-6		
PFOS*	170	41		ng/kg	4.12	1763-23-1		
PFOS-LN*	Not detected	41		ng/kg	4.12	1763-23-1-LN		
PFOS-BR*	150	41		ng/kg	4.12	1763-23-1-BR		
PFUnDA*	Not detected	41		ng/kg	4.12	2058-94-8		
PFNS*	Not detected	41		ng/kg	4.12	68259-12-1		
PFDODA*	Not detected	41		ng/kg	4.12	307-55-1		
PFDS*	Not detected	41		ng/kg	4.12	335-77-3		
PFTTrDA*	Not detected	41		ng/kg	4.12	72629-94-8		
FOSA*	Not detected	41		ng/kg	4.12	754-91-6		
PFTeDA*	Not detected	41		ng/kg	4.12	376-06-7		
11Cl-PF3OUdS*	Not detected	41		ng/kg	4.12	763051-92-9		
9Cl-PF3ONS*	Not detected	41		ng/kg	4.12	756426-58-1		
ADONA*	Not detected	41		ng/kg	4.12	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43600.20 (continued)

Sample Tag: AOC12-TP02-S

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 15:45, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	41		ng/kg	4.12	13252-13-6		
PFECHS*	Not detected	41		ng/kg	4.12	67584-42-3		
PFBSA*	Not detected	41		ng/kg	4.12	30334-69-1		
PFHxSA*	Not detected	41		ng/kg	4.12	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43600.21

Sample Tag: AOC12-TP02-B

Collected Date/Time: 12/15/2022 11:16

Matrix: Soil

COC Reference: 158669

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.7	IR
1	250ml Plastic	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	7.77/6.51/10	ASTM D7968-17M	01/11/23 12:00	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 20:35, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 16:05, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	170		ng/kg	8.35	375-22-4		
PFPeA*	Not detected	84		ng/kg	8.35	2706-90-3		
4:2 FTSA*	Not detected	84		ng/kg	8.35	757124-72-4		
PFHxA*	Not detected	84		ng/kg	8.35	307-24-4		
PFBS*	Not detected	84		ng/kg	8.35	375-73-5		
PFHpA*	Not detected	84		ng/kg	8.35	375-85-9		
PFPeS*	Not detected	84		ng/kg	8.35	2706-91-4		
6:2 FTSA*	Not detected	84		ng/kg	8.35	27619-97-2		
PFOA*	Not detected	84		ng/kg	8.35	335-67-1		
PFHxS*	Not detected	84		ng/kg	8.35	355-46-4		
PFHxS-LN*	Not detected	84		ng/kg	8.35	355-46-4-LN		
PFHxS-BR*	Not detected	84		ng/kg	8.35	355-46-4-BR		
PFNA*	Not detected	84		ng/kg	8.35	375-95-1		
8:2 FTSA*	Not detected	84		ng/kg	8.35	39108-34-4		
PFHpS*	Not detected	84		ng/kg	8.35	375-92-8		
PFDA*	Not detected	84		ng/kg	8.35	335-76-2		
N-MeFOSAA*	Not detected	84		ng/kg	8.35	2355-31-9		
EtFOSAA*	Not detected	84		ng/kg	8.35	2991-50-6		
PFOS*	480	84		ng/kg	8.35	1763-23-1		
PFOS-LN*	260	84		ng/kg	8.35	1763-23-1-LN		
PFOS-BR*	220	84		ng/kg	8.35	1763-23-1-BR		
PFUnDA*	Not detected	84		ng/kg	8.35	2058-94-8		
PFNS*	Not detected	84		ng/kg	8.35	68259-12-1		
PFDODA*	Not detected	84		ng/kg	8.35	307-55-1		
PFDS*	Not detected	84		ng/kg	8.35	335-77-3		
PFTTrDA*	Not detected	84		ng/kg	8.35	72629-94-8		
FOSA*	Not detected	84		ng/kg	8.35	754-91-6		
PFTeDA*	Not detected	84		ng/kg	8.35	376-06-7		
11Cl-PF3OUdS*	Not detected	84		ng/kg	8.35	763051-92-9		
9Cl-PF3ONS*	Not detected	84		ng/kg	8.35	756426-58-1		
ADONA*	Not detected	84		ng/kg	8.35	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43600.21 (continued)

Sample Tag: AOC12-TP02-B

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 16:05, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	84		ng/kg	8.35	13252-13-6		
PFECHS*	Not detected	84		ng/kg	8.35	67584-42-3		
PFBSA*	Not detected	84		ng/kg	8.35	30334-69-1		
PFHxSA*	Not detected	84		ng/kg	8.35	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43600.22

Sample Tag: DUP-12S

Collected Date/Time: 12/15/2022 00:01

Matrix: Soil

COC Reference: 158669

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.7	IR
1	250ml Plastic	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.49/6.48/10	ASTM D7968-17M	01/11/23 12:00	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 20:35, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	96	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 16:24, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	69		ng/kg	3.46	375-22-4		
PFPeA*	Not detected	35		ng/kg	3.46	2706-90-3		
4:2 FTSA*	Not detected	35		ng/kg	3.46	757124-72-4		
PFHxA*	Not detected	35		ng/kg	3.46	307-24-4		
PFBS*	Not detected	35		ng/kg	3.46	375-73-5		
PFHpA*	Not detected	35		ng/kg	3.46	375-85-9		
PFPeS*	Not detected	35		ng/kg	3.46	2706-91-4		
6:2 FTSA*	Not detected	35		ng/kg	3.46	27619-97-2		
PFOA*	58	35		ng/kg	3.46	335-67-1		
PFHxS*	Not detected	35		ng/kg	3.46	355-46-4		
PFHxS-LN*	Not detected	35		ng/kg	3.46	355-46-4-LN		
PFHxS-BR*	Not detected	35		ng/kg	3.46	355-46-4-BR		
PFNA*	Not detected	35		ng/kg	3.46	375-95-1		
8:2 FTSA*	Not detected	35		ng/kg	3.46	39108-34-4		
PFHpS*	Not detected	35		ng/kg	3.46	375-92-8		
PFDA*	Not detected	35		ng/kg	3.46	335-76-2		
N-MeFOSAA*	Not detected	35		ng/kg	3.46	2355-31-9		
EtFOSAA*	Not detected	35		ng/kg	3.46	2991-50-6		
PFOS*	94	35		ng/kg	3.46	1763-23-1		
PFOS-LN*	Not detected	35		ng/kg	3.46	1763-23-1-LN		
PFOS-BR*	85	35		ng/kg	3.46	1763-23-1-BR		
PFUnDA*	Not detected	35		ng/kg	3.46	2058-94-8		
PFNS*	Not detected	35		ng/kg	3.46	68259-12-1		
PFDODA*	Not detected	35		ng/kg	3.46	307-55-1		
PFDS*	Not detected	35		ng/kg	3.46	335-77-3		
PFTTrDA*	Not detected	35		ng/kg	3.46	72629-94-8		
FOSA*	Not detected	35		ng/kg	3.46	754-91-6		
PFTeDA*	Not detected	35		ng/kg	3.46	376-06-7		
11Cl-PF3OUdS*	Not detected	35		ng/kg	3.46	763051-92-9		
9Cl-PF3ONS*	Not detected	35		ng/kg	3.46	756426-58-1		
ADONA*	Not detected	35		ng/kg	3.46	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43600.22 (continued)

Sample Tag: DUP-12S

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 16:24, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	35		ng/kg	3.46	13252-13-6		
PFECHS*	Not detected	35		ng/kg	3.46	67584-42-3		
PFBSA*	Not detected	35		ng/kg	3.46	30334-69-1		
PFHxSA*	Not detected	35		ng/kg	3.46	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43600.23

Sample Tag: AOC12-TP03-E

Collected Date/Time: 12/15/2022 12:30

Matrix: Soil

COC Reference: 158671

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.7	IR
1	250ml Plastic	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.48/6.48/10	ASTM D7968-17M	01/11/23 12:00	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 20:35, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 16:44, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	110		ng/kg	5.26	375-22-4		
PFPeA*	Not detected	53		ng/kg	5.26	2706-90-3		
4:2 FTSA*	Not detected	53		ng/kg	5.26	757124-72-4		
PFHxA*	Not detected	53		ng/kg	5.26	307-24-4		
PFBS*	Not detected	53		ng/kg	5.26	375-73-5		
PFHpA*	Not detected	53		ng/kg	5.26	375-85-9		
PFPeS*	Not detected	53		ng/kg	5.26	2706-91-4		
6:2 FTSA*	Not detected	53		ng/kg	5.26	27619-97-2		
PFOA*	Not detected	53		ng/kg	5.26	335-67-1		
PFHxS*	Not detected	53		ng/kg	5.26	355-46-4		
PFHxS-LN*	Not detected	53		ng/kg	5.26	355-46-4-LN		
PFHxS-BR*	Not detected	53		ng/kg	5.26	355-46-4-BR		
PFNA*	Not detected	53		ng/kg	5.26	375-95-1		
8:2 FTSA*	Not detected	53		ng/kg	5.26	39108-34-4		
PFHpS*	Not detected	53		ng/kg	5.26	375-92-8		
PFDA*	Not detected	53		ng/kg	5.26	335-76-2		
N-MeFOSAA*	Not detected	53		ng/kg	5.26	2355-31-9		
EtFOSAA*	Not detected	53		ng/kg	5.26	2991-50-6		
PFOS*	56	53		ng/kg	5.26	1763-23-1		
PFOS-LN*	Not detected	53		ng/kg	5.26	1763-23-1-LN		
PFOS-BR*	Not detected	53		ng/kg	5.26	1763-23-1-BR		
PFUnDA*	Not detected	53		ng/kg	5.26	2058-94-8		
PFNS*	Not detected	53		ng/kg	5.26	68259-12-1		
PFDODA*	Not detected	53		ng/kg	5.26	307-55-1		
PFDS*	Not detected	53		ng/kg	5.26	335-77-3		
PFTTrDA*	Not detected	53		ng/kg	5.26	72629-94-8		
FOSA*	Not detected	53		ng/kg	5.26	754-91-6		
PFTeDA*	Not detected	53		ng/kg	5.26	376-06-7		
11Cl-PF3OUdS*	Not detected	53		ng/kg	5.26	763051-92-9		
9Cl-PF3ONS*	Not detected	53		ng/kg	5.26	756426-58-1		
ADONA*	Not detected	53		ng/kg	5.26	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43600.23 (continued)

Sample Tag: AOC12-TP03-E

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 16:44, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	53		ng/kg	5.26	13252-13-6		
PFECHS*	Not detected	53		ng/kg	5.26	67584-42-3		
PFBSA*	Not detected	53		ng/kg	5.26	30334-69-1		
PFHxSA*	Not detected	53		ng/kg	5.26	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43600.24

Sample Tag: AOC12-TP03-W

Collected Date/Time: 12/15/2022 12:35

Matrix: Soil

COC Reference: 158671

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.7	IR
1	250ml Plastic	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.21/6.50/10	ASTM D7968-17M	01/11/23 12:00	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 20:35, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 17:04, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	120		ng/kg	6.22	375-22-4		
PFPeA*	Not detected	62		ng/kg	6.22	2706-90-3		
4:2 FTSA*	Not detected	62		ng/kg	6.22	757124-72-4		
PFHxA*	Not detected	62		ng/kg	6.22	307-24-4		
PFBS*	Not detected	62		ng/kg	6.22	375-73-5		
PFHpA*	Not detected	62		ng/kg	6.22	375-85-9		
PFPeS*	Not detected	62		ng/kg	6.22	2706-91-4		
6:2 FTSA*	Not detected	62		ng/kg	6.22	27619-97-2		
PFOA*	Not detected	62		ng/kg	6.22	335-67-1		
PFHxS*	Not detected	62		ng/kg	6.22	355-46-4		
PFHxS-LN*	Not detected	62		ng/kg	6.22	355-46-4-LN		
PFHxS-BR*	Not detected	62		ng/kg	6.22	355-46-4-BR		
PFNA*	Not detected	62		ng/kg	6.22	375-95-1		
8:2 FTSA*	Not detected	62		ng/kg	6.22	39108-34-4		
PFHpS*	Not detected	62		ng/kg	6.22	375-92-8		
PFDA*	Not detected	62		ng/kg	6.22	335-76-2		
N-MeFOSAA*	Not detected	62		ng/kg	6.22	2355-31-9		
EtFOSAA*	Not detected	62		ng/kg	6.22	2991-50-6		
PFOS*	87	62		ng/kg	6.22	1763-23-1		
PFOS-LN*	Not detected	62		ng/kg	6.22	1763-23-1-LN		
PFOS-BR*	Not detected	62		ng/kg	6.22	1763-23-1-BR		
PFUnDA*	Not detected	62		ng/kg	6.22	2058-94-8		
PFNS*	Not detected	62		ng/kg	6.22	68259-12-1		
PFDaDA*	Not detected	62		ng/kg	6.22	307-55-1		
PFDS*	Not detected	62		ng/kg	6.22	335-77-3		
PFTTrDA*	Not detected	62		ng/kg	6.22	72629-94-8		
FOSA*	Not detected	62		ng/kg	6.22	754-91-6		
PFTeDA*	Not detected	62		ng/kg	6.22	376-06-7		
11Cl-PF3OUdS*	Not detected	62		ng/kg	6.22	763051-92-9		
9Cl-PF3ONS*	Not detected	62		ng/kg	6.22	756426-58-1		
ADONA*	Not detected	62		ng/kg	6.22	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43600.24 (continued)

Sample Tag: AOC12-TP03-W

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 17:04, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	62		ng/kg	6.22	13252-13-6		
PFECHS*	Not detected	62		ng/kg	6.22	67584-42-3		
PFBSA*	Not detected	62		ng/kg	6.22	30334-69-1		
PFHxSA*	Not detected	62		ng/kg	6.22	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43600.25

Sample Tag: AOC12-TP03-N

Collected Date/Time: 12/15/2022 12:45

Matrix: Soil

COC Reference: 158671

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.7	IR
1	250ml Plastic	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.78/6.48/10	ASTM D7968-17M	01/11/23 12:00	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 20:35, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	95	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 17:23, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	64		ng/kg	3.19	375-22-4		
PFPeA*	Not detected	32		ng/kg	3.19	2706-90-3		
4:2 FTSA*	Not detected	32		ng/kg	3.19	757124-72-4		
PFHxA*	Not detected	32		ng/kg	3.19	307-24-4		
PFBS*	Not detected	32		ng/kg	3.19	375-73-5		
PFHpA*	Not detected	32		ng/kg	3.19	375-85-9		
PFPeS*	Not detected	32		ng/kg	3.19	2706-91-4		
6:2 FTSA*	Not detected	32		ng/kg	3.19	27619-97-2		
PFOA*	Not detected	32		ng/kg	3.19	335-67-1		
PFHxS*	Not detected	32		ng/kg	3.19	355-46-4		
PFHxS-LN*	Not detected	32		ng/kg	3.19	355-46-4-LN		
PFHxS-BR*	Not detected	32		ng/kg	3.19	355-46-4-BR		
PFNA*	Not detected	32		ng/kg	3.19	375-95-1		
8:2 FTSA*	Not detected	32		ng/kg	3.19	39108-34-4		
PFHpS*	Not detected	32		ng/kg	3.19	375-92-8		
PFDA*	Not detected	32		ng/kg	3.19	335-76-2		
N-MeFOSAA*	Not detected	32		ng/kg	3.19	2355-31-9		
EtFOSAA*	Not detected	32		ng/kg	3.19	2991-50-6		
PFOS*	55	32		ng/kg	3.19	1763-23-1		
PFOS-LN*	41	32		ng/kg	3.19	1763-23-1-LN		
PFOS-BR*	Not detected	32		ng/kg	3.19	1763-23-1-BR		
PFUnDA*	Not detected	32		ng/kg	3.19	2058-94-8		
PFNS*	Not detected	32		ng/kg	3.19	68259-12-1		
PFDODA*	Not detected	32		ng/kg	3.19	307-55-1		
PFDS*	Not detected	32		ng/kg	3.19	335-77-3		
PFTTrDA*	Not detected	32		ng/kg	3.19	72629-94-8		
FOSA*	Not detected	32		ng/kg	3.19	754-91-6		
PFTeDA*	Not detected	32		ng/kg	3.19	376-06-7		
11Cl-PF3OUdS*	Not detected	32		ng/kg	3.19	763051-92-9		
9Cl-PF3ONS*	Not detected	32		ng/kg	3.19	756426-58-1		
ADONA*	Not detected	32		ng/kg	3.19	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43600.25 (continued)

Sample Tag: AOC12-TP03-N

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 17:23, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	32		ng/kg	3.19	13252-13-6		
PFECHS*	Not detected	32		ng/kg	3.19	67584-42-3		
PFBSA*	Not detected	32		ng/kg	3.19	30334-69-1		
PFHxSA*	Not detected	32		ng/kg	3.19	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43600.26

Sample Tag: AOC12-TP03-S

Collected Date/Time: 12/15/2022 12:45

Matrix: Soil

COC Reference: 158671

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.7	IR
1	250ml Plastic	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	9.10/6.47/10	ASTM D7968-17M	01/11/23 12:00	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 20:35, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	94	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 17:43, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	69		ng/kg	3.43	375-22-4		
PFPeA*	Not detected	34		ng/kg	3.43	2706-90-3		
4:2 FTSA*	Not detected	34		ng/kg	3.43	757124-72-4		
PFHxA*	Not detected	34		ng/kg	3.43	307-24-4		
PFBS*	Not detected	34		ng/kg	3.43	375-73-5		
PFHpA*	Not detected	34		ng/kg	3.43	375-85-9		
PFPeS*	Not detected	34		ng/kg	3.43	2706-91-4		
6:2 FTSA*	Not detected	34		ng/kg	3.43	27619-97-2		
PFOA*	Not detected	34		ng/kg	3.43	335-67-1		
PFHxS*	Not detected	34		ng/kg	3.43	355-46-4		
PFHxS-LN*	Not detected	34		ng/kg	3.43	355-46-4-LN		
PFHxS-BR*	Not detected	34		ng/kg	3.43	355-46-4-BR		
PFNA*	Not detected	34		ng/kg	3.43	375-95-1		
8:2 FTSA*	Not detected	34		ng/kg	3.43	39108-34-4		
PFHpS*	Not detected	34		ng/kg	3.43	375-92-8		
PFDA*	Not detected	34		ng/kg	3.43	335-76-2		
N-MeFOSAA*	Not detected	34		ng/kg	3.43	2355-31-9		
EtFOSAA*	Not detected	34		ng/kg	3.43	2991-50-6		
PFOS*	35	34		ng/kg	3.43	1763-23-1		
PFOS-LN*	Not detected	34		ng/kg	3.43	1763-23-1-LN		
PFOS-BR*	Not detected	34		ng/kg	3.43	1763-23-1-BR		
PFUnDA*	Not detected	34		ng/kg	3.43	2058-94-8		
PFNS*	Not detected	34		ng/kg	3.43	68259-12-1		
PFDODA*	Not detected	34		ng/kg	3.43	307-55-1		
PFDS*	Not detected	34		ng/kg	3.43	335-77-3		
PFTTrDA*	Not detected	34		ng/kg	3.43	72629-94-8		
FOSA*	Not detected	34		ng/kg	3.43	754-91-6		
PFTeDA*	Not detected	34		ng/kg	3.43	376-06-7		
11Cl-PF3OUdS*	Not detected	34		ng/kg	3.43	763051-92-9		
9Cl-PF3ONS*	Not detected	34		ng/kg	3.43	756426-58-1		
ADONA*	Not detected	34		ng/kg	3.43	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43600.26 (continued)

Sample Tag: AOC12-TP03-S

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 17:43, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	34		ng/kg	3.43	13252-13-6		
PFECHS*	Not detected	34		ng/kg	3.43	67584-42-3		
PFBSA*	Not detected	34		ng/kg	3.43	30334-69-1		
PFHxSA*	Not detected	34		ng/kg	3.43	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43600.27

Sample Tag: AOC12-TP03-B

Collected Date/Time: 12/15/2022 13:05

Matrix: Soil

COC Reference: 158671

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.7	IR
1	250ml Plastic	None	Yes	3.7	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	8.87/6.52/10	ASTM D7968-17M	01/11/23 12:00	PTW	

Inorganics

Method: SM2540B, Run Date: 12/16/22 20:35, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Total Solids*	91	1		%	1			

Organics

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 18:02, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	94		ng/kg	4.68	375-22-4		
PFPeA*	Not detected	47		ng/kg	4.68	2706-90-3		
4:2 FTSA*	Not detected	47		ng/kg	4.68	757124-72-4		
PFHxA*	Not detected	47		ng/kg	4.68	307-24-4		
PFBS*	Not detected	47		ng/kg	4.68	375-73-5		
PFHpA*	Not detected	47		ng/kg	4.68	375-85-9		
PFPeS*	Not detected	47		ng/kg	4.68	2706-91-4		
6:2 FTSA*	Not detected	47		ng/kg	4.68	27619-97-2		
PFOA*	57	47		ng/kg	4.68	335-67-1		
PFHxS*	Not detected	47		ng/kg	4.68	355-46-4		
PFHxS-LN*	Not detected	47		ng/kg	4.68	355-46-4-LN		
PFHxS-BR*	Not detected	47		ng/kg	4.68	355-46-4-BR		
PFNA*	Not detected	47		ng/kg	4.68	375-95-1		
8:2 FTSA*	Not detected	47		ng/kg	4.68	39108-34-4		
PFHpS*	Not detected	47		ng/kg	4.68	375-92-8		
PFDA*	Not detected	47		ng/kg	4.68	335-76-2		
N-MeFOSAA*	Not detected	47		ng/kg	4.68	2355-31-9		
EtFOSAA*	Not detected	47		ng/kg	4.68	2991-50-6		
PFOS*	240	47		ng/kg	4.68	1763-23-1		
PFOS-LN*	200	47		ng/kg	4.68	1763-23-1-LN		
PFOS-BR*	Not detected	47		ng/kg	4.68	1763-23-1-BR		
PFUnDA*	Not detected	47		ng/kg	4.68	2058-94-8		
PFNS*	Not detected	47		ng/kg	4.68	68259-12-1		
PFDODA*	Not detected	47		ng/kg	4.68	307-55-1		
PFDS*	Not detected	47		ng/kg	4.68	335-77-3		
PFTTrDA*	Not detected	47		ng/kg	4.68	72629-94-8		
FOSA*	Not detected	47		ng/kg	4.68	754-91-6		
PFTeDA*	Not detected	47		ng/kg	4.68	376-06-7		
11Cl-PF3OUdS*	Not detected	47		ng/kg	4.68	763051-92-9		
9Cl-PF3ONS*	Not detected	47		ng/kg	4.68	756426-58-1		
ADONA*	Not detected	47		ng/kg	4.68	919005-14-4		



Analytical Laboratory Report

Lab Sample ID: S43600.27 (continued)

Sample Tag: AOC12-TP03-B

31 PFAs, Method: ASTM D7968-17M, Run Date: 01/12/23 18:02, Analyst: KCV (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
HFPO-DA*	Not detected	47		ng/kg	4.68	13252-13-6		
PFECHS*	Not detected	47		ng/kg	4.68	67584-42-3		
PFBSA*	Not detected	47		ng/kg	4.68	30334-69-1		
PFHxSA*	Not detected	47		ng/kg	4.68	41997-13-1		

Merit Laboratories Login Checklist

Lab Set ID:S43600

Client:TRC (TRC)

Project: Det. Axle Southern Bound.

Submitted: 12/16/2022 12:00 Login User: MMC

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place

Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Selection	Description	Note
Sample Receiving		
01.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples are received at 4C +/- 2C Thermometer # IR 3.7
02.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Received on ice/ cooling process begun
03.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples shipped
04.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples left in 24 hr. drop box
05.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Are there custody seals/tape or is the drop box locked
Chain of Custody		
06.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC adequately filled out
07.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC signed and relinquished to the lab
08.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sample tag on bottles match COC
09.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Subcontracting needed? Subcontracted to:
Preservation		
10.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Do sample have correct chemical preservation
11.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Completed pH checks on preserved samples? (no VOAs)
12.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Did any samples need to be preserved in the lab?
Bottle Conditions		
13.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	All bottles intact
14.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Appropriate analytical bottles are used
15.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Merit bottles used
16.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sufficient sample volume received
17.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples require laboratory filtration
18.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples submitted within holding time
19.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Do water VOC or TOX bottles contain headspace

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____



2680 East Lansing Dr., East Lansing, MI 48823
 Phone (517) 332-0167 Fax (517) 332-4034
 www.meritlabs.com

C.O.C. PAGE # _____ OF _____ 158671

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME: *Kelly Cratsenburg*
 COMPANY: *J&E*
 ADDRESS: *1540 Eisenhower Place*
 CITY: *Ann Arbor* STATE: *MI* ZIP CODE: *48108*
 PHONE NO.: _____ CELL NO.: _____ P.O. NO.: *193431*
 E-MAIL ADDRESS: *kcratsenburg@jrecompany.com* QUOTE NO.: _____

CONTACT NAME: _____ SAME
 COMPANY: _____
 ADDRESS: _____
 CITY: _____ STATE: _____ ZIP CODE: _____
 PHONE NO.: _____ E-MAIL ADDRESS: _____

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME: *Detroit Axle Southern Invest./495430.000* SAMPLER(S) - PLEASE PRINT/SIGN NAME: *H. Schmidt*
 TURNAROUND TIME REQUIRED: 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____
 DELIVERABLES REQUIRED: STD LEVEL II LEVEL III LEVEL IV EDD OTHER *REC 200*

MATRIX W=WATER GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 CODE: SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR WS=WASTE

Containers & Preservatives

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	COLLECTION		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	VOCs + TICs + H ₂ g Distillate + Solids SVOCs + TICs Metals * PCBs Alcohols (3) PFAS Phosphorus TCLP VOC, METALS, SUCC PCBs	Certifications	Project Locations	Special Instructions	
	DATE	TIME															
4359925	12/15/22	1230	AOC12-TPO3 - E	J	9	7					2						* SEE SOUTHERN
26		1235	AOC12-TPO3 - W														BOUNDARY SOIL
27		1245	AOC12-TPO3 - N														SCOPE
28		1245	AOC12-TPO3 - S														43600
29		1305	AOC12-TPO3 - B														27
30	12/16/22	1000	COMP-02	S	1	1											X
31	12/16/22	1000	TRIP BLANK - TB		1						1	X					VOC ONLY

RELINQUISHED BY: _____ DATE: _____ TIME: _____
 SIGNATURE/Organization: *Henry Schmidt* *Sampler
 RECEIVED BY: _____ DATE: *12/15/22* TIME: *1500*
 SIGNATURE/Organization: _____
 RECEIVED BY: _____ DATE: *12/16/22* TIME: *1040*
 SIGNATURE/Organization: _____

RELINQUISHED BY: _____ DATE: _____ TIME: _____
 SIGNATURE/Organization: *JM*
 RECEIVED BY: _____ DATE: *12/16/22* TIME: *1200*
 SIGNATURE/Organization: *M Calcutt*
 SEAL NO.: _____ SEAL INTACT: YES NO INITIALS: _____
 SEAL NO.: _____ SEAL INTACT: YES NO INITIALS: _____
 NOTES: _____ TEMP. ON ARRIVAL: *3.7*

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE



Analytical Laboratory Report

Report ID: S43469.01(01)
Generated on 01/03/2023

Report to
Attention: Kelly Cratsenburg
TRC
1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: 734-412-5424 FAX:
Email: KCratsenburg@trccompanies.com

Report produced by
Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Additional Contacts: Vince Buening

Report Summary

Lab Sample ID(s): S43469.01-S43469.07
Project: DA South Investigation 495430.0001
Collected Date(s): 12/13/2022 - 12/14/2022
Submitted Date/Time: 12/14/2022 16:50
Sampled by: A. Whaley
P.O. #: 193431

Table of Contents

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Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
E200.8	EPA Method 200.8 Revision 5.4
E245.1	EPA Method 245.1 Revision 3.0
E608.3	EPA Method 608.3 December 2016
N/A	Not Applicable
SW3015A	SW 846 Method 3015A Revision 1 February 2007
SW3510C	SW 846 Method 3510C Revision 3 December 1996
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003
SW8260B - SIM	SW 846 Method 8260B Revision 2 December 1996 SIMs
SW8270D	SW 846 Method 8270D Revision 4 February 2007



Analytical Laboratory Report

Sample Summary (7 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S43469.01	MW-22-09	Groundwater	12/13/22 09:25
S43469.02	DUP-01W	Groundwater	12/13/22 00:01
S43469.03	MW-22-08	Groundwater	12/13/22 13:10
S43469.04	MW-22-07	Groundwater	12/14/22 09:15
S43469.05	DUP-03W	Groundwater	12/14/22 00:01
S43469.06	MW-22-10	Groundwater	12/14/22 11:18
S43469.07	Trip Blank	Water	12/13/22 00:01



Analytical Laboratory Report

Lab Sample ID: S43469.01

Sample Tag: MW-22-09

Collected Date/Time: 12/13/2022 09:25

Matrix: Groundwater

COC Reference: 141475

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.2	IR
3	40ml Glass	None	Yes	4.2	IR
2	125ml Plastic	HNO3	Yes	4.2	IR
4	1L Amber	None	Yes	4.2	IR
1	250ml Amber	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	12/15/22 00:14	CTV	
pH check for VOCs*	<2	N/A	12/19/22 11:40	JKJ	
Metal Digestion	Completed	SW3015A	12/19/22 09:45	CCM	
BNA Extraction	Completed	SW3510C	12/16/22 17:00	PL	
Extraction, PCB*	Completed	E608.3	12/16/22 10:30	JWR	

Metals

Method: E200.8, Run Date: 12/19/22 11:24, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.381	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	0.002	0.002		mg/L	2	7440-38-2		
Barium	0.086	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Boron	0.09	0.04		mg/L	2	7440-42-8		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.64	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.164	0.005		mg/L	2	7439-96-5		
Molybdenum	Not detected	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.311	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	0.014	0.005		mg/L	2	7440-32-6		
Vanadium	0.002	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		

Method: E200.8, Run Date: 12/19/22 14:38, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	106	0.50		mg/L	2	7440-70-2		
Magnesium	18.1	0.50		mg/L	2	7439-95-4		
Potassium	6.48	0.50		mg/L	2	7440-09-7		



Analytical Laboratory Report

Lab Sample ID: S43469.01 (continued)

Sample Tag: MW-22-09

Method: E200.8, Run Date: 12/19/22 14:38, Analyst: CCM (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Sodium	158	0.50		mg/L	2	7440-23-5		

Method: E245.1, Run Date: 12/15/22 00:12, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 12/19/22 15:17, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2		
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2		
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5		
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9		
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6		
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1		
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5		
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 12/16/22 23:49, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43469.01 (continued)

Sample Tag: MW-22-09

Method: SW8270D, Run Date: 12/16/22 23:49, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 12/25/22 14:11, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 12/18/22 18:09, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 12/21/22 12:43, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/18/22 18:09, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200



Analytical Laboratory Report

Lab Sample ID: S43469.01 (continued)

Sample Tag: MW-22-09

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/18/22 18:09, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		



Analytical Laboratory Report

Lab Sample ID: S43469.01 (continued)

Sample Tag: MW-22-09

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/18/22 18:09, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 12/18/22 00:59, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/21/22 14:55, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43469.02

Sample Tag: DUP-01W

Collected Date/Time: 12/13/2022 00:01

Matrix: Groundwater

COC Reference: 141475

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.2	IR
3	40ml Glass	None	Yes	4.2	IR
2	125ml Plastic	HNO3	Yes	4.2	IR
4	1L Amber	None	Yes	4.2	IR
1	250ml Amber	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	12/15/22 00:14	CTV	
pH check for VOCs*	<2	N/A	12/19/22 11:40	JKJ	
Metal Digestion	Completed	SW3015A	12/19/22 09:45	CCM	
BNA Extraction	Completed	SW3510C	12/16/22 17:00	PL	
Extraction, PCB*	Completed	E608.3	12/16/22 10:30	JWR	

Metals

Method: E200.8, Run Date: 12/19/22 11:26, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.327	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	0.002	0.002		mg/L	2	7440-38-2		
Barium	0.083	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Boron	0.09	0.04		mg/L	2	7440-42-8		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.56	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.156	0.005		mg/L	2	7439-96-5		
Molybdenum	Not detected	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.310	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	0.011	0.005		mg/L	2	7440-32-6		
Vanadium	0.002	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		

Method: E200.8, Run Date: 12/19/22 14:40, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	106	0.50		mg/L	2	7440-70-2		
Magnesium	17.8	0.50		mg/L	2	7439-95-4		
Potassium	6.74	0.50		mg/L	2	7440-09-7		



Analytical Laboratory Report

Lab Sample ID: S43469.02 (continued)

Sample Tag: DUP-01W

Method: E200.8, Run Date: 12/19/22 14:40, Analyst: CCM (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Sodium	161	0.50		mg/L	2	7440-23-5		

Method: E245.1, Run Date: 12/15/22 00:16, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 12/19/22 15:39, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2		
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2		
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5		
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9		
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6		
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1		
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5		
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 12/17/22 00:21, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43469.02 (continued)

Sample Tag: DUP-01W

Method: SW8270D, Run Date: 12/17/22 00:21, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 12/25/22 14:35, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 12/18/22 18:28, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 12/21/22 13:05, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/18/22 18:28, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200



Analytical Laboratory Report

Lab Sample ID: S43469.02 (continued)

Sample Tag: DUP-01W

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/18/22 18:28, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		



Analytical Laboratory Report

Lab Sample ID: S43469.02 (continued)

Sample Tag: DUP-01W

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/18/22 18:28, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 12/18/22 01:20, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/21/22 15:23, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43469.03

Sample Tag: MW-22-08

Collected Date/Time: 12/13/2022 13:10

Matrix: Groundwater

COC Reference: 141475

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
3	40ml Glass	HCL	Yes	4.2	IR
3	40ml Glass	None	Yes	4.2	IR
2	125ml Plastic	HNO3	Yes	4.2	IR
4	1L Amber	None	Yes	4.2	IR
1	250ml Amber	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	12/16/22 13:13	CTV	
pH check for VOCs*	<2	N/A	12/19/22 11:40	JKJ	
Metal Digestion	Completed	SW3015A	12/19/22 09:45	CCM	
BNA Extraction	Completed	SW3510C	12/16/22 17:00	PL	
Extraction, PCB*	Completed	E608.3	12/16/22 10:30	JWR	

Metals

Method: E200.8, Run Date: 12/19/22 11:28, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.256	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		
Barium	0.076	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Boron	0.12	0.04		mg/L	2	7440-42-8		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.48	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.179	0.005		mg/L	2	7439-96-5		
Molybdenum	0.017	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.208	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	0.008	0.005		mg/L	2	7440-32-6		
Vanadium	0.002	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		

Method: E200.8, Run Date: 12/19/22 14:41, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Magnesium	10.6	0.50		mg/L	2	7439-95-4		
Potassium	6.78	0.50		mg/L	2	7440-09-7		



Analytical Laboratory Report

Lab Sample ID: S43469.03 (continued)

Sample Tag: MW-22-08

Method: E200.8, Run Date: 12/19/22 14:58, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	65.3	10.0		mg/L	50	7440-70-2		
Sodium	152	10.0		mg/L	50	7440-23-5		

Method: E245.1, Run Date: 12/16/22 14:40, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 12/19/22 15:28, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2		
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2		
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5		
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9		
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6		
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1		
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5		
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 12/17/22 00:51, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		



Analytical Laboratory Report

Lab Sample ID: S43469.03 (continued)

Sample Tag: MW-22-08

Method: SW8270D, Run Date: 12/17/22 00:51, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 12/25/22 14:59, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 12/18/22 18:47, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 12/21/22 13:25, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/18/22 18:47, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		



Analytical Laboratory Report

Lab Sample ID: S43469.03 (continued)

Sample Tag: MW-22-08

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/18/22 18:47, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	2	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		



Analytical Laboratory Report

Lab Sample ID: S43469.03 (continued)

Sample Tag: MW-22-08

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/18/22 18:47, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 12/18/22 01:41, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/21/22 15:50, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43469.04

Sample Tag: MW-22-07

Collected Date/Time: 12/14/2022 09:15

Matrix: Groundwater

COC Reference: 141475

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	4.2	IR
3	40ml Glass	None	Yes	4.2	IR
2	125ml Plastic	HNO3	Yes	4.2	IR
4	1L Amber	None	Yes	4.2	IR
1	250ml Amber	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	12/16/22 13:13	CTV	
pH check for VOCs*	<2	N/A	12/19/22 11:40	JKJ	
Metal Digestion	Completed	SW3015A	12/19/22 09:45	CCM	
BNA Extraction	Completed	SW3510C	12/16/22 17:00	PL	
Extraction, PCB*	Completed	E608.3	12/20/22 12:00	JWR	

Metals

Method: E200.8, Run Date: 12/19/22 11:32, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.038	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		
Barium	0.066	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Boron	0.08	0.04		mg/L	2	7440-42-8		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.05	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.044	0.005		mg/L	2	7439-96-5		
Molybdenum	0.008	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.224	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	0.003	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		

Method: E200.8, Run Date: 12/19/22 14:43, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	78.7	0.50		mg/L	2	7440-70-2		
Magnesium	15.5	0.50		mg/L	2	7439-95-4		
Potassium	5.26	0.50		mg/L	2	7440-09-7		



Analytical Laboratory Report

Lab Sample ID: S43469.04 (continued)

Sample Tag: MW-22-07

Method: E200.8, Run Date: 12/19/22 14:43, Analyst: CCM (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Sodium	127	0.50		mg/L	2	7440-23-5		

Method: E245.1, Run Date: 12/16/22 14:44, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 12/20/22 16:40, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2		
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2		
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5		
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9		
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6		
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1		
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5		
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 12/17/22 01:22, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43469.04 (continued)

Sample Tag: MW-22-07

Method: SW8270D, Run Date: 12/17/22 01:22, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 12/25/22 15:23, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 12/18/22 19:07, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 12/21/22 13:45, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/18/22 19:07, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200



Analytical Laboratory Report

Lab Sample ID: S43469.04 (continued)

Sample Tag: MW-22-07

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/18/22 19:07, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		



Analytical Laboratory Report

Lab Sample ID: S43469.04 (continued)

Sample Tag: MW-22-07

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/18/22 19:07, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 12/18/22 02:03, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/21/22 16:18, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43469.05

Sample Tag: DUP-03W

Collected Date/Time: 12/14/2022 00:01

Matrix: Groundwater

COC Reference: 141475

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	4.2	IR
3	40ml Glass	None	Yes	4.2	IR
2	125ml Plastic	HNO3	Yes	4.2	IR
4	1L Amber	None	Yes	4.2	IR
1	250ml Amber	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	12/16/22 13:13	CTV	
pH check for VOCs*	<2	N/A	12/19/22 11:40	JKJ	
Metal Digestion	Completed	SW3015A	12/19/22 09:45	CCM	
BNA Extraction	Completed	SW3510C	12/16/22 17:00	PL	
Extraction, PCB*	Completed	E608.3	12/20/22 12:00	JWR	

Metals

Method: E200.8, Run Date: 12/19/22 11:34, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.036	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		
Barium	0.068	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Boron	0.08	0.04		mg/L	2	7440-42-8		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.05	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.043	0.005		mg/L	2	7439-96-5		
Molybdenum	0.008	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.221	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	0.003	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		

Method: E200.8, Run Date: 12/19/22 14:44, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	78.9	0.50		mg/L	2	7440-70-2		
Magnesium	15.7	0.50		mg/L	2	7439-95-4		
Potassium	5.34	0.50		mg/L	2	7440-09-7		



Analytical Laboratory Report

Lab Sample ID: S43469.05 (continued)

Sample Tag: DUP-03W

Method: E200.8, Run Date: 12/19/22 14:44, Analyst: CCM (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Sodium	125	0.50		mg/L	2	7440-23-5		

Method: E245.1, Run Date: 12/16/22 14:47, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 12/20/22 16:51, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2		
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2		
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5		
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9		
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6		
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1		
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5		
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 12/17/22 01:53, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43469.05 (continued)

Sample Tag: DUP-03W

Method: SW8270D, Run Date: 12/17/22 01:53, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 12/25/22 15:47, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 12/18/22 19:26, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 12/21/22 14:06, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/18/22 19:26, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200



Analytical Laboratory Report

Lab Sample ID: S43469.05 (continued)

Sample Tag: DUP-03W

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/18/22 19:26, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		



Analytical Laboratory Report

Lab Sample ID: S43469.05 (continued)

Sample Tag: DUP-03W

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/18/22 19:26, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 12/18/22 02:24, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/21/22 16:45, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43469.06

Sample Tag: MW-22-10

Collected Date/Time: 12/14/2022 11:18

Matrix: Groundwater

COC Reference: 141475

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	4.2	IR
3	40ml Glass	None	Yes	4.2	IR
2	125ml Plastic	HNO3	Yes	4.2	IR
4	1L Amber	None	Yes	4.2	IR
1	250ml Amber	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	12/16/22 13:13	CTV	
pH check for VOCs*	<2	N/A	12/19/22 11:40	JKJ	
Metal Digestion	Completed	SW3015A	12/19/22 09:45	CCM	
BNA Extraction	Completed	SW3510C	12/16/22 17:00	PL	
Extraction, PCB*	Completed	E608.3	12/20/22 12:00	JWR	

Metals

Method: E200.8, Run Date: 12/19/22 11:36, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.055	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		
Barium	0.089	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Boron	0.08	0.04		mg/L	2	7440-42-8		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.09	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.063	0.005		mg/L	2	7439-96-5		
Molybdenum	0.007	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.300	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		

Method: E200.8, Run Date: 12/19/22 14:46, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	78.4	0.50		mg/L	2	7440-70-2		
Magnesium	13.7	0.50		mg/L	2	7439-95-4		
Potassium	4.38	0.50		mg/L	2	7440-09-7		



Analytical Laboratory Report

Lab Sample ID: S43469.06 (continued)

Sample Tag: MW-22-10

Method: E200.8, Run Date: 12/19/22 14:46, Analyst: CCM (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Sodium	75.6	0.50		mg/L	2	7440-23-5		

Method: E245.1, Run Date: 12/16/22 14:57, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 12/20/22 17:03, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2		
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2		
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5		
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9		
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6		
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1		
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5		
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 12/17/22 02:23, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43469.06 (continued)

Sample Tag: MW-22-10

Method: SW8270D, Run Date: 12/17/22 02:23, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 12/25/22 16:12, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 12/18/22 19:45, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 12/21/22 14:26, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/18/22 19:45, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200



Analytical Laboratory Report

Lab Sample ID: S43469.06 (continued)

Sample Tag: MW-22-10

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/18/22 19:45, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		



Analytical Laboratory Report

Lab Sample ID: S43469.06 (continued)

Sample Tag: MW-22-10

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/18/22 19:45, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 12/18/22 02:45, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/21/22 17:13, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43469.07

Sample Tag: Trip Blank

Collected Date/Time: 12/13/2022 00:01

Matrix: Water

COC Reference: 141475

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/19/22 11:40	JKJ	

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 12/25/22 16:36, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/18/22 15:52, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000



Analytical Laboratory Report

Lab Sample ID: S43469.07 (continued)

Sample Tag: Trip Blank

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/18/22 15:52, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Merit Laboratories Login Checklist

Lab Set ID:S43469

Client:TRC (TRC)

Project: DA South Investigation 495430.0001

Submitted: 12/14/2022 16:50 Login User: MMC

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place

Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Selection	Description	Note
-----------	-------------	------

Sample Receiving

- | | | |
|-----|--|--|
| 01. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples are received at 4C +/- 2C Thermometer # IR 4.2 |
| 02. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Received on ice/ cooling process begun |
| 03. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples shipped |
| 04. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples left in 24 hr. drop box |
| 05. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Are there custody seals/tape or is the drop box locked |

Chain of Custody

- | | | |
|-----|--|---|
| 06. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC adequately filled out |
| 07. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC signed and relinquished to the lab |
| 08. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sample tag on bottles match COC |
| 09. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Subcontracting needed? Subcontracted to: Eurofins |

Preservation

- | | | |
|-----|--|---|
| 10. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Do sample have correct chemical preservation |
| 11. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Completed pH checks on preserved samples? (no VOAs) |
| 12. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Did any samples need to be preserved in the lab? |

Bottle Conditions

- | | | |
|-----|--|---|
| 13. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | All bottles intact |
| 14. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Appropriate analytical bottles are used |
| 15. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Merit bottles used |
| 16. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sufficient sample volume received |
| 17. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples require laboratory filtration |
| 18. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples submitted within holding time |
| 19. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Do water VOC or TOX bottles contain headspace |

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____

Merit Laboratories Bottle Preservation Check

Lab Set ID: S43469 Submitted: 12/14/2022 16:50

Client: TRC (TRC)

Project: DA South Investigation 495430.0001

Initial Preservation Check: 12/15/2022 09:20 MMC

Preservation Recheck (E200.8): N/A

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Sample ID	Bottle / Preservation	pH (Orig)	Add ml	pH (New)	Notes
S43469.01	125ml Plastic HNO3	<2			
S43469.01	125ml Plastic HNO3	<2			
S43469.02	125ml Plastic HNO3	<2			
S43469.02	125ml Plastic HNO3	<2			
S43469.03	125ml Plastic HNO3	<2			
S43469.03	125ml Plastic HNO3	<2			
S43469.04	125ml Plastic HNO3	<2			
S43469.04	125ml Plastic HNO3	<2			
S43469.05	125ml Plastic HNO3	<2			
S43469.05	125ml Plastic HNO3	<2			
S43469.06	125ml Plastic HNO3	<2			
S43469.06	125ml Plastic HNO3	<2			



REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME Kelly Cratsenburg
 COMPANY TRC
 ADDRESS 1540 Eisenhower Place
 CITY Ann Arbor STATE MI ZIP CODE 48104
 PHONE NO. 734-525-7809 FAX NO. _____ P.O. NO. 193431
 E-MAIL ADDRESS KCratsenburg@trccompanies.com QUOTE NO. _____

CONTACT NAME _____ SAME
 COMPANY _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP CODE _____
 PHONE NO. _____ E-MAIL ADDRESS _____

PROJECT NO./NAME DA South Investigation 495430.000 SAMPLER(S) - PLEASE PRINT/SIGN NAME A. Whaley
 TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____
 DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER TRC EDD
 MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIFE A=AIR W=WASTE # Containers & Preservatives

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

VOCT TICS	1,4 Dioxane	SVOCs TICS	Metals	PFAS 31	PCBS	Tetraethyl Lead	Thorium	Alcohols	Certifications
									<input type="checkbox"/> OHIO VAP <input type="checkbox"/> Drinking Water
									<input type="checkbox"/> DoD <input type="checkbox"/> NPDES
									Project Locations
									<input checked="" type="checkbox"/> Detroit <input type="checkbox"/> New York
									<input type="checkbox"/> Other _____
									Special Instructions

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	VOCT TICS	1,4 Dioxane	SVOCs TICS	Metals	PFAS 31	PCBS	Tetraethyl Lead	Thorium	Alcohols		Special Instructions
	DATE	TIME																					
43469/43470	12.13.22	0925	MW-22-09	GW	16	11	3	2					X	X	X	X	X	X	X	X	X		See Scope
.02	↓	—	DUP-01W	GW	16	11	3	2					X	X	X	X	X	X	X	X	X		For DA
.03	↓	1310	MW-22-08	GW	16	11	3	2					X	X	X	X	X	X	X	X	X		Southern Boundary
.04	12.14.22	0915	MW-22-07	GW	18	11	5	2					X	X	X	X	X	X	X	X	X		
.05	↓	—	DUP-03W	GW	18	11	5	2					X	X	X	X	X	X	X	X	X		
.06	↓	1118	MW-22-10	GW	18	11	5	2					X	X	X	X	X	X	X	X	X		
43469.07																							

RELINQUISHED BY: A. Whaley Sampler DATE 12.14.22 TIME 1450
 SIGNATURE/ORGANIZATION TRC
 RECEIVED BY: MS DATE 12-14-22 TIME 1450
 SIGNATURE/ORGANIZATION MS
 RELINQUISHED BY: MS DATE 12-14-22 TIME 1650
 SIGNATURE/ORGANIZATION MS
 RECEIVED BY: M. Chilcote DATE 12/14/22 TIME 1650
 SIGNATURE/ORGANIZATION M. Chilcote

RELINQUISHED BY: _____ DATE _____ TIME _____
 SIGNATURE/ORGANIZATION _____
 RECEIVED BY: _____ DATE _____ TIME _____
 SIGNATURE/ORGANIZATION _____
 SEAL NO. SEAL INTACT YES NO INITIALS _____
 SEAL NO. SEAL INTACT YES NO INITIALS _____
 NOTES: TEMP. ON ARRIVAL 4.2

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Lab Results
Merit Laboratories
2680 E Lansing Drive
East Lansing, Michigan 48823

Generated 12/29/2022 2:44:33 PM

JOB DESCRIPTION

S43469

JOB NUMBER

190-30651-1

Eurofins Michigan

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

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Authorization



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Sample Summary

Client: Merit Laboratories
Project/Site: S43469

Job ID: 190-30651-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
190-30651-1	S43469.01	Water	12/13/22 09:25	12/16/22 10:07
190-30651-2	S43469.02	Water	12/13/22 00:01	12/16/22 10:07
190-30651-3	S43469.03	Water	12/13/22 13:10	12/16/22 10:07
190-30651-4	S43469.04	Water	12/14/22 09:15	12/16/22 10:07
190-30651-5	S43469.05	Water	12/14/22 00:01	12/16/22 10:07
190-30651-6	S43469.06	Water	12/14/22 11:18	12/16/22 10:07

1

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Case Narrative

Client: Merit Laboratories
Project/Site: S43469

Job ID: 190-30651-1

Job ID: 190-30651-1

Laboratory: Eurofins Michigan

Narrative

Job Narrative 190-30651-1

Receipt

The samples were received on 12/16/2022 10:07 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.2°C

GC/MS Semi VOA

Method 8270D: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 480-653994.

Method 8270D: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 480-654168 was outside criteria for the following analyte(s): <AffectedAnalytes>. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte(s) is considered estimated.

Method 8270D: The continuing calibration verification (CCV) analyzed in batch 480-654168 was outside the method criteria for the following analyte(s): Phenol-d5 (Surr). A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8270D: The continuing calibration verification (CCV) associated with batch 480-654168 recovered above the upper control limit for Tetraethyl lead. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: S43469.01 (190-30651-1), S43469.02 (190-30651-2), S43469.03 (190-30651-3), S43469.04 (190-30651-4), S43469.05 (190-30651-5) and S43469.06 (190-30651-6).

Method 8270D: Six surrogates are used for this analysis. The laboratory's SOP allows one acid and one base of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: S43469.03 (190-30651-3). These results have been reported and qualified.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

Method 6020B: preparation batch 160-594383 Elevated reporting limits are provided for the following samples due to insufficient sample provided preparation: S43469.01 (190-30651-1), (190-30651-D-1 MS) and (190-30651-D-1 MSD).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Client Sample Results

Client: Merit Laboratories
Project/Site: S43469

Job ID: 190-30651-1

Client Sample ID: S43469.01

Lab Sample ID: 190-30651-1

Date Collected: 12/13/22 09:25

Matrix: Water

Date Received: 12/16/22 10:07

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<11		11	ug/L		12/20/22 08:17	12/21/22 14:55	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	76		46 - 120			12/20/22 08:17	12/21/22 14:55	1
p-Terphenyl-d14 (Surr)	85		60 - 148			12/20/22 08:17	12/21/22 14:55	1
Phenol-d5 (Surr)	37		22 - 120			12/20/22 08:17	12/21/22 14:55	1
2-Fluorophenol (Surr)	54		35 - 120			12/20/22 08:17	12/21/22 14:55	1
2,4,6-Tribromophenol (Surr)	83		41 - 120			12/20/22 08:17	12/21/22 14:55	1
2-Fluorobiphenyl (Surr)	81		48 - 120			12/20/22 08:17	12/21/22 14:55	1

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/18/22 00:59	1
Ethanol	<5.0		5.0	mg/L			12/18/22 00:59	1
n-Butanol	<5.0		5.0	mg/L			12/18/22 00:59	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<4.0		4.0	ug/L		12/20/22 13:34	12/21/22 20:55	2

Client Sample ID: S43469.02

Lab Sample ID: 190-30651-2

Date Collected: 12/13/22 00:01

Matrix: Water

Date Received: 12/16/22 10:07

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<13		13	ug/L		12/20/22 08:17	12/21/22 15:23	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	79		46 - 120			12/20/22 08:17	12/21/22 15:23	1
p-Terphenyl-d14 (Surr)	87		60 - 148			12/20/22 08:17	12/21/22 15:23	1
Phenol-d5 (Surr)	40		22 - 120			12/20/22 08:17	12/21/22 15:23	1
2-Fluorophenol (Surr)	55		35 - 120			12/20/22 08:17	12/21/22 15:23	1
2,4,6-Tribromophenol (Surr)	90		41 - 120			12/20/22 08:17	12/21/22 15:23	1
2-Fluorobiphenyl (Surr)	84		48 - 120			12/20/22 08:17	12/21/22 15:23	1

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/18/22 01:20	1
Ethanol	<5.0		5.0	mg/L			12/18/22 01:20	1
n-Butanol	<5.0		5.0	mg/L			12/18/22 01:20	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/20/22 13:34	12/21/22 21:22	2

Client Sample Results

Client: Merit Laboratories
Project/Site: S43469

Job ID: 190-30651-1

Client Sample ID: S43469.03

Lab Sample ID: 190-30651-3

Date Collected: 12/13/22 13:10

Matrix: Water

Date Received: 12/16/22 10:07

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<10		10	ug/L		12/20/22 08:17	12/21/22 15:50	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	49		46 - 120			12/20/22 08:17	12/21/22 15:50	1
p-Terphenyl-d14 (Surr)	68		60 - 148			12/20/22 08:17	12/21/22 15:50	1
Phenol-d5 (Surr)	24		22 - 120			12/20/22 08:17	12/21/22 15:50	1
2-Fluorophenol (Surr)	34	S1-	35 - 120			12/20/22 08:17	12/21/22 15:50	1
2,4,6-Tribromophenol (Surr)	59		41 - 120			12/20/22 08:17	12/21/22 15:50	1
2-Fluorobiphenyl (Surr)	58		48 - 120			12/20/22 08:17	12/21/22 15:50	1

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/18/22 01:41	1
Ethanol	<5.0		5.0	mg/L			12/18/22 01:41	1
n-Butanol	<5.0		5.0	mg/L			12/18/22 01:41	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/20/22 13:34	12/21/22 21:26	2

Client Sample ID: S43469.04

Lab Sample ID: 190-30651-4

Date Collected: 12/14/22 09:15

Matrix: Water

Date Received: 12/16/22 10:07

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<10		10	ug/L		12/20/22 08:17	12/21/22 16:18	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	68		46 - 120			12/20/22 08:17	12/21/22 16:18	1
p-Terphenyl-d14 (Surr)	69		60 - 148			12/20/22 08:17	12/21/22 16:18	1
Phenol-d5 (Surr)	31		22 - 120			12/20/22 08:17	12/21/22 16:18	1
2-Fluorophenol (Surr)	46		35 - 120			12/20/22 08:17	12/21/22 16:18	1
2,4,6-Tribromophenol (Surr)	73		41 - 120			12/20/22 08:17	12/21/22 16:18	1
2-Fluorobiphenyl (Surr)	79		48 - 120			12/20/22 08:17	12/21/22 16:18	1

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/18/22 02:03	1
Ethanol	<5.0		5.0	mg/L			12/18/22 02:03	1
n-Butanol	<5.0		5.0	mg/L			12/18/22 02:03	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/20/22 13:34	12/21/22 21:29	2

Client Sample Results

Client: Merit Laboratories
Project/Site: S43469

Job ID: 190-30651-1

Client Sample ID: S43469.05

Lab Sample ID: 190-30651-5

Date Collected: 12/14/22 00:01

Matrix: Water

Date Received: 12/16/22 10:07

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<10		10	ug/L		12/20/22 08:17	12/21/22 16:45	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	74		46 - 120			12/20/22 08:17	12/21/22 16:45	1
p-Terphenyl-d14 (Surr)	88		60 - 148			12/20/22 08:17	12/21/22 16:45	1
Phenol-d5 (Surr)	35		22 - 120			12/20/22 08:17	12/21/22 16:45	1
2-Fluorophenol (Surr)	48		35 - 120			12/20/22 08:17	12/21/22 16:45	1
2,4,6-Tribromophenol (Surr)	84		41 - 120			12/20/22 08:17	12/21/22 16:45	1
2-Fluorobiphenyl (Surr)	83		48 - 120			12/20/22 08:17	12/21/22 16:45	1

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/18/22 02:24	1
Ethanol	<5.0		5.0	mg/L			12/18/22 02:24	1
n-Butanol	<5.0		5.0	mg/L			12/18/22 02:24	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/20/22 13:34	12/21/22 21:33	2

Client Sample ID: S43469.06

Lab Sample ID: 190-30651-6

Date Collected: 12/14/22 11:18

Matrix: Water

Date Received: 12/16/22 10:07

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<10		10	ug/L		12/20/22 08:17	12/21/22 17:13	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	76		46 - 120			12/20/22 08:17	12/21/22 17:13	1
p-Terphenyl-d14 (Surr)	88		60 - 148			12/20/22 08:17	12/21/22 17:13	1
Phenol-d5 (Surr)	38		22 - 120			12/20/22 08:17	12/21/22 17:13	1
2-Fluorophenol (Surr)	56		35 - 120			12/20/22 08:17	12/21/22 17:13	1
2,4,6-Tribromophenol (Surr)	95		41 - 120			12/20/22 08:17	12/21/22 17:13	1
2-Fluorobiphenyl (Surr)	87		48 - 120			12/20/22 08:17	12/21/22 17:13	1

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/18/22 02:45	1
Ethanol	<5.0		5.0	mg/L			12/18/22 02:45	1
n-Butanol	<5.0		5.0	mg/L			12/18/22 02:45	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/20/22 13:34	12/21/22 21:36	2

QC Sample Results

Client: Merit Laboratories
Project/Site: S43469

Job ID: 190-30651-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-653994/1-A
Matrix: Water
Analysis Batch: 654168

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 653994

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<10		10	ug/L		12/20/22 08:17	12/21/22 13:32	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	78		46 - 120	12/20/22 08:17	12/21/22 13:32	1
p-Terphenyl-d14 (Surr)	102		60 - 148	12/20/22 08:17	12/21/22 13:32	1
Phenol-d5 (Surr)	34		22 - 120	12/20/22 08:17	12/21/22 13:32	1
2-Fluorophenol (Surr)	48		35 - 120	12/20/22 08:17	12/21/22 13:32	1
2,4,6-Tribromophenol (Surr)	77		41 - 120	12/20/22 08:17	12/21/22 13:32	1
2-Fluorobiphenyl (Surr)	91		48 - 120	12/20/22 08:17	12/21/22 13:32	1

Lab Sample ID: LCS 480-653994/2-A
Matrix: Water
Analysis Batch: 654168

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 653994

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5 (Surr)	89		46 - 120
p-Terphenyl-d14 (Surr)	107		60 - 148
Phenol-d5 (Surr)	48		22 - 120
2-Fluorophenol (Surr)	63		35 - 120
2,4,6-Tribromophenol (Surr)	108		41 - 120
2-Fluorobiphenyl (Surr)	102		48 - 120

Lab Sample ID: LCSD 480-653994/3-A
Matrix: Water
Analysis Batch: 654168

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 653994

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Nitrobenzene-d5 (Surr)	79		46 - 120
p-Terphenyl-d14 (Surr)	89		60 - 148
Phenol-d5 (Surr)	44		22 - 120
2-Fluorophenol (Surr)	57		35 - 120
2,4,6-Tribromophenol (Surr)	102		41 - 120
2-Fluorobiphenyl (Surr)	94		48 - 120

Method: 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Lab Sample ID: MB 680-755688/10
Matrix: Water
Analysis Batch: 755688

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/17/22 19:47	1
Ethanol	<5.0		5.0	mg/L			12/17/22 19:47	1
n-Butanol	<5.0		5.0	mg/L			12/17/22 19:47	1

QC Sample Results

Client: Merit Laboratories
Project/Site: S43469

Job ID: 190-30651-1

Method: 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC) (Continued)

Lab Sample ID: LCS 680-755688/6
Matrix: Water
Analysis Batch: 755688

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methanol	20.0	23.1		mg/L		115	43 - 143
Ethanol	20.0	23.0		mg/L		115	38 - 156
n-Butanol	20.0	21.8		mg/L		109	70 - 130

Lab Sample ID: LCSD 680-755688/7
Matrix: Water
Analysis Batch: 755688

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methanol	20.0	20.9		mg/L		104	43 - 143	10	50
Ethanol	20.0	20.7		mg/L		104	38 - 156	10	50
n-Butanol	20.0	19.5		mg/L		97	70 - 130	11	30

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 160-594383/1-A
Matrix: Water
Analysis Batch: 594602

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 594383

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/20/22 13:34	12/21/22 20:20	2

Lab Sample ID: LCS 160-594383/2-A
Matrix: Water
Analysis Batch: 594602

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 594383

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Thorium	995	977		ug/L		98	80 - 120

Lab Sample ID: 190-30651-1 MS
Matrix: Water
Analysis Batch: 594602

Client Sample ID: S43469.01
Prep Type: Total/NA
Prep Batch: 594383

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Thorium	<4.0		1990	2040		ug/L		103	75 - 125

Lab Sample ID: 190-30651-1 MSD
Matrix: Water
Analysis Batch: 594602

Client Sample ID: S43469.01
Prep Type: Total/NA
Prep Batch: 594383

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Thorium	<4.0		1990	2110		ug/L		106	75 - 125	3	20

Definitions/Glossary

Client: Merit Laboratories
Project/Site: S43469

Job ID: 190-30651-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Association Summary

Client: Merit Laboratories
Project/Site: S43469

Job ID: 190-30651-1

GC/MS Semi VOA

Prep Batch: 653994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30651-1	S43469.01	Total/NA	Water	3510C	
190-30651-2	S43469.02	Total/NA	Water	3510C	
190-30651-3	S43469.03	Total/NA	Water	3510C	
190-30651-4	S43469.04	Total/NA	Water	3510C	
190-30651-5	S43469.05	Total/NA	Water	3510C	
190-30651-6	S43469.06	Total/NA	Water	3510C	
MB 480-653994/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-653994/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 480-653994/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 654168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30651-1	S43469.01	Total/NA	Water	8270D	653994
190-30651-2	S43469.02	Total/NA	Water	8270D	653994
190-30651-3	S43469.03	Total/NA	Water	8270D	653994
190-30651-4	S43469.04	Total/NA	Water	8270D	653994
190-30651-5	S43469.05	Total/NA	Water	8270D	653994
190-30651-6	S43469.06	Total/NA	Water	8270D	653994
MB 480-653994/1-A	Method Blank	Total/NA	Water	8270D	653994
LCS 480-653994/2-A	Lab Control Sample	Total/NA	Water	8270D	653994
LCSD 480-653994/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	653994

GC Semi VOA

Analysis Batch: 755688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30651-1	S43469.01	Total/NA	Water	8015D	
190-30651-2	S43469.02	Total/NA	Water	8015D	
190-30651-3	S43469.03	Total/NA	Water	8015D	
190-30651-4	S43469.04	Total/NA	Water	8015D	
190-30651-5	S43469.05	Total/NA	Water	8015D	
190-30651-6	S43469.06	Total/NA	Water	8015D	
MB 680-755688/10	Method Blank	Total/NA	Water	8015D	
LCS 680-755688/6	Lab Control Sample	Total/NA	Water	8015D	
LCSD 680-755688/7	Lab Control Sample Dup	Total/NA	Water	8015D	

Metals

Prep Batch: 594383

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30651-1	S43469.01	Total/NA	Water	3010A	
190-30651-2	S43469.02	Total/NA	Water	3010A	
190-30651-3	S43469.03	Total/NA	Water	3010A	
190-30651-4	S43469.04	Total/NA	Water	3010A	
190-30651-5	S43469.05	Total/NA	Water	3010A	
190-30651-6	S43469.06	Total/NA	Water	3010A	
MB 160-594383/1-A	Method Blank	Total/NA	Water	3010A	
LCS 160-594383/2-A	Lab Control Sample	Total/NA	Water	3010A	
190-30651-1 MS	S43469.01	Total/NA	Water	3010A	
190-30651-1 MSD	S43469.01	Total/NA	Water	3010A	

Eurofins Michigan

QC Association Summary

Client: Merit Laboratories
Project/Site: S43469

Job ID: 190-30651-1

Metals

Analysis Batch: 594602

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30651-1	S43469.01	Total/NA	Water	6020B	594383
190-30651-2	S43469.02	Total/NA	Water	6020B	594383
190-30651-3	S43469.03	Total/NA	Water	6020B	594383
190-30651-4	S43469.04	Total/NA	Water	6020B	594383
190-30651-5	S43469.05	Total/NA	Water	6020B	594383
190-30651-6	S43469.06	Total/NA	Water	6020B	594383
MB 160-594383/1-A	Method Blank	Total/NA	Water	6020B	594383
LCS 160-594383/2-A	Lab Control Sample	Total/NA	Water	6020B	594383
190-30651-1 MS	S43469.01	Total/NA	Water	6020B	594383
190-30651-1 MSD	S43469.01	Total/NA	Water	6020B	594383

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43469

Job ID: 190-30651-1

Client Sample ID: S43469.01

Lab Sample ID: 190-30651-1

Date Collected: 12/13/22 09:25

Matrix: Water

Date Received: 12/16/22 10:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			653994	MS	EET BUF	12/20/22 08:17
Total/NA	Analysis	8270D		1	654168	JMM	EET BUF	12/21/22 14:55
Total/NA	Analysis	8015D		1	755688	JCK	EET SAV	12/18/22 00:59
Total/NA	Prep	3010A			594383	LKP	EET SL	12/20/22 13:34
Total/NA	Analysis	6020B		2	594602	CGB	EET SL	12/21/22 20:55

Client Sample ID: S43469.02

Lab Sample ID: 190-30651-2

Date Collected: 12/13/22 00:01

Matrix: Water

Date Received: 12/16/22 10:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			653994	MS	EET BUF	12/20/22 08:17
Total/NA	Analysis	8270D		1	654168	JMM	EET BUF	12/21/22 15:23
Total/NA	Analysis	8015D		1	755688	JCK	EET SAV	12/18/22 01:20
Total/NA	Prep	3010A			594383	LKP	EET SL	12/20/22 13:34
Total/NA	Analysis	6020B		2	594602	CGB	EET SL	12/21/22 21:22

Client Sample ID: S43469.03

Lab Sample ID: 190-30651-3

Date Collected: 12/13/22 13:10

Matrix: Water

Date Received: 12/16/22 10:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			653994	MS	EET BUF	12/20/22 08:17
Total/NA	Analysis	8270D		1	654168	JMM	EET BUF	12/21/22 15:50
Total/NA	Analysis	8015D		1	755688	JCK	EET SAV	12/18/22 01:41
Total/NA	Prep	3010A			594383	LKP	EET SL	12/20/22 13:34
Total/NA	Analysis	6020B		2	594602	CGB	EET SL	12/21/22 21:26

Client Sample ID: S43469.04

Lab Sample ID: 190-30651-4

Date Collected: 12/14/22 09:15

Matrix: Water

Date Received: 12/16/22 10:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			653994	MS	EET BUF	12/20/22 08:17
Total/NA	Analysis	8270D		1	654168	JMM	EET BUF	12/21/22 16:18
Total/NA	Analysis	8015D		1	755688	JCK	EET SAV	12/18/22 02:03
Total/NA	Prep	3010A			594383	LKP	EET SL	12/20/22 13:34
Total/NA	Analysis	6020B		2	594602	CGB	EET SL	12/21/22 21:29

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43469

Job ID: 190-30651-1

Client Sample ID: S43469.05

Lab Sample ID: 190-30651-5

Date Collected: 12/14/22 00:01

Matrix: Water

Date Received: 12/16/22 10:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			653994	MS	EET BUF	12/20/22 08:17
Total/NA	Analysis	8270D		1	654168	JMM	EET BUF	12/21/22 16:45
Total/NA	Analysis	8015D		1	755688	JCK	EET SAV	12/18/22 02:24
Total/NA	Prep	3010A			594383	LKP	EET SL	12/20/22 13:34
Total/NA	Analysis	6020B		2	594602	CGB	EET SL	12/21/22 21:33

Client Sample ID: S43469.06

Lab Sample ID: 190-30651-6

Date Collected: 12/14/22 11:18

Matrix: Water

Date Received: 12/16/22 10:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			653994	MS	EET BUF	12/20/22 08:17
Total/NA	Analysis	8270D		1	654168	JMM	EET BUF	12/21/22 17:13
Total/NA	Analysis	8015D		1	755688	JCK	EET SAV	12/18/22 02:45
Total/NA	Prep	3010A			594383	LKP	EET SL	12/20/22 13:34
Total/NA	Analysis	6020B		2	594602	CGB	EET SL	12/21/22 21:36

Laboratory References:

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600
EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858
EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Analyst References:

Lab: EET BUF
Batch Type: Prep
MS = Manpreet Singh
Batch Type: Analysis
JMM = Joseph Marshall
Lab: EET SAV
Batch Type: Analysis
JCK = Joshua Kellar
Lab: EET SL
Batch Type: Prep
LKP = Laura Pemberton
Batch Type: Analysis
CGB = Cory Buffington

Accreditation/Certification Summary

Client: Merit Laboratories
Project/Site: S43469

Job ID: 190-30651-1

Laboratory: Eurofins Buffalo

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-0686	07-06-22 *
Connecticut	State	PH-0568	03-31-24
Florida	NELAP	E87672	06-30-23
Georgia	State	10026 (NY)	04-01-23
Georgia	State Program	N/A	03-31-09 *
Georgia (DW)	State	956	03-31-23
Illinois	NELAP	200003	09-30-23
Iowa	State	374	03-01-23
Iowa	State Program	374	03-01-09 *
Kansas	NELAP	E-10187	01-31-23
Kentucky (DW)	State	90029	12-31-22
Kentucky (UST)	State	30	04-01-23
Kentucky (WW)	State	KY90029	12-31-22
Louisiana	NELAP	02031	06-30-23
Louisiana (All)	NELAP	02031	06-30-23
Maine	State	NY00044	12-04-22 *
Maryland	State	294	03-31-23
Massachusetts	State	M-NY044	06-30-23
Michigan	State	9937	03-31-23
Michigan	State Program	9937	04-01-09 *
New Hampshire	NELAP	2973	09-11-19 *
New Hampshire	NELAP	2337	11-17-22 *
New Jersey	NELAP	NY455	06-30-23
New York	NELAP	10026	03-31-23
Pennsylvania	NELAP	68-00281	07-31-23
Rhode Island	State	LAO00328	12-30-22
Tennessee	State	02970	04-01-23
Texas	NELAP	T104704412-18-10	07-31-23
USDA	US Federal Programs	P330-18-00039	03-25-24
Virginia	NELAP	460185	09-14-23
Washington	State	C784	02-10-23
Wisconsin	State	998310390	08-31-23

Laboratory: Eurofins Savannah

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	SAVLAB	
Alabama	State	41450	06-30-23
ANAB	Dept. of Defense ELAP	L2463	09-22-24
Arkansas DEQ	State	19-015-0	02-01-23
California	State	2939	06-30-22 *
Connecticut	State	PH-0161	03-31-23
Florida	NELAP	E87052	06-23-23
Georgia	State	E87052	06-30-23
Georgia (DW)	State	803	06-30-23
Guam	State	19-007R	04-17-23
Hawaii	State	<cert No.>	06-30-23
Illinois	NELAP	200022	11-30-22 *
Indiana	State	C-GA-02	06-30-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Michigan

Accreditation/Certification Summary

Client: Merit Laboratories
Project/Site: S43469

Job ID: 190-30651-1

Laboratory: Eurofins Savannah (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Iowa	State	353	07-01-23
Kentucky (UST)	State	NA	06-30-23
Louisiana	NELAP	30690	06-30-23
Louisiana (All)	NELAP	30690	06-30-23
Louisiana (DW)	State	LA009	12-31-22
Maine	State	GA00006	12-27-22
Maryland	State	250	12-31-23
Massachusetts	State	M-GA006	07-30-23
Michigan	State	9925	06-30-23
Mississippi	State	<cert No.>	06-30-23
Nebraska	State	NE-OS-7-04	06-30-23
New Jersey	NELAP	GA769	06-30-23
New Mexico	State	GA00006	06-30-23
New York	NELAP	10842	04-01-23
North Carolina (DW)	State	13701	07-31-23
North Carolina (WW/SW)	State	269	12-31-22
Pennsylvania	NELAP	68-00474	06-30-23
Puerto Rico	State	GA00006	12-30-22
South Carolina	State	98001	06-30-23
Tennessee	State	TN02961	06-30-23
Texas	NELAP	T1047004185-19-14	11-30-23
Texas	TCEQ Water Supply	T104704185	06-30-23
USDA	US Federal Programs	P330-18-00313	09-03-24
Virginia	NELAP	460161	06-14-23
Wisconsin	State	999819810	08-31-23
Wyoming	State	8TMS-L	06-30-23

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-23
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-23
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-23
HI - RadChem Recognition	State	n/a	06-30-23
Illinois	NELAP	200023	11-30-23
Iowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-23
Kentucky (DW)	State	KY90125	12-31-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-22
Louisiana (All)	NELAP	04080	06-30-23
Louisiana (DW)	State	LA011	12-31-22
Maryland	State	310	09-30-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Michigan

Accreditation/Certification Summary

Client: Merit Laboratories
Project/Site: S43469

Job ID: 190-30651-1

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
MI - RadChem Recognition	State	9005	06-30-23
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-23
New Jersey	NELAP	MO002	06-30-23
New York	NELAP	11616	04-01-23
North Dakota	State	R-207	06-30-23
NRC	NRC	24-24817-01	12-31-22
Oklahoma	NELAP	9997	08-31-23
Oregon	NELAP	4157	09-01-23
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-23
Texas	NELAP	T104704193	07-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-24
Washington	State	C592	08-30-23
West Virginia DEP	State	381	12-31-22

Method Summary

Client: Merit Laboratories
Project/Site: S43469

Job ID: 190-30651-1

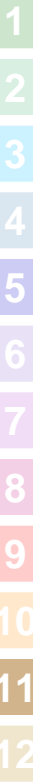
Method	Method Description	Protocol	Laboratory
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	EET BUF
8015D	Nonhalogenated Organic Compounds - Direct Injection (GC)	SW846	EET SAV
6020B	Metals (ICP/MS)	SW846	EET SL
3010A	Preparation, Total Metals	SW846	EET SL
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET BUF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600
EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858
EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566





2680 East Lansing Dr., East Lansing, MI 48823
 Phone (517) 332-0167 Fax (517) 332-4034
 www.meritlabs.com

C.O.C. PAGE # 1 OF 1

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME: Project Management Team
 COMPANY: Merit Laboratories
 ADDRESS: 2680 East Lansing Drive
 CITY: East Lansing
 STATE: MI
 ZIP CODE: 48823
 PHONE NO.: 517-332-0167
 FAX NO.:
 E-MAIL ADDRESS: results@meritlabs.com

CONTACT NAME: Julie Teague
 COMPANY: Merit Laboratories
 ADDRESS: 2680 East Lansing Drive
 CITY: East Lansing
 STATE: MI
 ZIP CODE: 48823
 PHONE NO.: 517-332-0167
 FAX NO.:
 E-MAIL ADDRESS: juliet@meritlabs.com

PROJECT NO./NAME: S43469
 ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

TURNAROUND TIME REQUIRED: 1 DAY 2 DAYS 3 DAYS STANDARD OTHER

DELIVERABLES REQUIRED: STD LEVEL II LEVEL III LEVEL IV EDD OTHER

SAMPLER(S) - PLEASE PRINT/SIGN NAME

METHANOL LAB NO. (FOR LAB USE ONLY)	YEAR	DATE	TIME	IDENTIFICATION-DESCRIPTION	METHANOL	ETHANOL	N-BUTANOL	OTHER	# Containers & Preservatives				
									GW	SL	WW	DW	
	12/13/22	0925		S43469.01	5	4	1		1	4	1	1	
	12/13/22	0001		S43469.02	5	4	1		1	4	1	1	
	12/13/22	1310		S43469.03	5	4	1		1	4	1	1	
	12/14/22	0915		S43469.04	5	4	1		1	4	1	1	
	12/14/22	0001		S43469.05	5	4	1		1	4	1	1	
	12/14/22	1118		S43469.06	5	4	1		1	4	1	1	

ALCOHOLS	THORIUM	TETRAETHYL LEAD	CERTIFICATIONS
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> OHIO VAP <input type="checkbox"/> Drinking Water <input type="checkbox"/> DoD <input type="checkbox"/> NPDES <input type="checkbox"/> Detroit <input type="checkbox"/> New York <input type="checkbox"/> Other Special Instructions
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	*Methanol RL 3,700ppb *Ethanol, N-Butanol

190-30651 Chain of Custody

RELINQUISHED BY: [Signature] DATE: 12/15/22 TIME: 15:00
 RECEIVED BY: [Signature] DATE: 12/15/22 TIME: 16:00

SEAL NO. [] SEAL INTACT [] INITIALS []
 SEAL NO. [] SEAL INTACT [] INITIALS []

NOTES: Subcontracted to Eurofins

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

12/29/2022



Environment Testing
TestAmerica

- SDS or Known Hazard Information Supplied by Client
- Discrepancies
- Short Hold
- Rush 24 Hr 2-Day 3-Day 5-Day Other:

Client ID: Merit
Work Order #: 30657

Cooler / Sample Receipt

After hours receipt: complete gray areas. Place cooler in walk-in, place form in Receiving box. Date: _____ Time: _____

Receipt Evaluation Performed by: Initials: JH Date: 12/16/22 Time: 1007

Method of Shipment:

Walk-In Client Eurofins TA Field/Courier
Other Client / 3rd Party Courier: _____
Fed Ex Tracking #: _____
UPS Tracking #: _____
Other: _____

Shipping Container Type:

- Cooler Box
- None Other: _____

Custody Seals Intact:

- Yes No
- NA (not used or required)

Packing Materials:

- Plastic Bags Foam
- Bubble Wrap Paper
- Packing Peanuts None
- Other: _____

Cooling Materials:

- Ice (Solid) Ice (Melted)
- Blue Ice None
- Other: _____

Bacteriological Samples	Temp Corrected (°C)	Frozen?		Rec'd Within 2 Hrs?		Sample Flagged?	
		Yes	No	Yes	No	Yes	No

Received on same day sampled? Yes No Additional Sheets Required? Yes No

Receipt Temperatures

Thermometer ID	Observed (°C)	Corrected (°C)	Temp Blank	Sample Temp	Acceptable	Cooler ID	Affected Samples
<u>CP313207</u>	<u>5.2</u>	<u>5.2</u>		<u>X</u>	<u>X</u> <u>Y</u> <u>N</u>		
					<u>Y</u> <u>N</u>		
					<u>Y</u> <u>N</u>		

Receipt Questions**	Y	N	NA	"No" answers require additional comment
CoC present and ETA receipt signature, date, and time properly documented?	<input checked="" type="checkbox"/>			
Containers and Labels in good condition? (unbroken, not leaking, appropriately filled, labels legible & attached)	<input checked="" type="checkbox"/>			
Appropriate containers used and adequate volume provided?	<input checked="" type="checkbox"/>			Preserved bottles checked for pH? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> pH strip lot # _____
Number of sample containers match CoC?	<input checked="" type="checkbox"/>			
Samples received within hold?	<input checked="" type="checkbox"/>			
Samples submitted for GRO and Volatiles analysis (8260, 624, 524) received without headspace?	<input checked="" type="checkbox"/>			
Was a Trip Blank received with VOA samples?			<input checked="" type="checkbox"/>	
Were the samples free of any questionable physical conformities? (i.e.: field duplicates or multiple bottles of the same sample do not significantly vary in appearance - color, solid proportions, etc.)	<input checked="" type="checkbox"/>			
Were the CoC bottle labels and all other items free of all other discrepancies or issues that would need to be addressed with the Project Manager and/or Client?	<input checked="" type="checkbox"/>			
**May not be applicable if samples are not for compliance testing				*Excludes FOG, VOAs, TOC Vials, HEM

Client Contact Record

Contact Via: Phone Email Other: _____ Person Contacted: _____ Date/Time: _____
 Discrepancy allowance agreement is on record in the client project file

Discussion / Resolution

Any additional documentation and clarification from the client must be noted in the narrative and/or scanned into the CoC directory.

Reviewed by Jeri Hal Date: 12/16/22

WI-MI-010_020720

Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:																																																																						
Client Contact:		Phone:	Schafer, Sue		190-34921.1																																																																						
Shipping/Receiving			E-Mail:	State of Origin:	Page																																																																						
Company:			Sue.Schafer@et.eurofinsus.com	Michigan	Page 1 of 1																																																																						
Address:		Due Date Requested:	Accreditations Required (See note):																																																																								
13715 Rider Trail North,		1/3/2023	190-30651-1																																																																								
City:		TAT Requested (days):	Analysis Requested																																																																								
Earth City			<table border="1"> <tr> <th>Sample ID (Lab ID)</th> <th>Sample Date</th> <th>Sample Time</th> <th>Sample Type (C=Comp, G=Grab)</th> <th>Matrix (W=Water, S=Soil, O=soil/sediment, BT=Thiourea, A=Air)</th> <th>Field Filtered Sample (Yes or No)</th> <th>Perform MS/MSD (Yes or No)</th> <th>60208/3010A 2% THORIUM ONLY</th> <th>Total Number of Containers</th> <th>Special Instructions/Note:</th> </tr> <tr> <td>S43469.01 (190-30651-1)</td> <td>12/13/22</td> <td>09:25 Eastern</td> <td></td> <td>Water</td> <td>X</td> <td>X</td> <td></td> <td>1</td> <td></td> </tr> <tr> <td>S43469.02 (190-30651-2)</td> <td>12/13/22</td> <td>00:01 Eastern</td> <td></td> <td>Water</td> <td>X</td> <td>X</td> <td></td> <td>1</td> <td></td> </tr> <tr> <td>S43469.03 (190-30651-3)</td> <td>12/13/22</td> <td>13:10 Eastern</td> <td></td> <td>Water</td> <td>X</td> <td>X</td> <td></td> <td>1</td> <td></td> </tr> <tr> <td>S43469.04 (190-30651-4)</td> <td>12/14/22</td> <td>09:15 Eastern</td> <td></td> <td>Water</td> <td>X</td> <td>X</td> <td></td> <td>1</td> <td></td> </tr> <tr> <td>S43469.05 (190-30651-5)</td> <td>12/14/22</td> <td>00:01 Eastern</td> <td></td> <td>Water</td> <td>X</td> <td>X</td> <td></td> <td>1</td> <td></td> </tr> <tr> <td>S43469.06 (190-30651-6)</td> <td>12/14/22</td> <td>11:18 Eastern</td> <td></td> <td>Water</td> <td>X</td> <td>X</td> <td></td> <td>1</td> <td></td> </tr> </table>			Sample ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (W=Water, S=Soil, O=soil/sediment, BT=Thiourea, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	60208/3010A 2% THORIUM ONLY	Total Number of Containers	Special Instructions/Note:	S43469.01 (190-30651-1)	12/13/22	09:25 Eastern		Water	X	X		1		S43469.02 (190-30651-2)	12/13/22	00:01 Eastern		Water	X	X		1		S43469.03 (190-30651-3)	12/13/22	13:10 Eastern		Water	X	X		1		S43469.04 (190-30651-4)	12/14/22	09:15 Eastern		Water	X	X		1		S43469.05 (190-30651-5)	12/14/22	00:01 Eastern		Water	X	X		1		S43469.06 (190-30651-6)	12/14/22	11:18 Eastern		Water	X	X		1	
Sample ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (W=Water, S=Soil, O=soil/sediment, BT=Thiourea, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	60208/3010A 2% THORIUM ONLY	Total Number of Containers	Special Instructions/Note:																																																																		
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S43469.03 (190-30651-3)	12/13/22	13:10 Eastern		Water	X	X		1																																																																			
S43469.04 (190-30651-4)	12/14/22	09:15 Eastern		Water	X	X		1																																																																			
S43469.05 (190-30651-5)	12/14/22	00:01 Eastern		Water	X	X		1																																																																			
S43469.06 (190-30651-6)	12/14/22	11:18 Eastern		Water	X	X		1																																																																			
State, Zip:		PO #:	Preservation Codes:																																																																								
MO, 63045			M - Hexane N - None O - AsNBO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA Y - Tritzma Z - other (specify)																																																																								
Phone:		WO #:	Other:																																																																								
314-298-8566(Tel) 314-298-8757(Fax)																																																																											
E-mail:		Project #:																																																																									
		19001249																																																																									
Project Name:		SSOW#:																																																																									
S43469																																																																											
Site:																																																																											

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) _____
 Primary Deliverable Rank: 2
 Empty Kit Relinquished by: _____
 Relinquished by: _____
 Relinquished by: _____
 Relinquished by: _____
 Custody Seals Intact: _____
 Custody Seal No.: _____
 Cooler Temperature(s) °C and Other Remarks: _____

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
 Special Instructions/QC Requirements: _____

Received by:	Received by:	Received by:
FED EX	<i>B. George</i>	
Date/Time: 12/19/22 8:25 AM	Date/Time: 12/19/22 8:25 AM	Date/Time: _____
Company: _____	Company: _____	Company: _____

Ver: 06/08/2021



iCOC No:
190-34921

Containers

Count
6

Container Type
Plastic 125mL - Nitric Acid

Preservative
Nitric Acid



!COC No:
190-34921

Containers

Count
6

Container Type
Plastic 125mL - Nitric Acid

Preservative
Nitric Acid

1
2
3
4
5
6
7
8
9
10
11
12

Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler	Lab PM	Carrier Tracking No(s)		COC No
Address		Schafer, Sue	Schafer, Sue	State of Origin		190-34922.1
City		Amherst	E-Mail	Michigan		Page 1 of 1
State, Zip		NY, 14228-2298	Shipping/Receiving	Sue.Schafer@et.eurofins.com		Job #
Phone		716-691-2600(Tel) 716-691-7991(Fax)	Company	Eurofins Environment Testing Northeast.		190-30651-1
Email			Accreditations Required (See note)			
Project Name		S43469	Due Date Requested:			
Site			1/3/2023			
			TAT Requested (days):			
			09			
			PO #			
			WO #			
			Project #			
			19001249			
			SSOWN#			
			Field Filtered Sample (Yes or No)			
			Perform MS/MSD (Yes or No)			
			8270D/3510C_LVI Terephthal			
			Total Number of Containers			
			Special Instructions/Note:			
			Preservation Codes:			
			A - HCL			
			B - NaOH			
			C - Zn Acetate			
			D - Nitric Acid			
			E - NaHSO4			
			F - MeOH			
			G - Amchlor			
			H - Ascorbic Acid			
			I - Ice			
			J - DI Water			
			K - EDTA			
			L - EDA			
			Other:			
			M - Hexane			
			N - None			
			O - AsNaO2			
			P - Na2O4S			
			Q - Na2SO3			
			R - Na2SO3			
			S - H2SO4			
			T - TSP Dodecahydrate			
			U - Acetone			
			V - MCAA			
			W - pH 4-5			
			Y - Trizma			
			Z - other (specify)			
			Analysis Requested			
			Sample Identification - Client ID (Lab ID)			
			Sample Date			
			Sample Time			
			Sample Type (C=comp, G=grab)			
			Matrix (Water, Seawater, Other)			
			Preservation Code:			
			S43469.01 (190-30651-1)			
			S43469.02 (190-30651-2)			
			S43469.03 (190-30651-3)			
			S43469.04 (190-30651-4)			
			S43469.05 (190-30651-5)			
			S43469.06 (190-30651-6)			
			Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.			
			Possible Hazard Identification			
			Unconfirmed			
			Deliverable Requested: I, II, III, IV, Other (specify)			
			Primary Deliverable Rank: 2			
			Empty Kit Relinquished by:			
			Relinquished by: [Signature]			
			Relinquished by: [Signature]			
			Relinquished by:			
			Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No			
			Custody Seal No.:			
			Date/Time: 12/16/22 11:20			
			Date/Time: 12-17-22 1000			
			Date/Time: [Signature]			
			Date/Time: [Signature]			
			Date/Time: [Signature]			
			Cooler Temperature(s) °C and Other Remarks: 2.31°C			
			Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
			<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months			
			Special Instructions/QC Requirements:			
			Method of Shipment:			
			Received by: [Signature]			
			Received by: [Signature]			
			Received by: [Signature]			





Analytical Laboratory Report

Report ID: S43470.01(01)
Generated on 01/17/2023

Report to
Attention: Kelly Cratsenburg
TRC
1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: 734-412-5424 FAX:
Email: KCratsenburg@trccompanies.com

Report produced by
Merit Laboratories, Inc.
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Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Additional Contacts: Vince Buening

Report Summary
Lab Sample ID(s): S43470.01-S43470.06
Project: DA South Investigation 495430.0001
Collected Date(s): 12/13/2022 - 12/14/2022
Submitted Date/Time: 12/14/2022 16:50
Sampled by: A. Whaley
P.O. #: 193431

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Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
ASTMD7979-19M	ASTM Method D7979 - 19 Modified (Isotopic Dilution)

Parameter Summary

Parameter	Synonym	Cas #
PFBA	Perfluorobutanoic Acid	375-22-4
PFPeA	Perfluoropentanoic Acid	2706-90-3
4:2 FTSA	4:2 Fluorotelomer Sulfonic Acid	757124-72-4
PFHxA	Perfluorohexanoic Acid	307-24-4
PFBS	Perfluorobutane sulfonic Acid	375-73-5
PFHpA	Perfluoroheptanoic Acid	375-85-9
PFPeS	Perfluoropentane Sulfonic Acid	2706-91-4
6:2 FTSA	6:2 Fluorotelomer Sulfonic Acid	27619-97-2
PFOA	Perfluorooctanoic Acid	335-67-1
PFHxS	Perfluorohexane Sulfonic Acid	355-46-4
PFHxS-LN	Perfluorohexane Sulfonic Acid - LN	355-46-4-LN
PFHxS-BR	Perfluorohexane Sulfonic Acid - BR	355-46-4-BR
PFNA	Perfluorononanoic Acid	375-95-1
8:2 FTSA	8:2 Fluorotelomer Sulfonic Acid	39108-34-4
PFHpS	Perfluoroheptane Sulfonic Acid	375-92-8
PFDA	Perfluorodecanoic Acid	335-76-2
N-MeFOSAA	N-methyl perfluorooctanesulfonamidoacetic acid	2355-31-9
EtFOSAA	N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	2991-50-6
PFOS	Perfluorooctane Sulfonic Acid	1763-23-1
PFOS-LN	Perfluorooctane Sulfonic Acid - LN	1763-23-1-LN
PFOS-BR	Perfluorooctane Sulfonic Acid - BR	1763-23-1-BR
PFUnDA	Perfluoroundecanoic Acid	2058-94-8
PFNS	Perfluorononane Sulfonic Acid	68259-12-1
PFDoDA	Perfluorododecanoic Acid	307-55-1
PFDS	Perfluorodecane Sulfonic Acid	335-77-3
PFTTrDA	Perfluorotridecanoic Acid	72629-94-8
FOSA	Perfluorooctane Sulfonamide	754-91-6
PFTeDA	Perfluorotetradecanoic Acid	376-06-7
11Cl-PF3OUdS	11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	763051-92-9
9Cl-PF3ONS	9-chlorohexadecafluoro-3-oxanone1-sulfonic acid	756426-58-1
ADONA	4,8-dioxa-3H-perfluorononanoic acid	919005-14-4
HFPO-DA	Hexafluoropropylene oxide dimer	13252-13-6
PFECBS	Perfluoro-4-ethylcyclohexanesulfonate	67584-42-3
PFBSA	Perfluorobutanesulfonamide	30334-69-1
PFHxSA	Perfluorohexanesulfonamide	41997-13-1



Analytical Laboratory Report

Sample Summary (6 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S43470.01	MW-22-09	Groundwater	12/13/22 09:25
S43470.02	DUP-01W	Groundwater	12/13/22 00:01
S43470.03	MW-22-08	Groundwater	12/13/22 13:10
S43470.04	MW-22-07	Groundwater	12/14/22 09:15
S43470.05	DUP-03W	Groundwater	12/14/22 00:01
S43470.06	MW-22-10	Groundwater	12/14/22 11:18



Analytical Laboratory Report

Lab Sample ID: S43470.01

Sample Tag: MW-22-09

Collected Date/Time: 12/13/2022 09:25

Matrix: Groundwater

COC Reference: 141475

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.53/6.50/10	ASTMD7979-19M	01/03/23 10:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 01/04/23 12:59, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	11	10.0		ng/L	1.99	375-22-4		
PFPeA*	Not detected	4.0		ng/L	1.99	2706-90-3		
4:2 FTSA*	Not detected	2.0		ng/L	1.99	757124-72-4		
PFHxA*	2.1	2.0		ng/L	1.99	307-24-4		
PFBS*	6.1	2.0		ng/L	1.99	375-73-5		
PFHpA*	2.8	2.0		ng/L	1.99	375-85-9		
PFPeS*	Not detected	2.0		ng/L	1.99	2706-91-4		
6:2 FTSA*	Not detected	2.0		ng/L	1.99	27619-97-2		
PFOA*	7.6	2.0		ng/L	1.99	335-67-1		
PFHxS*	11	2.0		ng/L	1.99	355-46-4		
PFHxS-LN*	7.9	2.0		ng/L	1.99	355-46-4-LN		
PFHxS-BR*	2.8	2.0		ng/L	1.99	355-46-4-BR		
PFNA*	Not detected	2.0		ng/L	1.99	375-95-1		
8:2 FTSA*	Not detected	2.0		ng/L	1.99	39108-34-4		
PFHpS*	Not detected	2.0		ng/L	1.99	375-92-8		
PFDA*	Not detected	2.0		ng/L	1.99	335-76-2		
N-MeFOSAA*	Not detected	2.0		ng/L	1.99	2355-31-9		
EtFOSAA*	Not detected	4.0		ng/L	1.99	2991-50-6		
PFOS*	Not detected	2.0		ng/L	1.99	1763-23-1		
PFOS-LN*	Not detected	2.0		ng/L	1.99	1763-23-1-LN		
PFOS-BR*	Not detected	2.0		ng/L	1.99	1763-23-1-BR		
PFUnDA*	Not detected	2.0		ng/L	1.99	2058-94-8		
PFNS*	Not detected	2.0		ng/L	1.99	68259-12-1		
PFDODA*	Not detected	2.0		ng/L	1.99	307-55-1		
PFDS*	Not detected	2.0		ng/L	1.99	335-77-3		
PFTTrDA*	Not detected	2.0		ng/L	1.99	72629-94-8		
FOSA*	Not detected	2.0		ng/L	1.99	754-91-6		
PFTeDA*	Not detected	4.0		ng/L	1.99	376-06-7		
11Cl-PF3OUdS*	Not detected	2.0		ng/L	1.99	763051-92-9		
9Cl-PF3ONS*	Not detected	2.0		ng/L	1.99	756426-58-1		
ADONA*	Not detected	2.0		ng/L	1.99	919005-14-4		
HFPO-DA*	Not detected	10.0		ng/L	1.99	13252-13-6		
PFECHS*	Not detected	2.0		ng/L	1.99	67584-42-3		
PFBSA*	Not detected	2.0		ng/L	1.99	30334-69-1		
PFHxSA*	Not detected	2.0		ng/L	1.99	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43470.02

Sample Tag: DUP-01W

Collected Date/Time: 12/13/2022 00:01

Matrix: Groundwater

COC Reference: 141475

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.53/6.55/10	ASTMD7979-19M	01/03/23 10:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 01/03/23 23:10, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	12	10		ng/L	2.01	375-22-4		
PFPeA*	Not detected	4.0		ng/L	2.01	2706-90-3		
4:2 FTSA*	Not detected	2.0		ng/L	2.01	757124-72-4		
PFHxA*	2.3	2.0		ng/L	2.01	307-24-4		
PFBS*	5.9	2.0		ng/L	2.01	375-73-5		
PFHpA*	Not detected	2.0		ng/L	2.01	375-85-9		
PFPeS*	Not detected	2.0		ng/L	2.01	2706-91-4		
6:2 FTSA*	Not detected	2.0		ng/L	2.01	27619-97-2		
PFOA*	5.2	2.0		ng/L	2.01	335-67-1		
PFHxS*	11	2.0		ng/L	2.01	355-46-4		
PFHxS-LN*	8.7	2.0		ng/L	2.01	355-46-4-LN		
PFHxS-BR*	2.3	2.0		ng/L	2.01	355-46-4-BR		
PFNA*	Not detected	2.0		ng/L	2.01	375-95-1		
8:2 FTSA*	Not detected	2.0		ng/L	2.01	39108-34-4		
PFHpS*	Not detected	2.0		ng/L	2.01	375-92-8		
PFDA*	Not detected	2.0		ng/L	2.01	335-76-2		
N-MeFOSAA*	Not detected	2.0		ng/L	2.01	2355-31-9		
EtFOSAA*	Not detected	4.0		ng/L	2.01	2991-50-6		
PFOS*	2.2	2.0		ng/L	2.01	1763-23-1		
PFOS-LN*	Not detected	2.0		ng/L	2.01	1763-23-1-LN		
PFOS-BR*	Not detected	2.0		ng/L	2.01	1763-23-1-BR		
PFUnDA*	Not detected	2.0		ng/L	2.01	2058-94-8		
PFNS*	Not detected	2.0		ng/L	2.01	68259-12-1		
PFDODA*	Not detected	2.0		ng/L	2.01	307-55-1		
PFDS*	Not detected	2.0		ng/L	2.01	335-77-3		
PFTTrDA*	Not detected	2.0		ng/L	2.01	72629-94-8		
FOSA*	Not detected	2.0		ng/L	2.01	754-91-6		
PFTeDA*	Not detected	4.0		ng/L	2.01	376-06-7		
11Cl-PF3OUdS*	Not detected	2.0		ng/L	2.01	763051-92-9		
9Cl-PF3ONS*	Not detected	2.0		ng/L	2.01	756426-58-1		
ADONA*	Not detected	2.0		ng/L	2.01	919005-14-4		
HFPO-DA*	Not detected	10		ng/L	2.01	13252-13-6		
PFECHS*	Not detected	2.0		ng/L	2.01	67584-42-3		
PFBSA*	Not detected	2.0		ng/L	2.01	30334-69-1		
PFHxSA*	Not detected	2.0		ng/L	2.01	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43470.03

Sample Tag: MW-22-08

Collected Date/Time: 12/13/2022 13:10

Matrix: Groundwater

COC Reference: 141475

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.44/6.50/10	ASTMD7979-19M	01/03/23 10:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 01/03/23 23:29, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	11	10		ng/L	2.02	375-22-4		
PFPeA*	4.3	4.0		ng/L	2.02	2706-90-3		
4:2 FTSA*	Not detected	2.0		ng/L	2.02	757124-72-4		
PFHxA*	4.8	2.0		ng/L	2.02	307-24-4		
PFBS*	6.4	2.0		ng/L	2.02	375-73-5		
PFHpA*	2.7	2.0		ng/L	2.02	375-85-9		
PFPeS*	Not detected	2.0		ng/L	2.02	2706-91-4		
6:2 FTSA*	Not detected	2.0		ng/L	2.02	27619-97-2		
PFOA*	7.0	2.0		ng/L	2.02	335-67-1		
PFHxS*	9.2	2.0		ng/L	2.02	355-46-4		
PFHxS-LN*	7.6	2.0		ng/L	2.02	355-46-4-LN		
PFHxS-BR*	Not detected	2.0		ng/L	2.02	355-46-4-BR		
PFNA*	Not detected	2.0		ng/L	2.02	375-95-1		
8:2 FTSA*	Not detected	2.0		ng/L	2.02	39108-34-4		
PFHpS*	Not detected	2.0		ng/L	2.02	375-92-8		
PFDA*	Not detected	2.0		ng/L	2.02	335-76-2		
N-MeFOSAA*	Not detected	2.0		ng/L	2.02	2355-31-9		
EtFOSAA*	5.6	4.0		ng/L	2.02	2991-50-6		
PFOS*	9.3	2.0		ng/L	2.02	1763-23-1		
PFOS-LN*	5.8	2.0		ng/L	2.02	1763-23-1-LN		
PFOS-BR*	3.3	2.0		ng/L	2.02	1763-23-1-BR		
PFUnDA*	Not detected	2.0		ng/L	2.02	2058-94-8		
PFNS*	Not detected	2.0		ng/L	2.02	68259-12-1		
PFDODA*	Not detected	2.0		ng/L	2.02	307-55-1		
PFDS*	Not detected	2.0		ng/L	2.02	335-77-3		
PFTTrDA*	Not detected	2.0		ng/L	2.02	72629-94-8		
FOSA*	Not detected	2.0		ng/L	2.02	754-91-6		
PFTeDA*	Not detected	4.0		ng/L	2.02	376-06-7		
11Cl-PF3OUdS*	Not detected	2.0		ng/L	2.02	763051-92-9		
9Cl-PF3ONS*	Not detected	2.0		ng/L	2.02	756426-58-1		
ADONA*	Not detected	2.0		ng/L	2.02	919005-14-4		
HFPO-DA*	Not detected	10		ng/L	2.02	13252-13-6		
PFECHS*	Not detected	2.0		ng/L	2.02	67584-42-3		
PFBSA*	Not detected	2.0		ng/L	2.02	30334-69-1		
PFHxSA*	Not detected	2.0		ng/L	2.02	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43470.04

Sample Tag: MW-22-07

Collected Date/Time: 12/14/2022 09:15

Matrix: Groundwater

COC Reference: 141475

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.60/6.51/10	ASTMD7979-19M	01/03/23 10:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 01/03/23 23:49, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	14	9.8		ng/L	1.96	375-22-4		
PFPeA*	Not detected	3.9		ng/L	1.96	2706-90-3		
4:2 FTSA*	Not detected	2.0		ng/L	1.96	757124-72-4		
PFHxA*	2.7	2.0		ng/L	1.96	307-24-4		
PFBS*	4.5	2.0		ng/L	1.96	375-73-5		
PFHpA*	Not detected	2.0		ng/L	1.96	375-85-9		
PFPeS*	Not detected	2.0		ng/L	1.96	2706-91-4		
6:2 FTSA*	Not detected	2.0		ng/L	1.96	27619-97-2		
PFOA*	6.7	2.0		ng/L	1.96	335-67-1		
PFHxS*	4.1	2.0		ng/L	1.96	355-46-4		
PFHxS-LN*	3.1	2.0		ng/L	1.96	355-46-4-LN		
PFHxS-BR*	Not detected	2.0		ng/L	1.96	355-46-4-BR		
PFNA*	Not detected	2.0		ng/L	1.96	375-95-1		
8:2 FTSA*	Not detected	2.0		ng/L	1.96	39108-34-4		
PFHpS*	Not detected	2.0		ng/L	1.96	375-92-8		
PFDA*	Not detected	2.0		ng/L	1.96	335-76-2		
N-MeFOSAA*	Not detected	2.0		ng/L	1.96	2355-31-9		
EtFOSAA*	Not detected	3.9		ng/L	1.96	2991-50-6		
PFOS*	4.5	2.0		ng/L	1.96	1763-23-1		
PFOS-LN*	2.4	2.0		ng/L	1.96	1763-23-1-LN		
PFOS-BR*	2.0	2.0		ng/L	1.96	1763-23-1-BR		
PFUnDA*	Not detected	2.0		ng/L	1.96	2058-94-8		
PFNS*	Not detected	2.0		ng/L	1.96	68259-12-1		
PFDODA*	Not detected	2.0		ng/L	1.96	307-55-1		
PFDS*	Not detected	2.0		ng/L	1.96	335-77-3		
PFTTrDA*	Not detected	2.0		ng/L	1.96	72629-94-8		
FOSA*	Not detected	2.0		ng/L	1.96	754-91-6		
PFTeDA*	Not detected	3.9		ng/L	1.96	376-06-7		
11Cl-PF3OUdS*	Not detected	2.0		ng/L	1.96	763051-92-9		
9Cl-PF3ONS*	Not detected	2.0		ng/L	1.96	756426-58-1		
ADONA*	Not detected	2.0		ng/L	1.96	919005-14-4		
HFPO-DA*	Not detected	9.8		ng/L	1.96	13252-13-6		
PFECHS*	Not detected	2.0		ng/L	1.96	67584-42-3		
PFBSA*	Not detected	2.0		ng/L	1.96	30334-69-1		
PFHxSA*	Not detected	2.0		ng/L	1.96	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43470.05

Sample Tag: DUP-03W

Collected Date/Time: 12/14/2022 00:01

Matrix: Groundwater

COC Reference: 141475

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.48/6.53/10	ASTMD7979-19M	01/03/23 10:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 01/04/23 00:08, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	14	10		ng/L	2.02	375-22-4		
PFPeA*	Not detected	4.0		ng/L	2.02	2706-90-3		
4:2 FTSA*	Not detected	2.0		ng/L	2.02	757124-72-4		
PFHxA*	2.6	2.0		ng/L	2.02	307-24-4		
PFBS*	5.2	2.0		ng/L	2.02	375-73-5		
PFHpA*	Not detected	2.0		ng/L	2.02	375-85-9		
PFPeS*	Not detected	2.0		ng/L	2.02	2706-91-4		
6:2 FTSA*	Not detected	2.0		ng/L	2.02	27619-97-2		
PFOA*	5.8	2.0		ng/L	2.02	335-67-1		
PFHxS*	4.0	2.0		ng/L	2.02	355-46-4		
PFHxS-LN*	3.0	2.0		ng/L	2.02	355-46-4-LN		
PFHxS-BR*	Not detected	2.0		ng/L	2.02	355-46-4-BR		
PFNA*	Not detected	2.0		ng/L	2.02	375-95-1		
8:2 FTSA*	Not detected	2.0		ng/L	2.02	39108-34-4		
PFHpS*	Not detected	2.0		ng/L	2.02	375-92-8		
PFDA*	Not detected	2.0		ng/L	2.02	335-76-2		
N-MeFOSAA*	Not detected	2.0		ng/L	2.02	2355-31-9		
EtFOSAA*	Not detected	4.0		ng/L	2.02	2991-50-6		
PFOS*	4.6	2.0		ng/L	2.02	1763-23-1		
PFOS-LN*	2.9	2.0		ng/L	2.02	1763-23-1-LN		
PFOS-BR*	Not detected	2.0		ng/L	2.02	1763-23-1-BR		
PFUnDA*	Not detected	2.0		ng/L	2.02	2058-94-8		
PFNS*	Not detected	2.0		ng/L	2.02	68259-12-1		
PFDODA*	Not detected	2.0		ng/L	2.02	307-55-1		
PFDS*	Not detected	2.0		ng/L	2.02	335-77-3		
PFTTrDA*	Not detected	2.0		ng/L	2.02	72629-94-8		
FOSA*	Not detected	2.0		ng/L	2.02	754-91-6		
PFTeDA*	Not detected	4.0		ng/L	2.02	376-06-7		
11Cl-PF3OUdS*	Not detected	2.0		ng/L	2.02	763051-92-9		
9Cl-PF3ONS*	Not detected	2.0		ng/L	2.02	756426-58-1		
ADONA*	Not detected	2.0		ng/L	2.02	919005-14-4		
HFPO-DA*	Not detected	10		ng/L	2.02	13252-13-6		
PFECHS*	Not detected	2.0		ng/L	2.02	67584-42-3		
PFBSA*	Not detected	2.0		ng/L	2.02	30334-69-1		
PFHxSA*	Not detected	2.0		ng/L	2.02	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43470.06

Sample Tag: MW-22-10

Collected Date/Time: 12/14/2022 11:18

Matrix: Groundwater

COC Reference: 141475

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.78/6.53/10	ASTMD7979-19M	01/03/23 10:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 01/04/23 13:19, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	13	9.5		ng/L	1.9	375-22-4		
PFPeA*	6.1	3.8		ng/L	1.9	2706-90-3		
4:2 FTSA*	Not detected	1.9		ng/L	1.9	757124-72-4		
PFHxA*	5.9	1.9		ng/L	1.9	307-24-4		
PFBS*	4.6	1.9		ng/L	1.9	375-73-5		
PFHpA*	3.1	1.9		ng/L	1.9	375-85-9		
PFPeS*	Not detected	1.9		ng/L	1.9	2706-91-4		
6:2 FTSA*	Not detected	1.9		ng/L	1.9	27619-97-2		
PFOA*	9.8	1.9		ng/L	1.9	335-67-1		
PFHxS*	3.0	1.9		ng/L	1.9	355-46-4		
PFHxS-LN*	2.4	1.9		ng/L	1.9	355-46-4-LN		
PFHxS-BR*	Not detected	1.9		ng/L	1.9	355-46-4-BR		
PFNA*	Not detected	1.9		ng/L	1.9	375-95-1		
8:2 FTSA*	Not detected	1.9		ng/L	1.9	39108-34-4		
PFHpS*	Not detected	1.9		ng/L	1.9	375-92-8		
PFDA*	Not detected	1.9		ng/L	1.9	335-76-2		
N-MeFOSAA*	Not detected	1.9		ng/L	1.9	2355-31-9		
EtFOSAA*	Not detected	3.8		ng/L	1.9	2991-50-6		
PFOS*	4.1	1.9		ng/L	1.9	1763-23-1		
PFOS-LN*	Not detected	1.9		ng/L	1.9	1763-23-1-LN		
PFOS-BR*	2.5	1.9		ng/L	1.9	1763-23-1-BR		
PFUnDA*	Not detected	1.9		ng/L	1.9	2058-94-8		
PFNS*	Not detected	1.9		ng/L	1.9	68259-12-1		
PFDoDA*	Not detected	1.9		ng/L	1.9	307-55-1		
PFDS*	Not detected	1.9		ng/L	1.9	335-77-3		
PFTTrDA*	Not detected	1.9		ng/L	1.9	72629-94-8		
FOSA*	Not detected	1.9		ng/L	1.9	754-91-6		
PFTeDA*	Not detected	3.8		ng/L	1.9	376-06-7		
11Cl-PF3OUdS*	Not detected	1.9		ng/L	1.9	763051-92-9		
9Cl-PF3ONS*	Not detected	1.9		ng/L	1.9	756426-58-1		
ADONA*	Not detected	1.9		ng/L	1.9	919005-14-4		
HFPO-DA*	Not detected	9.5		ng/L	1.9	13252-13-6		
PFECHS*	Not detected	1.9		ng/L	1.9	67584-42-3		
PFBSA*	Not detected	1.9		ng/L	1.9	30334-69-1		
PFHxSA*	Not detected	1.9		ng/L	1.9	41997-13-1		

Merit Laboratories Login Checklist

Lab Set ID:S43470

Client:TRC (TRC)

Project: DA South Investigation 495430.0001

Submitted: 12/14/2022 16:50 Login User: MMC

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place

Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Selection	Description	Note
Sample Receiving		
01.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples are received at 4C +/- 2C Thermometer # IR 4.2
02.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Received on ice/ cooling process begun
03.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples shipped
04.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples left in 24 hr. drop box
05.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Are there custody seals/tape or is the drop box locked
Chain of Custody		
06.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC adequately filled out
07.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC signed and relinquished to the lab
08.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sample tag on bottles match COC
09.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Subcontracting needed? Subcontracted to:
Preservation		
10.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Do sample have correct chemical preservation
11.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Completed pH checks on preserved samples? (no VOAs)
12.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Did any samples need to be preserved in the lab?
Bottle Conditions		
13.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	All bottles intact
14.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Appropriate analytical bottles are used
15.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Merit bottles used
16.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sufficient sample volume received
17.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples require laboratory filtration
18.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples submitted within holding time
19.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Do water VOC or TOX bottles contain headspace

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____



2680 East Lansing Dr., East Lansing, MI 48823
 Phone (517) 332-0167 Fax (517) 332-4034
 www.meritlabs.com

C.O.C. PAGE # _____ OF _____ 141475

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME Kelly Cratsenburg
 COMPANY TRC
 ADDRESS 1540 Eisenhower Place
 CITY Ann Arbor STATE MI ZIP CODE 48108
 PHONE NO. 734-585-7887 FAX NO. _____ P.O. NO. 193431
 E-MAIL ADDRESS KCratsenburg@trccompanies.com QUOTE NO. _____

CONTACT NAME _____ SAME
 COMPANY _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP CODE _____
 PHONE NO. _____ E-MAIL ADDRESS _____

PROJECT NO./NAME DA South investigation 495480.cool SAMPLER(S) - PLEASE PRINT/SIGN NAME A. Whaley
 TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____
 DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER TRC EDD

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIFE A=AIR W=WASTE

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Volat TICS	SVOCs TICS	Metals	PFAS 31	PCBs	Tetraethyl Lead	Thorium	Alcohols	Certifications
1,4 Dioxane								<input type="checkbox"/> OHIO VAP <input type="checkbox"/> Drinking Water
								<input type="checkbox"/> DoD <input type="checkbox"/> NPDES
								Project Locations
								<input checked="" type="checkbox"/> Detroit <input type="checkbox"/> New York
								<input type="checkbox"/> Other _____
								Special Instructions

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	Volat TICS 1,4 Dioxane	SVOCs TICS	Metals	PFAS 31	PCBs	Tetraethyl Lead	Thorium	Alcohols		Special Instructions	
	DATE	TIME																					
43469.01	12.13.22	0925	MW-22-09	GW	16	11	3	2					X	X	X	X	X	X	X	X	X		See Scope For DA Southern Boundary
.02	↓	—	DUP-01W	GW	16	11	3	2					X	X	X	X	X	X	X	X	X		
.03	↓	1310	MW-22-08	GW	16	11	3	2					X	X	X	X	X	X	X	X	X		
.04	12.14.22	0915	MW-22-07	GW	18	11	5	2					X	X	X	X	X	X	X	X	X		
.05	↓	—	DUP-03W	GW	18	11	5	2					X	X	X	X	X	X	X	X	X		
.06	↓	1118	MW-22-10	GW	18	11	5	2					X	X	X	X	X	X	X	X	X		
43469.07																							

RELINQUISHED BY: A. Whaley Sampler DATE 12.14.22 TIME 1450
 SIGNATURE/ORGANIZATION TRC
 RECEIVED BY: MS DATE 12-14-22 TIME 1450
 SIGNATURE/ORGANIZATION MS
 RELINQUISHED BY: MS DATE 12-14-22 TIME 1650
 SIGNATURE/ORGANIZATION MS
 RECEIVED BY: M. Chilcote DATE 12/14/22 TIME 1650
 SIGNATURE/ORGANIZATION M. Chilcote

RELINQUISHED BY: _____ DATE _____ TIME _____
 SIGNATURE/ORGANIZATION _____
 RECEIVED BY: _____ DATE _____ TIME _____
 SIGNATURE/ORGANIZATION _____

SEAL NO. _____	SEAL INTACT YES <input type="checkbox"/> NO <input type="checkbox"/>	INITIALS _____	NOTES: TEMP. ON ARRIVAL <u>4.2</u>
SEAL NO. _____	SEAL INTACT YES <input type="checkbox"/> NO <input type="checkbox"/>	INITIALS _____	



Analytical Laboratory Report

Report ID: S43569.01(01)
Generated on 01/03/2023

Report to
Attention: Kelly Cratsenburg
TRC
1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: 734-412-5424 FAX:
Email: KCratsenburg@trccompanies.com

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Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Additional Contacts: Vince Buening

Report Summary
Lab Sample ID(s): S43569.01-S43569.06
Project: Detroit Axle Southern
Collected Date(s): 12/15/2022
Submitted Date/Time: 12/16/2022 12:00
Sampled by: A. Whaley
P.O. #: 193431

Table of Contents
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Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
E200.8	EPA Method 200.8 Revision 5.4
E245.1	EPA Method 245.1 Revision 3.0
E608.3	EPA Method 608.3 December 2016
N/A	Not Applicable
SW3015A	SW 846 Method 3015A Revision 1 February 2007
SW3510C	SW 846 Method 3510C Revision 3 December 1996
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003
SW8260B - SIM	SW 846 Method 8260B Revision 2 December 1996 SIMs
SW8270D	SW 846 Method 8270D Revision 4 February 2007



Analytical Laboratory Report

Sample Summary (6 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S43569.01	MW-22-15	Groundwater	12/15/22 09:42
S43569.02	MW-22-14	Groundwater	12/15/22 10:55
S43569.03	TB-03	Water	12/15/22 00:01
S43569.04	Dup-02W	Groundwater	12/15/22 00:01
S43569.05	MW-22-13	Groundwater	12/15/22 12:54
S43569.06	MW-22-11	Groundwater	12/15/22 15:03



Analytical Laboratory Report

Lab Sample ID: S43569.01

Sample Tag: MW-22-15

Collected Date/Time: 12/15/2022 09:42

Matrix: Groundwater

COC Reference: 158675

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	5.3	IR
3	40ml Glass	None	Yes	5.3	IR
2	125ml Plastic	HNO3	Yes	5.3	IR
4	1L Amber	None	Yes	5.3	IR
1	250ml Amber	None	Yes	5.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	12/19/22 23:45	CTV	
pH check for VOCs*	<2	N/A	12/19/22 11:40	JKJ	
Metal Digestion	Completed	SW3015A	12/19/22 11:40	CCM	
BNA Extraction	Completed	SW3510C	12/20/22 12:00	JWR	
Extraction, PCB*	Completed	E608.3	12/20/22 12:00	JWR	

Metals

Method: E200.8, Run Date: 12/19/22 12:50, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.025	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		
Barium	0.098	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Boron	0.21	0.04		mg/L	2	7440-42-8		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.12	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.076	0.005		mg/L	2	7439-96-5		
Molybdenum	0.012	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.496	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		

Method: E200.8, Run Date: 12/19/22 15:35, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	137	0.50		mg/L	2	7440-70-2		
Magnesium	23.5	0.50		mg/L	2	7439-95-4		
Potassium	10.9	0.50		mg/L	2	7440-09-7		



Analytical Laboratory Report

Lab Sample ID: S43569.01 (continued)

Sample Tag: MW-22-15

Method: E200.8, Run Date: 12/19/22 15:35, Analyst: CCM (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Sodium	54.2	0.50		mg/L	2	7440-23-5		

Method: E245.1, Run Date: 12/19/22 23:35, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 12/21/22 16:24, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2		
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2		
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5		
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9		
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6		
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1		
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5		
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 12/22/22 23:25, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43569.01 (continued)

Sample Tag: MW-22-15

Method: SW8270D, Run Date: 12/22/22 23:25, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 12/27/22 02:54, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 12/19/22 04:25, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 12/21/22 17:31, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/19/22 04:25, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200



Analytical Laboratory Report

Lab Sample ID: S43569.01 (continued)

Sample Tag: MW-22-15

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/19/22 04:25, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	1	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	1	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	1	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		



Analytical Laboratory Report

Lab Sample ID: S43569.01 (continued)

Sample Tag: MW-22-15

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/19/22 04:25, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 12/21/22 16:28, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/21/22 10:46, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43569.02

Sample Tag: MW-22-14

Collected Date/Time: 12/15/2022 10:55

Matrix: Groundwater

COC Reference: 158675

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	5.3	IR
3	40ml Glass	None	Yes	5.3	IR
2	125ml Plastic	HNO3	Yes	5.3	IR
4	1L Amber	None	Yes	5.3	IR
1	250ml Amber	None	Yes	5.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	12/19/22 23:45	CTV	
pH check for VOCs*	<2	N/A	12/19/22 11:40	JKJ	
Metal Digestion	Completed	SW3015A	12/19/22 11:40	CCM	
BNA Extraction	Completed	SW3510C	12/20/22 12:00	JWR	
Extraction, PCB*	Completed	E608.3	12/20/22 12:00	JWR	

Metals

Method: E200.8, Run Date: 12/19/22 12:53, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.020	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		
Barium	0.079	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Boron	0.33	0.04		mg/L	2	7440-42-8		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.03	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.091	0.005		mg/L	2	7439-96-5		
Molybdenum	0.006	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.544	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		

Method: E200.8, Run Date: 12/19/22 15:36, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	135	0.50		mg/L	2	7440-70-2		
Magnesium	28.1	0.50		mg/L	2	7439-95-4		
Potassium	16.7	0.50		mg/L	2	7440-09-7		



Analytical Laboratory Report

Lab Sample ID: S43569.02 (continued)

Sample Tag: MW-22-14

Method: E200.8, Run Date: 12/19/22 15:36, Analyst: CCM (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Sodium	149	0.50		mg/L	2	7440-23-5		

Method: E245.1, Run Date: 12/19/22 23:39, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 12/21/22 16:35, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2		
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2		
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5		
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9		
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6		
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1		
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5		
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 12/22/22 23:55, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43569.02 (continued)

Sample Tag: MW-22-14

Method: SW8270D, Run Date: 12/22/22 23:55, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 12/27/22 03:18, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 12/19/22 04:45, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 12/21/22 17:51, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/19/22 04:45, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200



Analytical Laboratory Report

Lab Sample ID: S43569.02 (continued)

Sample Tag: MW-22-14

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/19/22 04:45, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		



Analytical Laboratory Report

Lab Sample ID: S43569.02 (continued)

Sample Tag: MW-22-14

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/19/22 04:45, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 12/21/22 16:49, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/21/22 10:46, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43569.03

Sample Tag: TB-03

Collected Date/Time: 12/15/2022 00:01

Matrix: Water

COC Reference: 158675

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/19/22 11:40	JKJ	

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 12/27/22 03:42, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/18/22 16:12, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000



Analytical Laboratory Report

Lab Sample ID: S43569.03 (continued)

Sample Tag: TB-03

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/18/22 16:12, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		



Analytical Laboratory Report

Lab Sample ID: S43569.04

Sample Tag: Dup-02W

Collected Date/Time: 12/15/2022 00:01

Matrix: Groundwater

COC Reference: 158675

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	5.3	IR
3	40ml Glass	None	Yes	5.3	IR
2	125ml Plastic	HNO3	Yes	5.3	IR
4	1L Amber	None	Yes	5.3	IR
1	250ml Amber	None	Yes	5.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	12/19/22 01:42	CTV	
pH check for VOCs*	<2	N/A	12/19/22 11:40	JKJ	
Metal Digestion	Completed	SW3015A	12/19/22 11:40	CCM	
BNA Extraction	Completed	SW3510C	12/20/22 12:00	JWR	
Extraction, PCB*	Completed	E608.3	12/20/22 12:00	JWR	

Metals

Method: E200.8, Run Date: 12/19/22 12:54, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.044	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		
Barium	0.079	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Boron	0.33	0.04		mg/L	2	7440-42-8		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.11	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.162	0.005		mg/L	2	7439-96-5		
Molybdenum	0.016	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.481	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		

Method: E200.8, Run Date: 12/19/22 15:38, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	122	0.50		mg/L	2	7440-70-2		
Magnesium	26.8	0.50		mg/L	2	7439-95-4		
Potassium	24.2	0.50		mg/L	2	7440-09-7		



Analytical Laboratory Report

Lab Sample ID: S43569.04 (continued)

Sample Tag: Dup-02W

Method: E200.8, Run Date: 12/19/22 15:38, Analyst: CCM (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Sodium	93.9	0.50		mg/L	2	7440-23-5		

Method: E245.1, Run Date: 12/19/22 00:06, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 12/21/22 16:46, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2		
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2		
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5		
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9		
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6		
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1		
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5		
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 12/23/22 00:26, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43569.04 (continued)

Sample Tag: Dup-02W

Method: SW8270D, Run Date: 12/23/22 00:26, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 12/27/22 04:06, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW8260B - SIM, Run Date: 12/21/22 18:13, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/19/22 05:04, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700



Analytical Laboratory Report

Lab Sample ID: S43569.04 (continued)

Sample Tag: Dup-02W

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/19/22 05:04, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		



Analytical Laboratory Report

Lab Sample ID: S43569.04 (continued)

Sample Tag: Dup-02W

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/19/22 05:04, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

TICs Volatiles, Method: SW5030C/8260C, Run Date: 12/19/22 05:04, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Completed			ug/L	1			
Ethane, 1-chloro-1-fluoro-*	Found			ug/L	1			

Other / Misc.

Method: , Run Date: 12/21/22 17:09, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/21/22 10:46, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43569.05

Sample Tag: MW-22-13

Collected Date/Time: 12/15/2022 12:54

Matrix: Groundwater

COC Reference: 158675

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	5.3	IR
3	40ml Glass	None	Yes	5.3	IR
2	125ml Plastic	HNO3	Yes	5.3	IR
4	1L Amber	None	Yes	5.3	IR
1	250ml Amber	None	Yes	5.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	12/19/22 01:42	CTV	
pH check for VOCs*	<2	N/A	12/19/22 11:40	JKJ	
Metal Digestion	Completed	SW3015A	12/19/22 11:40	CCM	
BNA Extraction	Completed	SW3510C	12/20/22 12:00	JWR	
Extraction, PCB*	Completed	E608.3	12/20/22 12:00	JWR	

Metals

Method: E200.8, Run Date: 12/19/22 12:56, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.045	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		
Barium	0.081	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Boron	0.35	0.04		mg/L	2	7440-42-8		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.11	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.164	0.005		mg/L	2	7439-96-5		
Molybdenum	0.015	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.488	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		

Method: E200.8, Run Date: 12/19/22 15:39, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	124	0.50		mg/L	2	7440-70-2		
Magnesium	27.2	0.50		mg/L	2	7439-95-4		
Potassium	24.7	0.50		mg/L	2	7440-09-7		



Analytical Laboratory Report

Lab Sample ID: S43569.05 (continued)

Sample Tag: MW-22-13

Method: E200.8, Run Date: 12/19/22 15:39, Analyst: CCM (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Sodium	94.1	0.50		mg/L	2	7440-23-5		

Method: E245.1, Run Date: 12/19/22 00:10, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 12/21/22 16:57, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2		
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2		
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5		
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9		
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6		
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1		
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5		
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 12/23/22 00:56, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		



Analytical Laboratory Report

Lab Sample ID: S43569.05 (continued)

Sample Tag: MW-22-13

Method: SW8270D, Run Date: 12/23/22 00:56, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 12/27/22 04:31, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW8260B - SIM, Run Date: 12/21/22 18:33, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/19/22 05:24, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700



Analytical Laboratory Report

Lab Sample ID: S43569.05 (continued)

Sample Tag: MW-22-13

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/19/22 05:24, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		



Analytical Laboratory Report

Lab Sample ID: S43569.05 (continued)

Sample Tag: MW-22-13

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/19/22 05:24, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

TICs Volatiles, Method: SW5030C/8260C, Run Date: 12/19/22 05:24, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Completed			ug/L	1			
Ethane, 1-chloro-1-fluoro-*	Found			ug/L	1			

Other / Misc.

Method: , Run Date: 12/21/22 17:30, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/21/22 10:46, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43569.06

Sample Tag: MW-22-11

Collected Date/Time: 12/15/2022 15:03

Matrix: Groundwater

COC Reference: 158675

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	5.3	IR
3	40ml Glass	None	Yes	5.3	IR
2	125ml Plastic	HNO3	Yes	5.3	IR
4	1L Amber	None	Yes	5.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	12/19/22 01:42	CTV	
pH check for VOCs*	<2	N/A	12/19/22 11:40	JKJ	
Metal Digestion	Completed	SW3015A	12/19/22 11:40	CCM	
BNA Extraction	Completed	SW3510C	12/20/22 12:00	JWR	
Extraction, PCB*	Completed	E608.3	12/20/22 12:00	JWR	

Metals

Method: E200.8, Run Date: 12/19/22 12:58, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.053	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		
Barium	0.127	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Boron	0.07	0.04		mg/L	2	7440-42-8		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.08	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.092	0.005		mg/L	2	7439-96-5		
Molybdenum	0.006	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.267	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		

Method: E200.8, Run Date: 12/19/22 15:41, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	79.5	0.50		mg/L	2	7440-70-2		
Magnesium	14.2	0.50		mg/L	2	7439-95-4		
Potassium	6.99	0.50		mg/L	2	7440-09-7		
Sodium	70.2	0.50		mg/L	2	7440-23-5		



Analytical Laboratory Report

Lab Sample ID: S43569.06 (continued)

Sample Tag: MW-22-11

Method: E245.1, Run Date: 12/19/22 00:14, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 12/21/22 17:09, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2		
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2		
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5		
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9		
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6		
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1		
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5		
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 12/23/22 01:27, Analyst: JGH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		



Analytical Laboratory Report

Lab Sample ID: S43569.06 (continued)

Sample Tag: MW-22-11

Method: SW8270D, Run Date: 12/23/22 01:27, Analyst: JGH (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 12/27/22 04:55, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 12/19/22 05:43, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 12/21/22 18:53, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/19/22 05:43, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700



Analytical Laboratory Report

Lab Sample ID: S43569.06 (continued)

Sample Tag: MW-22-11

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/19/22 05:43, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		



Analytical Laboratory Report

Lab Sample ID: S43569.06 (continued)

Sample Tag: MW-22-11

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/19/22 05:43, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 12/21/22 17:51, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/21/22 10:46, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.

Merit Laboratories Login Checklist

Lab Set ID:S43569

Client:TRC (TRC)

Project: Detroit Axle Southern

Submitted: 12/16/2022 12:00 Login User: PFD

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place

Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Selection	Description	Note
-----------	-------------	------

Sample Receiving

- | | | |
|-----|--|--|
| 01. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples are received at 4C +/- 2C Thermometer # IR 5.3 |
| 02. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Received on ice/ cooling process begun |
| 03. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples shipped |
| 04. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples left in 24 hr. drop box |
| 05. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Are there custody seals/tape or is the drop box locked |

Chain of Custody

- | | | |
|-----|--|---|
| 06. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC adequately filled out |
| 07. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC signed and relinquished to the lab |
| 08. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sample tag on bottles match COC |
| 09. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Subcontracting needed? Subcontracted to: Eurofins |

Preservation

- | | | |
|-----|--|---|
| 10. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Do sample have correct chemical preservation |
| 11. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Completed pH checks on preserved samples? (no VOAs) |
| 12. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Did any samples need to be preserved in the lab? |

Bottle Conditions

- | | | |
|-----|--|---|
| 13. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | All bottles intact |
| 14. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Appropriate analytical bottles are used |
| 15. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Merit bottles used |
| 16. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sufficient sample volume received |
| 17. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples require laboratory filtration |
| 18. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples submitted within holding time |
| 19. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Do water VOC or TOX bottles contain headspace |

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____

Merit Laboratories Bottle Preservation Check

Lab Set ID: S43569 Submitted: 12/16/2022 12:00

Client: TRC (TRC)

Project: Detroit Axle Southern

Initial Preservation Check: 12/16/2022 14:11 PFD

Preservation Recheck (E200.8): N/A

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Sample ID	Bottle / Preservation	pH (Orig)	Add ml	pH (New)	Notes
S43569.01	125ml Plastic HNO3	<2			
S43569.01	125ml Plastic HNO3	<2			
S43569.02	125ml Plastic HNO3	<2			
S43569.02	125ml Plastic HNO3	<2			
S43569.04	125ml Plastic HNO3	<2			
S43569.04	125ml Plastic HNO3	<2			
S43569.05	125ml Plastic HNO3	<2			
S43569.05	125ml Plastic HNO3	<2			
S43569.06	125ml Plastic HNO3	<2			
S43569.06	125ml Plastic HNO3	<2			

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Lab Results
Merit Laboratories
2680 E Lansing Drive
East Lansing, Michigan 48823

Generated 12/28/2022 8:23:58 PM

JOB DESCRIPTION

S43569/Tetraethyl Lead

JOB NUMBER

190-30668-1

Eurofins Michigan

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



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12/28/2022 8:23:58 PM

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Sample Summary

Client: Merit Laboratories
Project/Site: S43569/Tetraethyl Lead

Job ID: 190-30668-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
190-30668-1	S43569.01	Water	12/15/22 09:42	12/16/22 15:50
190-30668-2	S43569.02	Water	12/15/22 10:55	12/16/22 15:50
190-30668-3	S43569.03	Water	12/15/22 00:01	12/16/22 15:50
190-30668-4	S43569.04	Water	12/15/22 12:54	12/16/22 15:50

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Case Narrative

Client: Merit Laboratories
Project/Site: S43569/Tetraethyl Lead

Job ID: 190-30668-1

Job ID: 190-30668-1

Laboratory: Eurofins Michigan

Narrative

**Job Narrative
190-30668-1**

Receipt

The samples were received on 12/16/2022 3:50 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice.

GC/MS Semi VOA

Method 8270D: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 480-654156.

Method 8270D: The continuing calibration verification (CCV) associated with batch 480-654315 recovered above the upper control limit for Tetraethyl lead. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: S43569.01 (190-30668-1), S43569.02 (190-30668-2), S43569.03 (190-30668-3) and S43569.04 (190-30668-4).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.



Client Sample Results

Client: Merit Laboratories
Project/Site: S43569/Tetraethyl Lead

Job ID: 190-30668-1

Client Sample ID: S43569.01

Lab Sample ID: 190-30668-1

Date Collected: 12/15/22 09:42

Matrix: Water

Date Received: 12/16/22 15:50

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<10		10	ug/L		12/21/22 08:33	12/22/22 14:36	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	80		46 - 120			12/21/22 08:33	12/22/22 14:36	1
p-Terphenyl-d14 (Surr)	77		60 - 148			12/21/22 08:33	12/22/22 14:36	1
Phenol-d5 (Surr)	39		22 - 120			12/21/22 08:33	12/22/22 14:36	1
2-Fluorophenol (Surr)	55		35 - 120			12/21/22 08:33	12/22/22 14:36	1
2,4,6-Tribromophenol (Surr)	91		41 - 120			12/21/22 08:33	12/22/22 14:36	1
2-Fluorobiphenyl (Surr)	92		48 - 120			12/21/22 08:33	12/22/22 14:36	1

Client Sample ID: S43569.02

Lab Sample ID: 190-30668-2

Date Collected: 12/15/22 10:55

Matrix: Water

Date Received: 12/16/22 15:50

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<10		10	ug/L		12/21/22 08:33	12/22/22 15:04	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	84		46 - 120			12/21/22 08:33	12/22/22 15:04	1
p-Terphenyl-d14 (Surr)	86		60 - 148			12/21/22 08:33	12/22/22 15:04	1
Phenol-d5 (Surr)	44		22 - 120			12/21/22 08:33	12/22/22 15:04	1
2-Fluorophenol (Surr)	63		35 - 120			12/21/22 08:33	12/22/22 15:04	1
2,4,6-Tribromophenol (Surr)	93		41 - 120			12/21/22 08:33	12/22/22 15:04	1
2-Fluorobiphenyl (Surr)	95		48 - 120			12/21/22 08:33	12/22/22 15:04	1

Client Sample ID: S43569.03

Lab Sample ID: 190-30668-3

Date Collected: 12/15/22 00:01

Matrix: Water

Date Received: 12/16/22 15:50

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<10		10	ug/L		12/21/22 08:33	12/22/22 15:31	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	84		46 - 120			12/21/22 08:33	12/22/22 15:31	1
p-Terphenyl-d14 (Surr)	83		60 - 148			12/21/22 08:33	12/22/22 15:31	1
Phenol-d5 (Surr)	36		22 - 120			12/21/22 08:33	12/22/22 15:31	1
2-Fluorophenol (Surr)	57		35 - 120			12/21/22 08:33	12/22/22 15:31	1
2,4,6-Tribromophenol (Surr)	86		41 - 120			12/21/22 08:33	12/22/22 15:31	1
2-Fluorobiphenyl (Surr)	94		48 - 120			12/21/22 08:33	12/22/22 15:31	1

Client Sample ID: S43569.04

Lab Sample ID: 190-30668-4

Date Collected: 12/15/22 12:54

Matrix: Water

Date Received: 12/16/22 15:50

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<10		10	ug/L		12/21/22 08:33	12/22/22 15:59	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	57		46 - 120			12/21/22 08:33	12/22/22 15:59	1

Eurofins Michigan

Client Sample Results

Client: Merit Laboratories
Project/Site: S43569/Tetraethyl Lead

Job ID: 190-30668-1

Client Sample ID: S43569.04

Lab Sample ID: 190-30668-4

Date Collected: 12/15/22 12:54

Matrix: Water

Date Received: 12/16/22 15:50

Method: SW846 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

<u>Surrogate</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
<i>p-Terphenyl-d14 (Surr)</i>	75		60 - 148	12/21/22 08:33	12/22/22 15:59	1
<i>Phenol-d5 (Surr)</i>	29		22 - 120	12/21/22 08:33	12/22/22 15:59	1
<i>2-Fluorophenol (Surr)</i>	42		35 - 120	12/21/22 08:33	12/22/22 15:59	1
<i>2,4,6-Tribromophenol (Surr)</i>	80		41 - 120	12/21/22 08:33	12/22/22 15:59	1
<i>2-Fluorobiphenyl (Surr)</i>	73		48 - 120	12/21/22 08:33	12/22/22 15:59	1

QC Sample Results

Client: Merit Laboratories
 Project/Site: S43569/Tetraethyl Lead

Job ID: 190-30668-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-654156/1-A
Matrix: Water
Analysis Batch: 654315

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 654156

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tetraethyl lead	<10		10	ug/L		12/21/22 08:33	12/22/22 13:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	86		46 - 120	12/21/22 08:33	12/22/22 13:13	1
p-Terphenyl-d14 (Surr)	102		60 - 148	12/21/22 08:33	12/22/22 13:13	1
Phenol-d5 (Surr)	38		22 - 120	12/21/22 08:33	12/22/22 13:13	1
2-Fluorophenol (Surr)	61		35 - 120	12/21/22 08:33	12/22/22 13:13	1
2,4,6-Tribromophenol (Surr)	82		41 - 120	12/21/22 08:33	12/22/22 13:13	1
2-Fluorobiphenyl (Surr)	98		48 - 120	12/21/22 08:33	12/22/22 13:13	1

Lab Sample ID: LCS 480-654156/2-A
Matrix: Water
Analysis Batch: 654315

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 654156

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5 (Surr)	84		46 - 120
p-Terphenyl-d14 (Surr)	102		60 - 148
Phenol-d5 (Surr)	53		22 - 120
2-Fluorophenol (Surr)	65		35 - 120
2,4,6-Tribromophenol (Surr)	97		41 - 120
2-Fluorobiphenyl (Surr)	102		48 - 120

Lab Sample ID: LCSD 480-654156/3-A
Matrix: Water
Analysis Batch: 654315

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 654156

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Nitrobenzene-d5 (Surr)	93		46 - 120
p-Terphenyl-d14 (Surr)	101		60 - 148
Phenol-d5 (Surr)	56		22 - 120
2-Fluorophenol (Surr)	70		35 - 120
2,4,6-Tribromophenol (Surr)	103		41 - 120
2-Fluorobiphenyl (Surr)	105		48 - 120

Definitions/Glossary

Client: Merit Laboratories
Project/Site: S43569/Tetraethyl Lead

Job ID: 190-30668-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Association Summary

Client: Merit Laboratories
Project/Site: S43569/Tetraethyl Lead

Job ID: 190-30668-1

GC/MS Semi VOA

Prep Batch: 654156

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30668-1	S43569.01	Total/NA	Water	3510C	
190-30668-2	S43569.02	Total/NA	Water	3510C	
190-30668-3	S43569.03	Total/NA	Water	3510C	
190-30668-4	S43569.04	Total/NA	Water	3510C	
MB 480-654156/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-654156/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 480-654156/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 654315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30668-1	S43569.01	Total/NA	Water	8270D	654156
190-30668-2	S43569.02	Total/NA	Water	8270D	654156
190-30668-3	S43569.03	Total/NA	Water	8270D	654156
190-30668-4	S43569.04	Total/NA	Water	8270D	654156
MB 480-654156/1-A	Method Blank	Total/NA	Water	8270D	654156
LCS 480-654156/2-A	Lab Control Sample	Total/NA	Water	8270D	654156
LCSD 480-654156/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	654156

Lab Chronicle

Client: Merit Laboratories
 Project/Site: S43569/Tetraethyl Lead

Job ID: 190-30668-1

Client Sample ID: S43569.01

Lab Sample ID: 190-30668-1

Date Collected: 12/15/22 09:42

Matrix: Water

Date Received: 12/16/22 15:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			654156	MS	EET BUF	12/21/22 08:33
Total/NA	Analysis	8270D		1	654315	JMM	EET BUF	12/22/22 14:36

Client Sample ID: S43569.02

Lab Sample ID: 190-30668-2

Date Collected: 12/15/22 10:55

Matrix: Water

Date Received: 12/16/22 15:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			654156	MS	EET BUF	12/21/22 08:33
Total/NA	Analysis	8270D		1	654315	JMM	EET BUF	12/22/22 15:04

Client Sample ID: S43569.03

Lab Sample ID: 190-30668-3

Date Collected: 12/15/22 00:01

Matrix: Water

Date Received: 12/16/22 15:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			654156	MS	EET BUF	12/21/22 08:33
Total/NA	Analysis	8270D		1	654315	JMM	EET BUF	12/22/22 15:31

Client Sample ID: S43569.04

Lab Sample ID: 190-30668-4

Date Collected: 12/15/22 12:54

Matrix: Water

Date Received: 12/16/22 15:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			654156	MS	EET BUF	12/21/22 08:33
Total/NA	Analysis	8270D		1	654315	JMM	EET BUF	12/22/22 15:59

Laboratory References:

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Analyst References:

Lab: EET BUF

Batch Type: Prep

MS = Manpreet Singh

Batch Type: Analysis

JMM = Joseph Marshall

Accreditation/Certification Summary

Client: Merit Laboratories
 Project/Site: S43569/Tetraethyl Lead

Job ID: 190-30668-1

Laboratory: Eurofins Buffalo

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-0686	07-06-22 *
Connecticut	State	PH-0568	03-31-24
Florida	NELAP	E87672	06-30-23
Georgia	State	10026 (NY)	04-01-23
Georgia	State Program	N/A	03-31-09 *
Georgia (DW)	State	956	03-31-23
Illinois	NELAP	200003	09-30-23
Iowa	State	374	03-01-23
Iowa	State Program	374	03-01-09 *
Kansas	NELAP	E-10187	01-31-23
Kentucky (DW)	State	90029	12-31-22
Kentucky (UST)	State	30	04-01-23
Kentucky (WW)	State	KY90029	12-31-22
Louisiana	NELAP	02031	06-30-23
Louisiana (All)	NELAP	02031	06-30-23
Maine	State	NY00044	12-04-22 *
Maryland	State	294	03-31-23
Massachusetts	State	M-NY044	06-30-23
Michigan	State	9937	03-31-23
Michigan	State Program	9937	04-01-09 *
New Hampshire	NELAP	2973	09-11-19 *
New Hampshire	NELAP	2337	11-17-22 *
New Jersey	NELAP	NY455	06-30-23
New York	NELAP	10026	03-31-23
Pennsylvania	NELAP	68-00281	07-31-23
Rhode Island	State	LAO00328	12-30-22
Tennessee	State	02970	04-01-23
Texas	NELAP	T104704412-18-10	07-31-23
USDA	US Federal Programs	P330-18-00039	03-25-24
Virginia	NELAP	460185	09-14-23
Washington	State	C784	02-10-23
Wisconsin	State	998310390	08-31-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Merit Laboratories
Project/Site: S43569/Tetraethyl Lead

Job ID: 190-30668-1

Method	Method Description	Protocol	Laboratory
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	EET BUF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET BUF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600





Environment Testing
TestAmerica

SDS or Known Hazard Information Supplied by Client
 Discrepancies
 Short Hold
 Rush 24 Hr 2-Day 3-Day 5-Day Other:
Client ID: Merit
Work Order #: 30668
Receipt Evaluation Performed by: Initials: HT Date: 1/16/22 Time: 1700

Cooler / Sample Receipt

After hours receipt: complete gray areas. Place cooler in walk-in, place form in Receiving box. Date: _____ Time: _____

Method of Shipment:

Walk-In Client Eurofins TA Field/Courier
Other Client / 3rd Party Courier: _____
FedEx Tracking #: _____
 UPS Tracking #: Direct Shipped to lab
Other: _____

Shipping Container Type:

Cooler Box
 None Other: _____
Packing Materials:
 Plastic Bags Foam
 Bubble Wrap Paper
 Packing Peanuts None
 Other: _____

Custody Seals Intact:

Yes No
 NA (not used or required)

Cooling Materials:

Ice (Solid) Ice (Melted)
 Blue Ice None
 Other: _____

Bacteriological Samples	Temp Corrected (°C)	Frozen?		Rec'd Within 2 Hrs?		Sample Flagged?	
		Yes	No	Yes	No	Yes	No

Received on same day sampled? Yes No Additional Sheets Required? Yes No

Receipt Temperatures

Thermometer ID	Observed (°C)	Corrected (°C)	Temp Blank	Sample Temp	Acceptable	Cooler ID	Affected Samples
<u>CP313207</u>					<u>Y</u> <u>N</u>		<u>Samples direct shipped to receiving lab.</u>
					<u>Y</u> <u>N</u>		
					<u>Y</u> <u>N</u>		

Receipt Questions**	Y	N	NA	"No" answers require additional comment
CoC present and ETA receipt signature, date, and time properly documented?				
Containers and Labels in good condition? (unbroken, not leaking, appropriately filled, labels legible & attached)				
Appropriate containers used and adequate volume provided?				Preserved bottles checked for pH? Yes No pH strip lot # _____
Number of sample containers match CoC?				
Samples received within hold?				
Samples submitted for GRO and Volatiles analysis (8260, 624, 524) received without headspace?				
Was a Trip Blank received with VOA samples?				
Were the samples free of any questionable physical conformities? (i.e.: field duplicates or multiple bottles of the same sample do not significantly vary in appearance - color, solid proportions, etc.)				
Were the CoC bottle labels and all other items free of all other discrepancies or issues that would need to be addressed with the Project Manager and/or Client?			<u>X</u>	<u>Samples were shipped by client to receiving lab.</u> *Excludes FOG, VOAs, TOC Vials, HEM

Client Contact Record

Contact Via: Phone Email Other: _____ Person Contacted: _____ Date/Time: _____
 Discrepancy allowance agreement is on record in the client project file

Discussion / Resolution

* Only logged Tetraethyl Lead samples, due to short hold.

Any additional documentation and clarification from the client must be noted in the narrative and/or scanned into the CoC directory.

Reviewed by [Signature] Date: 1/16/22

WI-MI-010_020720

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Lab Results
Merit Laboratories
2680 E Lansing Drive
East Lansing, Michigan 48823

Generated 12/30/2022 9:25:21 AM

JOB DESCRIPTION

S43569

JOB NUMBER

190-30670-1

Eurofins Michigan

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

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Authorization



Generated
12/30/2022 9:25:21 AM

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Sample Summary

Client: Merit Laboratories
Project/Site: S43569

Job ID: 190-30670-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
190-30670-1	S43569.01	Water	12/15/22 09:42	12/19/22 14:46
190-30670-2	S43569.02	Water	12/15/22 10:55	12/19/22 14:46
190-30670-3	S43569.04	Water	12/15/22 00:01	12/19/22 14:46
190-30670-4	S43569.05	Water	12/15/22 12:54	12/19/22 14:46
190-30670-5	S43569.06	Water	12/15/22 15:03	12/19/22 14:46

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Case Narrative

Client: Merit Laboratories
Project/Site: S43569

Job ID: 190-30670-1

Job ID: 190-30670-1

Laboratory: Eurofins Michigan

Narrative

Job Narrative
190-30670-1

Receipt

The samples were received on 12/19/2022 2:46 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.3°C

GC Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Client Sample Results

Client: Merit Laboratories
Project/Site: S43569

Job ID: 190-30670-1

Client Sample ID: S43569.01

Lab Sample ID: 190-30670-1

Date Collected: 12/15/22 09:42

Matrix: Water

Date Received: 12/19/22 14:46

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/21/22 16:28	1
Ethanol	<5.0		5.0	mg/L			12/21/22 16:28	1
n-Butanol	<5.0		5.0	mg/L			12/21/22 16:28	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/21/22 10:46	12/27/22 19:39	2

Client Sample ID: S43569.02

Lab Sample ID: 190-30670-2

Date Collected: 12/15/22 10:55

Matrix: Water

Date Received: 12/19/22 14:46

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/21/22 16:49	1
Ethanol	<5.0		5.0	mg/L			12/21/22 16:49	1
n-Butanol	<5.0		5.0	mg/L			12/21/22 16:49	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/21/22 10:46	12/27/22 19:42	2

Client Sample ID: S43569.04

Lab Sample ID: 190-30670-3

Date Collected: 12/15/22 00:01

Matrix: Water

Date Received: 12/19/22 14:46

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/21/22 17:09	1
Ethanol	<5.0		5.0	mg/L			12/21/22 17:09	1
n-Butanol	<5.0		5.0	mg/L			12/21/22 17:09	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/21/22 10:46	12/27/22 19:46	2

Client Sample ID: S43569.05

Lab Sample ID: 190-30670-4

Date Collected: 12/15/22 12:54

Matrix: Water

Date Received: 12/19/22 14:46

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/21/22 17:30	1
Ethanol	<5.0		5.0	mg/L			12/21/22 17:30	1
n-Butanol	<5.0		5.0	mg/L			12/21/22 17:30	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/21/22 10:46	12/27/22 19:49	2

Client Sample Results

Client: Merit Laboratories
Project/Site: S43569

Job ID: 190-30670-1

Client Sample ID: S43569.06

Lab Sample ID: 190-30670-5

Date Collected: 12/15/22 15:03

Matrix: Water

Date Received: 12/19/22 14:46

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/21/22 17:51	1
Ethanol	<5.0		5.0	mg/L			12/21/22 17:51	1
n-Butanol	<5.0		5.0	mg/L			12/21/22 17:51	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/21/22 10:46	12/27/22 19:52	2

QC Sample Results

Client: Merit Laboratories
Project/Site: S43569

Job ID: 190-30670-1

Method: 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Lab Sample ID: MB 680-756335/10
Matrix: Water
Analysis Batch: 756335

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/21/22 15:20	1
Ethanol	<5.0		5.0	mg/L			12/21/22 15:20	1
n-Butanol	<5.0		5.0	mg/L			12/21/22 15:20	1

Lab Sample ID: LCS 680-756335/6
Matrix: Water
Analysis Batch: 756335

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methanol	20.0	20.5		mg/L		102	43 - 143
Ethanol	20.0	20.8		mg/L		104	38 - 156
n-Butanol	20.0	20.5		mg/L		102	70 - 130

Lab Sample ID: LCSD 680-756335/7
Matrix: Water
Analysis Batch: 756335

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methanol	20.0	20.6		mg/L		103	43 - 143	1	50
Ethanol	20.0	20.3		mg/L		102	38 - 156	2	50
n-Butanol	20.0	19.2		mg/L		96	70 - 130	6	30

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 160-594437/1-A
Matrix: Water
Analysis Batch: 594869

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 594437

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/21/22 10:46	12/27/22 18:16	2

Lab Sample ID: LCS 160-594437/2-A
Matrix: Water
Analysis Batch: 594869

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 594437

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Thorium	995	1030		ug/L		103	80 - 120

Definitions/Glossary

Client: Merit Laboratories
Project/Site: S43569

Job ID: 190-30670-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Association Summary

Client: Merit Laboratories
Project/Site: S43569

Job ID: 190-30670-1

GC Semi VOA

Analysis Batch: 756335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30670-1	S43569.01	Total/NA	Water	8015D	
190-30670-2	S43569.02	Total/NA	Water	8015D	
190-30670-3	S43569.04	Total/NA	Water	8015D	
190-30670-4	S43569.05	Total/NA	Water	8015D	
190-30670-5	S43569.06	Total/NA	Water	8015D	
MB 680-756335/10	Method Blank	Total/NA	Water	8015D	
LCS 680-756335/6	Lab Control Sample	Total/NA	Water	8015D	
LCS 680-756335/7	Lab Control Sample Dup	Total/NA	Water	8015D	

Metals

Prep Batch: 594437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30670-1	S43569.01	Total/NA	Water	3010A	
190-30670-2	S43569.02	Total/NA	Water	3010A	
190-30670-3	S43569.04	Total/NA	Water	3010A	
190-30670-4	S43569.05	Total/NA	Water	3010A	
190-30670-5	S43569.06	Total/NA	Water	3010A	
MB 160-594437/1-A	Method Blank	Total/NA	Water	3010A	
LCS 160-594437/2-A	Lab Control Sample	Total/NA	Water	3010A	

Analysis Batch: 594869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30670-1	S43569.01	Total/NA	Water	6020B	594437
190-30670-2	S43569.02	Total/NA	Water	6020B	594437
190-30670-3	S43569.04	Total/NA	Water	6020B	594437
190-30670-4	S43569.05	Total/NA	Water	6020B	594437
190-30670-5	S43569.06	Total/NA	Water	6020B	594437
MB 160-594437/1-A	Method Blank	Total/NA	Water	6020B	594437
LCS 160-594437/2-A	Lab Control Sample	Total/NA	Water	6020B	594437

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43569

Job ID: 190-30670-1

Client Sample ID: S43569.01

Lab Sample ID: 190-30670-1

Date Collected: 12/15/22 09:42

Matrix: Water

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	756335	JCK	EET SAV	12/21/22 16:28
Total/NA	Prep	3010A			594437	LKP	EET SL	12/21/22 10:46
Total/NA	Analysis	6020B		2	594869	CGB	EET SL	12/27/22 19:39

Client Sample ID: S43569.02

Lab Sample ID: 190-30670-2

Date Collected: 12/15/22 10:55

Matrix: Water

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	756335	JCK	EET SAV	12/21/22 16:49
Total/NA	Prep	3010A			594437	LKP	EET SL	12/21/22 10:46
Total/NA	Analysis	6020B		2	594869	CGB	EET SL	12/27/22 19:42

Client Sample ID: S43569.04

Lab Sample ID: 190-30670-3

Date Collected: 12/15/22 00:01

Matrix: Water

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	756335	JCK	EET SAV	12/21/22 17:09
Total/NA	Prep	3010A			594437	LKP	EET SL	12/21/22 10:46
Total/NA	Analysis	6020B		2	594869	CGB	EET SL	12/27/22 19:46

Client Sample ID: S43569.05

Lab Sample ID: 190-30670-4

Date Collected: 12/15/22 12:54

Matrix: Water

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	756335	JCK	EET SAV	12/21/22 17:30
Total/NA	Prep	3010A			594437	LKP	EET SL	12/21/22 10:46
Total/NA	Analysis	6020B		2	594869	CGB	EET SL	12/27/22 19:49

Client Sample ID: S43569.06

Lab Sample ID: 190-30670-5

Date Collected: 12/15/22 15:03

Matrix: Water

Date Received: 12/19/22 14:46

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	756335	JCK	EET SAV	12/21/22 17:51
Total/NA	Prep	3010A			594437	LKP	EET SL	12/21/22 10:46
Total/NA	Analysis	6020B		2	594869	CGB	EET SL	12/27/22 19:52

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43569

Job ID: 190-30670-1

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Analyst References:

Lab: EET SAV
Batch Type: Analysis
JCK = Joshua Kellar

Lab: EET SL
Batch Type: Prep
LKP = Laura Pemberton

Batch Type: Analysis
CGB = Cory Buffington

Accreditation/Certification Summary

Client: Merit Laboratories
Project/Site: S43569

Job ID: 190-30670-1

Laboratory: Eurofins Savannah

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	SAVLAB	
Alabama	State	41450	06-30-23
ANAB	Dept. of Defense ELAP	L2463	09-22-24
Arkansas DEQ	State	19-015-0	02-01-23
California	State	2939	06-30-22 *
Connecticut	State	PH-0161	03-31-23
Florida	NELAP	E87052	06-23-23
Georgia	State	E87052	06-30-23
Georgia (DW)	State	803	06-30-23
Guam	State	19-007R	04-17-23
Hawaii	State	<cert No.>	06-30-23
Illinois	NELAP	200022	11-30-22 *
Indiana	State	C-GA-02	06-30-23
Iowa	State	353	07-01-23
Kentucky (UST)	State	NA	06-30-23
Louisiana	NELAP	30690	06-30-23
Louisiana (All)	NELAP	30690	06-30-23
Louisiana (DW)	State	LA009	12-31-22
Maine	State	GA00006	12-27-22
Maryland	State	250	12-31-23
Massachusetts	State	M-GA006	07-30-23
Michigan	State	9925	06-30-23
Mississippi	State	<cert No.>	06-30-23
Nebraska	State	NE-OS-7-04	06-30-23
New Jersey	NELAP	GA769	06-30-23
New Mexico	State	GA00006	06-30-23
New York	NELAP	10842	04-01-23
North Carolina (DW)	State	13701	07-31-23
North Carolina (WW/SW)	State	269	12-31-22
Pennsylvania	NELAP	68-00474	06-30-23
Puerto Rico	State	GA00006	12-30-22
South Carolina	State	98001	06-30-23
Tennessee	State	TN02961	06-30-23
Texas	NELAP	T1047004185-19-14	11-30-23
Texas	TCEQ Water Supply	T104704185	06-30-23
USDA	US Federal Programs	P330-18-00313	09-03-24
Virginia	NELAP	460161	06-14-23
Wisconsin	State	999819810	08-31-23
Wyoming	State	8TMS-L	06-30-23

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-23
California	Los Angeles County Sanitation Districts	10259	06-30-22 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Michigan

Accreditation/Certification Summary

Client: Merit Laboratories
Project/Site: S43569

Job ID: 190-30670-1

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2886	06-30-23
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-23
HI - RadChem Recognition	State	n/a	06-30-23
Illinois	NELAP	200023	11-30-23
Iowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-23
Kentucky (DW)	State	KY90125	12-31-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-22
Louisiana (All)	NELAP	04080	06-30-23
Louisiana (DW)	State	LA011	12-31-22
Maryland	State	310	09-30-23
MI - RadChem Recognition	State	9005	06-30-23
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-23
New Jersey	NELAP	MO002	06-30-23
New York	NELAP	11616	04-01-23
North Dakota	State	R-207	06-30-23
NRC	NRC	24-24817-01	12-31-22
Oklahoma	NELAP	9997	08-31-23
Oregon	NELAP	4157	09-01-23
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-23
Texas	NELAP	T104704193	07-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-24
Washington	State	C592	08-30-23
West Virginia DEP	State	381	12-31-22

Method Summary

Client: Merit Laboratories
Project/Site: S43569

Job ID: 190-30670-1

Method	Method Description	Protocol	Laboratory
8015D	Nonhalogenated Organic Compounds - Direct Injection (GC)	SW846	EET SAV
6020B	Metals (ICP/MS)	SW846	EET SL
3010A	Preparation, Total Metals	SW846	EET SL

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566





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 Phone (517) 332-0167 Fax (517) 332-4034
 www.meritlabs.com

C.O.C. PAGE # 1 OF 1

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME: Project Management Team
 COMPANY: Merit Laboratories
 ADDRESS: 2680 East Lansing Drive
 CITY: East Lansing
 STATE: MI ZIP CODE: 48823
 PHONE NO.: 517-332-0167
 E-MAIL ADDRESS: results@meritlabs.com

CONTACT NAME: Julie Teague
 COMPANY: Merit Laboratories
 ADDRESS: 2680 East Lansing Drive
 CITY: East Lansing
 STATE: MI ZIP CODE: 48823
 PHONE NO.: 517-332-0167
 E-MAIL ADDRESS: juliet@meritlabs.com

PROJECT NO./NAME: S43569
 ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

TURNAROUND TIME REQUIRED: 1 DAY 2 DAYS 3 DAYS STANDARD OTHER
 DELIVERABLES REQUIRED: STD LEVEL II LEVEL III LEVEL IV EDD OTHER

MATRIX CODE	GW=GROUNDWATER SL=SLUDGE	IW=WASTEWATER DW=DRINKING WATER	S=SOIL O=OIL	L=LIQUID WP=WIPE	A=AIR W=WASTE	# Containers & Preservatives	OTHER
12/15/22 0942	GW					5	4
12/15/22 1055	GW					5	4
12/15/22 0001	GW					5	4
12/15/22 1254	GW					5	4
12/15/22 1503	GW					4	3

YEAR	DATE	TIME	IDENTIFICATION-DESCRIPTION	MATRIX	BOTTLES	OTHER
2022	12/15/22	0942	S43569.01	GW	5	4
2022	12/15/22	1055	S43569.02	GW	5	4
2022	12/15/22	0001	S43569.04	GW	5	4
2022	12/15/22	1254	S43569.05	GW	5	4
2022	12/15/22	1503	S43569.06	GW	4	3

ALCOHOLS	THORIUM	TETRAETHYL LEAD	CERTIFICATIONS
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> OHIO VAP <input type="checkbox"/> Drinking Water <input type="checkbox"/> DoD <input type="checkbox"/> NPDES
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Project Locations <input type="checkbox"/> Detroit <input type="checkbox"/> New York <input type="checkbox"/> Other
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Special Instructions *Methanol RL 3,700ppb *Ethanol, N-Butanol
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Tetra Ethyl delivered via UPS Subcontracted to Eurofins



RELINQUISHED BY: [Signature] DATE: 12/19/22 TIME: 1446
 RECEIVED BY: [Signature] DATE: 12/19/22 TIME: 1446
 SEAL NO. [] SEAL INTACT YES [] NO [] INITIALS []
 SEAL NO. [] SEAL INTACT YES [] NO [] INITIALS []

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE





Environment Testing
TestAmerica

- SDS or Known Hazard Information Supplied by Client
- Discrepancies
- Short Hold
- Rush 24 Hr 2-Day 3-Day 5-Day Other:

Client ID: Merit
Work Order #: 30670

Cooler / Sample Receipt

After hours receipt: complete gray areas. Place cooler in walk-in, place form in Receiving box. Date: _____ Time: _____

Receipt Evaluation Performed by: Initials: _____ Date: _____ Time: 1446

Method of Shipment:

Walk-In Client Eurofins TA Field/Courier
Other Client / 3rd Party Courier: _____
Fed Ex Tracking #: _____
UPS Tracking #: _____
Other: _____

Shipping Container Type:

- Cooler Box
- None Other: _____

Custody Seals Intact:

- Yes No
- NA (not used or required)

Packing Materials:

- Plastic Bags Foam
- Bubble Wrap Paper
- Packing Peanuts None
- Other: _____

Cooling Materials:

- Ice (Solid) Ice (Melted)
- Blue Ice None
- Other: _____

Bacteriological Samples	Temp Corrected (°C)	Frozen?		Rec'd Within 2 Hrs?		Sample Flagged?	
		Yes	No	Yes	No	Yes	No

Received on same day sampled? Yes No Additional Sheets Required? Yes No

Receipt Temperatures

Thermometer ID	Observed (°C)	Corrected (°C)	Temp Blank	Sample Temp	Acceptable	Cooler ID	Affected Samples
<u>CP313207</u>	<u>2.3</u>	<u>2.3</u>		<u>X</u>	<u>X</u> Y <u>N</u>		
					Y <u>N</u>		
					Y <u>N</u>		

Receipt Questions**	Y	N	NA	"No" answers require additional comment
CoC present and ETA receipt signature, date, and time properly documented?	<u>X</u>			
Containers and Labels in good condition? (unbroken, not leaking, appropriately filled, labels legible & attached)	<u>X</u>			
Appropriate containers used and adequate volume provided?	<u>X</u>			Preserved bottles checked for pH? Yes <input checked="" type="checkbox"/> No
Number of sample containers match CoC?	<u>X</u>			pH strip lot # _____
Samples received within hold?	<u>X</u>			
Samples submitted for GRO and Volatiles analysis (8260, 624, 524) received without headspace?	<u>X</u>			
Was a Trip Blank received with VOA samples?			<u>X</u>	
Were the samples free of any questionable physical conformities? (i.e.; field duplicates or multiple bottles of the same sample do not significantly vary in appearance - color, solid proportions, etc.)		<u>X</u>		<u>Metals samples received frozen</u>
Were the CoC bottle labels and all other items free of all other discrepancies or issues that would need to be addressed with the Project Manager and/or Client?	<u>X</u>			
**May not be applicable if samples are not for compliance testing				*Excludes FOG, VOAs, TOC Vials, HEM

Client Contact Record

Contact Via: Phone Email Other: _____ Person Contacted: _____ Date/Time: _____
 Discrepancy allowance agreement is on record in the client project file

Discussion / Resolution

Any additional documentation and clarification from the client must be noted in the narrative and/or scanned into the CoC directory.

Reviewed by J. Harle Date: 12/19/22

WI-MI-010_020720

Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler:		Lab P.M. Schafer, Sue		Carrier Tracking No(s):		COC No: 190-34949.1	
Client Contact: Shipping/Receiving		Phone:		E-Mail: Sue.Schafer@eurofins.com		State of Origin: Michigan		Page: 1 of 1	
Company: TestAmerica Laboratories, Inc.		Address: 13715 Rider Trail North, Earth City, MO, 63045		PO #: 314-298-8566(Tel) 314-298-8757(Fax)		Email:		Job #: 190-30670-1	
Project Name: S43569		Site: S43569		Project #: 19001249		SSOW#:		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Due Date Requested: 1/4/2023		TAT Requested (days):		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Total Number of Containers	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (Water, Soil, On-surface, BT=Tease, A=Air)	
S43569.01 (190-30670-1)	12/15/22	09:42 Eastern	Water	X	X	6020R3010A, 2% THORIUM ONLY			
S43569.02 (190-30670-2)	12/15/22	10:55 Eastern	Water	X	X				
S43569.04 (190-30670-3)	12/15/22	00:01 Eastern	Water	X	X				
S43569.05 (190-30670-4)	12/15/22	12:54 Eastern	Water	X	X				
S43569.06 (190-30670-5)	12/15/22	15:03 Eastern	Water	X	X				
<p>Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.</p>									
Possible Hazard Identification									
<p>Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) _____ Primary Deliverable Rank: 2 Empty Kit Relinquished by: _____ Date: _____ Relinquished by: <i>J. A. K.</i> Date: 12/19/22 17:00 Relinquished by: <i>FGD EX</i> Date: _____ Relinquished by: _____ Date: _____ Custody Seals Intact: _____ Custody Seal No.: _____ Δ Yes Δ No</p>									
<p>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements:</p>									
<p>Received by: <i>FEDEX</i> Date/Time: _____ Company: _____ Received by: <i>Blaylock</i> Date/Time: 12/20/22 9:40 Company: <i>ETAS/CL</i> Received by: _____ Date/Time: _____ Company: _____ Cooler Temperature(s) °C and Other Remarks:</p>									



Analytical Laboratory Report

Report ID: S43570.01(01)
Generated on 01/13/2023

Report to

Attention: Kelly Cratsenburg
TRC
1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: 734-412-5424 FAX:
Email: KCratsenburg@trccompanies.com

Additional Contacts: Vince Buening

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:

John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S43570.01-S43570.05
Project: Detroit Axle Southern
Collected Date(s): 12/15/2022
Submitted Date/Time: 12/16/2022 12:00
Sampled by: A. Whaley
P.O. #: 193431

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Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
ASTMD7979-19M	ASTM Method D7979 - 19 Modified (Isotopic Dilution)

Parameter Summary

Parameter	Synonym	Cas #
PFBA	Perfluorobutanoic Acid	375-22-4
PFPeA	Perfluoropentanoic Acid	2706-90-3
4:2 FTSA	4:2 Fluorotelomer Sulfonic Acid	757124-72-4
PFHxA	Perfluorohexanoic Acid	307-24-4
PFBS	Perfluorobutane sulfonic Acid	375-73-5
PFHpA	Perfluoroheptanoic Acid	375-85-9
PFPeS	Perfluoropentane Sulfonic Acid	2706-91-4
6:2 FTSA	6:2 Fluorotelomer Sulfonic Acid	27619-97-2
PFOA	Perfluorooctanoic Acid	335-67-1
PFHxS	Perfluorohexane Sulfonic Acid	355-46-4
PFHxS-LN	Perfluorohexane Sulfonic Acid - LN	355-46-4-LN
PFHxS-BR	Perfluorohexane Sulfonic Acid - BR	355-46-4-BR
PFNA	Perfluorononanoic Acid	375-95-1
8:2 FTSA	8:2 Fluorotelomer Sulfonic Acid	39108-34-4
PFHpS	Perfluoroheptane Sulfonic Acid	375-92-8
PFDA	Perfluorodecanoic Acid	335-76-2
N-MeFOSAA	N-methyl perfluorooctanesulfonamidoacetic acid	2355-31-9
EtFOSAA	N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	2991-50-6
PFOS	Perfluorooctane Sulfonic Acid	1763-23-1
PFOS-LN	Perfluorooctane Sulfonic Acid - LN	1763-23-1-LN
PFOS-BR	Perfluorooctane Sulfonic Acid - BR	1763-23-1-BR
PFUnDA	Perfluoroundecanoic Acid	2058-94-8
PFNS	Perfluorononane Sulfonic Acid	68259-12-1
PFDoDA	Perfluorododecanoic Acid	307-55-1
PFDS	Perfluorodecane Sulfonic Acid	335-77-3
PFTTrDA	Perfluorotridecanoic Acid	72629-94-8
FOSA	Perfluorooctane Sulfonamide	754-91-6
PFTeDA	Perfluorotetradecanoic Acid	376-06-7
11Cl-PF3OUdS	11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	763051-92-9
9Cl-PF3ONS	9-chlorohexadecafluoro-3-oxanone1-sulfonic acid	756426-58-1
ADONA	4,8-dioxa-3H-perfluorononanoic acid	919005-14-4
HFPO-DA	Hexafluoropropylene oxide dimer	13252-13-6
PFECBS	Perfluoro-4-ethylcyclohexanesulfonate	67584-42-3
PFBSA	Perfluorobutanesulfonamide	30334-69-1
PFHxSA	Perfluorohexanesulfonamide	41997-13-1



Analytical Laboratory Report

Sample Summary (5 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S43570.01	MW-22-15	Groundwater	12/15/22 09:42
S43570.02	MW-22-14	Groundwater	12/15/22 10:55
S43570.03	Dup-02W	Groundwater	12/15/22 00:01
S43570.04	MW-22-13	Groundwater	12/15/22 00:01
S43570.05	MW-22-11	Groundwater	12/15/22 15:03



Analytical Laboratory Report

Lab Sample ID: S43570.01

Sample Tag: MW-22-15

Collected Date/Time: 12/15/2022 09:42

Matrix: Groundwater

COC Reference: 158675

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	5.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.63/6.49/10	ASTMD7979-19M	01/06/23 14:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 01/07/23 09:52, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	9.8		ng/L	1.95	375-22-4	
PFPeA*	7.3	3.9		ng/L	1.95	2706-90-3	
4:2 FTSA*	Not detected	2.0		ng/L	1.95	757124-72-4	
PFHxA*	7.5	2.0		ng/L	1.95	307-24-4	
PFBS*	2.6	2.0		ng/L	1.95	375-73-5	
PFHpA*	5.8	2.0		ng/L	1.95	375-85-9	
PFPeS*	Not detected	2.0		ng/L	1.95	2706-91-4	
6:2 FTSA*	Not detected	2.0		ng/L	1.95	27619-97-2	
PFOA*	18	2.0		ng/L	1.95	335-67-1	
PFHxS*	4.2	2.0		ng/L	1.95	355-46-4	
PFHxS-LN*	3.5	2.0		ng/L	1.95	355-46-4-LN	
PFHxS-BR*	Not detected	2.0		ng/L	1.95	355-46-4-BR	
PFNA*	Not detected	2.0		ng/L	1.95	375-95-1	
8:2 FTSA*	Not detected	2.0		ng/L	1.95	39108-34-4	
PFHpS*	Not detected	2.0		ng/L	1.95	375-92-8	
PFDA*	Not detected	2.0		ng/L	1.95	335-76-2	
N-MeFOSAA*	Not detected	2.0		ng/L	1.95	2355-31-9	
EtFOSAA*	Not detected	3.9		ng/L	1.95	2991-50-6	
PFOS*	4.7	2.0		ng/L	1.95	1763-23-1	
PFOS-LN*	2.5	2.0		ng/L	1.95	1763-23-1-LN	
PFOS-BR*	2.0	2.0		ng/L	1.95	1763-23-1-BR	
PFUnDA*	Not detected	2.0		ng/L	1.95	2058-94-8	
PFNS*	Not detected	2.0		ng/L	1.95	68259-12-1	
PFDODA*	Not detected	2.0		ng/L	1.95	307-55-1	
PFDS*	Not detected	2.0		ng/L	1.95	335-77-3	
PFTTrDA*	Not detected	2.0		ng/L	1.95	72629-94-8	
FOSA*	Not detected	2.0		ng/L	1.95	754-91-6	
PFTeDA*	Not detected	3.9		ng/L	1.95	376-06-7	
11Cl-PF3OUdS*	Not detected	2.0		ng/L	1.95	763051-92-9	
9Cl-PF3ONS*	Not detected	2.0		ng/L	1.95	756426-58-1	
ADONA*	Not detected	2.0		ng/L	1.95	919005-14-4	
HFPO-DA*	Not detected	2.0		ng/L	1.95	13252-13-6	
PFECHS*	Not detected	2.0		ng/L	1.95	67584-42-3	
PFBSA*	Not detected	2.0		ng/L	1.95	30334-69-1	
PFHxSA*	Not detected	2.0		ng/L	1.95	41997-13-1	



Analytical Laboratory Report

Lab Sample ID: S43570.02

Sample Tag: MW-22-14

Collected Date/Time: 12/15/2022 10:55

Matrix: Groundwater

COC Reference: 158675

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	5.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.28/6.47/10	ASTMD7979-19M	01/06/23 14:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 01/07/23 10:12, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	10		ng/L	2.08	375-22-4	
PFPeA*	7.2	4.2		ng/L	2.08	2706-90-3	
4:2 FTSA*	Not detected	2.1		ng/L	2.08	757124-72-4	
PFHxA*	7.3	2.1		ng/L	2.08	307-24-4	
PFBS*	2.8	2.1		ng/L	2.08	375-73-5	
PFHpA*	5.3	2.1		ng/L	2.08	375-85-9	
PFPeS*	Not detected	2.1		ng/L	2.08	2706-91-4	
6:2 FTSA*	Not detected	2.1		ng/L	2.08	27619-97-2	
PFOA*	10	2.1		ng/L	2.08	335-67-1	
PFHxS*	2.9	2.1		ng/L	2.08	355-46-4	
PFHxS-LN*	2.4	2.1		ng/L	2.08	355-46-4-LN	
PFHxS-BR*	Not detected	2.1		ng/L	2.08	355-46-4-BR	
PFNA*	Not detected	2.1		ng/L	2.08	375-95-1	
8:2 FTSA*	Not detected	2.1		ng/L	2.08	39108-34-4	
PFHpS*	Not detected	2.1		ng/L	2.08	375-92-8	
PFDA*	Not detected	2.1		ng/L	2.08	335-76-2	
N-MeFOSAA*	Not detected	2.1		ng/L	2.08	2355-31-9	
EtFOSAA*	Not detected	4.2		ng/L	2.08	2991-50-6	
PFOS*	3.0	2.1		ng/L	2.08	1763-23-1	
PFOS-LN*	Not detected	2.1		ng/L	2.08	1763-23-1-LN	
PFOS-BR*	Not detected	2.1		ng/L	2.08	1763-23-1-BR	
PFUnDA*	Not detected	2.1		ng/L	2.08	2058-94-8	
PFNS*	Not detected	2.1		ng/L	2.08	68259-12-1	
PFDODA*	Not detected	2.1		ng/L	2.08	307-55-1	
PFDS*	Not detected	2.1		ng/L	2.08	335-77-3	
PFTTrDA*	Not detected	2.1		ng/L	2.08	72629-94-8	
FOSA*	Not detected	2.1		ng/L	2.08	754-91-6	
PFTeDA*	Not detected	4.2		ng/L	2.08	376-06-7	
11Cl-PF3OUdS*	Not detected	2.1		ng/L	2.08	763051-92-9	
9Cl-PF3ONS*	Not detected	2.1		ng/L	2.08	756426-58-1	
ADONA*	Not detected	2.1		ng/L	2.08	919005-14-4	
HFPO-DA*	Not detected	2.1		ng/L	2.08	13252-13-6	
PFECHS*	Not detected	2.1		ng/L	2.08	67584-42-3	
PFBSA*	Not detected	2.1		ng/L	2.08	30334-69-1	
PFHxSA*	Not detected	2.1		ng/L	2.08	41997-13-1	



Analytical Laboratory Report

Lab Sample ID: S43570.03

Sample Tag: Dup-02W

Collected Date/Time: 12/15/2022 00:01

Matrix: Groundwater

COC Reference: 158675

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	5.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.65/6.52/10	ASTMD7979-19M	01/06/23 14:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 01/07/23 10:31, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	9.8		ng/L	1.95	375-22-4	
PFPeA*	7.6	3.9		ng/L	1.95	2706-90-3	
4:2 FTSA*	Not detected	2.0		ng/L	1.95	757124-72-4	
PFHxA*	7.6	2.0		ng/L	1.95	307-24-4	
PFBS*	2.7	2.0		ng/L	1.95	375-73-5	
PFHpA*	4.6	2.0		ng/L	1.95	375-85-9	
PFPeS*	Not detected	2.0		ng/L	1.95	2706-91-4	
6:2 FTSA*	Not detected	2.0		ng/L	1.95	27619-97-2	
PFOA*	21	2.0		ng/L	1.95	335-67-1	
PFHxS*	5.0	2.0		ng/L	1.95	355-46-4	
PFHxS-LN*	3.9	2.0		ng/L	1.95	355-46-4-LN	
PFHxS-BR*	Not detected	2.0		ng/L	1.95	355-46-4-BR	
PFNA*	Not detected	2.0		ng/L	1.95	375-95-1	
8:2 FTSA*	Not detected	2.0		ng/L	1.95	39108-34-4	
PFHpS*	Not detected	2.0		ng/L	1.95	375-92-8	
PFDA*	Not detected	2.0		ng/L	1.95	335-76-2	
N-MeFOSAA*	Not detected	2.0		ng/L	1.95	2355-31-9	
EtFOSAA*	Not detected	3.9		ng/L	1.95	2991-50-6	
PFOS*	16	2.0		ng/L	1.95	1763-23-1	
PFOS-LN*	9.1	2.0		ng/L	1.95	1763-23-1-LN	
PFOS-BR*	6.2	2.0		ng/L	1.95	1763-23-1-BR	
PFUnDA*	Not detected	2.0		ng/L	1.95	2058-94-8	
PFNS*	Not detected	2.0		ng/L	1.95	68259-12-1	
PFDODA*	Not detected	2.0		ng/L	1.95	307-55-1	
PFDS*	Not detected	2.0		ng/L	1.95	335-77-3	
PFTTrDA*	Not detected	2.0		ng/L	1.95	72629-94-8	
FOSA*	Not detected	2.0		ng/L	1.95	754-91-6	
PFTeDA*	Not detected	3.9		ng/L	1.95	376-06-7	
11Cl-PF3OUdS*	Not detected	2.0		ng/L	1.95	763051-92-9	
9Cl-PF3ONS*	Not detected	2.0		ng/L	1.95	756426-58-1	
ADONA*	Not detected	2.0		ng/L	1.95	919005-14-4	
HFPO-DA*	Not detected	2.0		ng/L	1.95	13252-13-6	
PFECHS*	Not detected	2.0		ng/L	1.95	67584-42-3	
PFBSA*	Not detected	2.0		ng/L	1.95	30334-69-1	
PFHxSA*	Not detected	2.0		ng/L	1.95	41997-13-1	



Analytical Laboratory Report

Lab Sample ID: S43570.04

Sample Tag: MW-22-13

Collected Date/Time: 12/15/2022 00:01

Matrix: Groundwater

COC Reference: 158675

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	5.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.43/6.50/10	ASTMD7979-19M	01/06/23 14:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 01/07/23 10:51, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	10		ng/L	2.03	375-22-4	
PFPeA*	7.6	4.1		ng/L	2.03	2706-90-3	
4:2 FTSA*	Not detected	2.0		ng/L	2.03	757124-72-4	
PFHxA*	7.1	2.0		ng/L	2.03	307-24-4	
PFBS*	2.6	2.0		ng/L	2.03	375-73-5	
PFHpA*	4.7	2.0		ng/L	2.03	375-85-9	
PFPeS*	Not detected	2.0		ng/L	2.03	2706-91-4	
6:2 FTSA*	Not detected	2.0		ng/L	2.03	27619-97-2	
PFOA*	19	2.0		ng/L	2.03	335-67-1	
PFHxS*	5.1	2.0		ng/L	2.03	355-46-4	
PFHxS-LN*	4.3	2.0		ng/L	2.03	355-46-4-LN	
PFHxS-BR*	Not detected	2.0		ng/L	2.03	355-46-4-BR	
PFNA*	Not detected	2.0		ng/L	2.03	375-95-1	
8:2 FTSA*	Not detected	2.0		ng/L	2.03	39108-34-4	
PFHpS*	Not detected	2.0		ng/L	2.03	375-92-8	
PFDA*	Not detected	2.0		ng/L	2.03	335-76-2	
N-MeFOSAA*	Not detected	2.0		ng/L	2.03	2355-31-9	
EtFOSAA*	Not detected	4.1		ng/L	2.03	2991-50-6	
PFOS*	18	2.0		ng/L	2.03	1763-23-1	
PFOS-LN*	10	2.0		ng/L	2.03	1763-23-1-LN	
PFOS-BR*	7.2	2.0		ng/L	2.03	1763-23-1-BR	
PFUnDA*	Not detected	2.0		ng/L	2.03	2058-94-8	
PFNS*	Not detected	2.0		ng/L	2.03	68259-12-1	
PFDoDA*	Not detected	2.0		ng/L	2.03	307-55-1	
PFDS*	Not detected	2.0		ng/L	2.03	335-77-3	
PFTTrDA*	Not detected	2.0		ng/L	2.03	72629-94-8	
FOSA*	Not detected	2.0		ng/L	2.03	754-91-6	
PFTeDA*	Not detected	4.1		ng/L	2.03	376-06-7	
11Cl-PF3OUdS*	Not detected	2.0		ng/L	2.03	763051-92-9	
9Cl-PF3ONS*	Not detected	2.0		ng/L	2.03	756426-58-1	
ADONA*	Not detected	2.0		ng/L	2.03	919005-14-4	
HFPO-DA*	Not detected	2.0		ng/L	2.03	13252-13-6	
PFECHS*	Not detected	2.0		ng/L	2.03	67584-42-3	
PFBSA*	Not detected	2.0		ng/L	2.03	30334-69-1	
PFHxSA*	Not detected	2.0		ng/L	2.03	41997-13-1	



Analytical Laboratory Report

Lab Sample ID: S43570.05

Sample Tag: MW-22-11

Collected Date/Time: 12/15/2022 15:03

Matrix: Groundwater

COC Reference: 158675

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	5.3	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.54/6.48/10	ASTMD7979-19M	01/06/23 14:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 01/07/23 11:10, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	9.9		ng/L	1.98	375-22-4	
PFPeA*	Not detected	4.0		ng/L	1.98	2706-90-3	
4:2 FTSA*	Not detected	2.0		ng/L	1.98	757124-72-4	
PFHxA*	Not detected	2.0		ng/L	1.98	307-24-4	
PFBS*	2.4	2.0		ng/L	1.98	375-73-5	
PFHpA*	Not detected	2.0		ng/L	1.98	375-85-9	
PFPeS*	Not detected	2.0		ng/L	1.98	2706-91-4	
6:2 FTSA*	Not detected	2.0		ng/L	1.98	27619-97-2	
PFOA*	6.8	2.0		ng/L	1.98	335-67-1	
PFHxS*	5.7	2.0		ng/L	1.98	355-46-4	
PFHxS-LN*	5.0	2.0		ng/L	1.98	355-46-4-LN	
PFHxS-BR*	Not detected	2.0		ng/L	1.98	355-46-4-BR	
PFNA*	Not detected	2.0		ng/L	1.98	375-95-1	
8:2 FTSA*	Not detected	2.0		ng/L	1.98	39108-34-4	
PFHpS*	Not detected	2.0		ng/L	1.98	375-92-8	
PFDA*	Not detected	2.0		ng/L	1.98	335-76-2	
N-MeFOSAA*	Not detected	2.0		ng/L	1.98	2355-31-9	
EtFOSAA*	Not detected	4.0		ng/L	1.98	2991-50-6	
PFOS*	Not detected	2.0		ng/L	1.98	1763-23-1	
PFOS-LN*	Not detected	2.0		ng/L	1.98	1763-23-1-LN	
PFOS-BR*	Not detected	2.0		ng/L	1.98	1763-23-1-BR	
PFUnDA*	Not detected	2.0		ng/L	1.98	2058-94-8	
PFNS*	Not detected	2.0		ng/L	1.98	68259-12-1	
PFDODA*	Not detected	2.0		ng/L	1.98	307-55-1	
PFDS*	Not detected	2.0		ng/L	1.98	335-77-3	
PFTTrDA*	Not detected	2.0		ng/L	1.98	72629-94-8	
FOSA*	Not detected	2.0		ng/L	1.98	754-91-6	
PFTeDA*	Not detected	4.0		ng/L	1.98	376-06-7	
11Cl-PF3OUdS*	Not detected	2.0		ng/L	1.98	763051-92-9	
9Cl-PF3ONS*	Not detected	2.0		ng/L	1.98	756426-58-1	
ADONA*	Not detected	2.0		ng/L	1.98	919005-14-4	
HFPO-DA*	Not detected	2.0		ng/L	1.98	13252-13-6	
PFECHS*	Not detected	2.0		ng/L	1.98	67584-42-3	
PFBSA*	Not detected	2.0		ng/L	1.98	30334-69-1	
PFHxSA*	Not detected	2.0		ng/L	1.98	41997-13-1	

Merit Laboratories Login Checklist

Lab Set ID:S43570

Client:TRC (TRC)

Project: Detroit Axle Southern

Submitted: 12/16/2022 12:00 Login User: PFD

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place

Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Selection	Description	Note
-----------	-------------	------

Sample Receiving

- | | | |
|-----|--|--|
| 01. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples are received at 4C +/- 2C Thermometer # IR 5.3 |
| 02. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Received on ice/ cooling process begun |
| 03. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples shipped |
| 04. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples left in 24 hr. drop box |
| 05. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Are there custody seals/tape or is the drop box locked |

Chain of Custody

- | | | |
|-----|--|--|
| 06. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC adequately filled out |
| 07. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC signed and relinquished to the lab |
| 08. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sample tag on bottles match COC |
| 09. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Subcontracting needed? Subcontracted to: |

Preservation

- | | | |
|-----|--|---|
| 10. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Do sample have correct chemical preservation |
| 11. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Completed pH checks on preserved samples? (no VOAs) |
| 12. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Did any samples need to be preserved in the lab? |

Bottle Conditions

- | | | |
|-----|--|---|
| 13. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | All bottles intact |
| 14. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Appropriate analytical bottles are used |
| 15. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Merit bottles used |
| 16. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sufficient sample volume received |
| 17. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples require laboratory filtration |
| 18. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples submitted within holding time |
| 19. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Do water VOC or TOX bottles contain headspace |

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____



Analytical Laboratory Report

Report ID: S43620.01(01)
Generated on 01/05/2023

Report to
Attention: Kelly Cratsenburg
TRC
1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: 734-412-5424 FAX:
Email: KCratsenburg@trccompanies.com

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Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Additional Contacts: Vince Buening

Report Summary
Lab Sample ID(s): S43620.01-S43620.02
Project: Detroit Axle Southern Inv.
Collected Date(s): 12/16/2022
Submitted Date/Time: 12/19/2022 11:20
Sampled by: A. Whaley
P.O. #: 193431

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Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
E200.8	EPA Method 200.8 Revision 5.4
E245.1	EPA Method 245.1 Revision 3.0
E608.3	EPA Method 608.3 December 2016
N/A	Not Applicable
SW3015A	SW 846 Method 3015A Revision 1 February 2007
SW3510C	SW 846 Method 3510C Revision 3 December 1996
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003
SW8260B - SIM	SW 846 Method 8260B Revision 2 December 1996 SIMs
SW8270D	SW 846 Method 8270D Revision 4 February 2007



Analytical Laboratory Report

Sample Summary (2 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S43620.01	MW-22-12	Groundwater	12/16/22 09:10
S43620.02	TB-04	Water	12/16/22 00:01



Analytical Laboratory Report

Lab Sample ID: S43620.01

Sample Tag: MW-22-12

Collected Date/Time: 12/16/2022 09:10

Matrix: Groundwater

COC Reference: 158672

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	5.0	IR
3	40ml Glass	None	Yes	5.0	IR
2	125ml Plastic	HNO3	Yes	5.0	IR
4	1L Amber	None	Yes	5.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	12/21/22 02:37	CTV	
pH check for VOCs*	<2	N/A	12/21/22 10:30	JKJ	
Metal Digestion	Completed	SW3015A	12/19/22 11:40	CCM	
BNA Extraction	Completed	SW3510C	12/22/22 10:30	JWR	
Extraction, PCB*	Completed	E608.3	12/22/22 13:00	JWR	

Metals

Method: E200.8, Run Date: 12/19/22 13:09, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.053	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	0.008	0.002		mg/L	2	7440-38-2		
Barium	0.157	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Boron	0.05	0.04		mg/L	2	7440-42-8		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.50	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.173	0.005		mg/L	2	7439-96-5		
Molybdenum	Not detected	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.344	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		

Method: E200.8, Run Date: 12/19/22 15:47, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	82.8	0.50		mg/L	2	7440-70-2		
Magnesium	15.9	0.50		mg/L	2	7439-95-4		
Potassium	3.97	0.50		mg/L	2	7440-09-7		
Sodium	78.5	0.50		mg/L	2	7440-23-5		



Analytical Laboratory Report

Lab Sample ID: S43620.01 (continued)

Sample Tag: MW-22-12

Method: E245.1, Run Date: 12/21/22 02:25, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 12/22/22 16:47, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2		
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2		
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5		
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9		
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6		
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1		
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5		
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/05/23 04:53, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		



Analytical Laboratory Report

Lab Sample ID: S43620.01 (continued)

Sample Tag: MW-22-12

Method: SW8270D, Run Date: 01/05/23 04:53, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 12/25/22 20:13, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 12/20/22 08:25, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 12/22/22 00:01, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	1	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/20/22 08:25, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700



Analytical Laboratory Report

Lab Sample ID: S43620.01 (continued)

Sample Tag: MW-22-12

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/20/22 08:25, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		



Analytical Laboratory Report

Lab Sample ID: S43620.01 (continued)

Sample Tag: MW-22-12

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/20/22 08:25, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 12/21/22 20:18, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/21/22 10:46, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43620.02

Sample Tag: TB-04

Collected Date/Time: 12/16/2022 00:01

Matrix: Water

COC Reference: 158672

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	5.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	12/21/22 10:30	JKJ	

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 12/25/22 20:38, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/20/22 08:05, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000



Analytical Laboratory Report

Lab Sample ID: S43620.02 (continued)

Sample Tag: TB-04

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/20/22 08:05, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Merit Laboratories Login Checklist

Lab Set ID:S43620

Client:TRC (TRC)

Project: Detroit Axle Southern Inv.

Submitted: 12/19/2022 11:20 Login User: PFD

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place

Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Selection	Description	Note
-----------	-------------	------

Sample Receiving

- | | | |
|-----|--|--|
| 01. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples are received at 4C +/- 2C Thermometer # IR 5.0 |
| 02. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Received on ice/ cooling process begun |
| 03. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples shipped |
| 04. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples left in 24 hr. drop box |
| 05. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Are there custody seals/tape or is the drop box locked |

Chain of Custody

- | | | |
|-----|--|---|
| 06. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC adequately filled out |
| 07. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC signed and relinquished to the lab |
| 08. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sample tag on bottles match COC |
| 09. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Subcontracting needed? Subcontracted to: Eurofins |

Preservation

- | | | |
|-----|--|---|
| 10. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Do sample have correct chemical preservation |
| 11. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Completed pH checks on preserved samples? (no VOAs) |
| 12. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Did any samples need to be preserved in the lab? |

Bottle Conditions

- | | | |
|-----|--|---|
| 13. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | All bottles intact |
| 14. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Appropriate analytical bottles are used |
| 15. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Merit bottles used |
| 16. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sufficient sample volume received |
| 17. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples require laboratory filtration |
| 18. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples submitted within holding time |
| 19. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Do water VOC or TOX bottles contain headspace |

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____

Merit Laboratories Bottle Preservation Check

Lab Set ID: S43620 Submitted: 12/19/2022 11:20

Client: TRC (TRC)

Project: Detroit Axle Southern Inv.

Initial Preservation Check: 12/19/2022 11:46 PFD

Preservation Recheck (E200.8): N/A

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Sample ID	Bottle / Preservation	pH (Orig)	Add ml	pH (New)	Notes
S43620.01	125ml Plastic HNO3	<2			
S43620.01	125ml Plastic HNO3	<2			

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Lab Results
Merit Laboratories
2680 E Lansing Drive
East Lansing, Michigan 48823

Generated 1/3/2023 2:36:11 PM Revision 1

JOB DESCRIPTION

S43620

JOB NUMBER

190-30671-1

Eurofins Michigan

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



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Revision 1

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Sample Summary

Client: Merit Laboratories
Project/Site: S43620

Job ID: 190-30671-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
190-30671-1	S43620.01	Water	12/16/22 09:10	12/19/22 14:46

1

2

3

4

5

6

7

8

9

10

11

12

Case Narrative

Client: Merit Laboratories
Project/Site: S43620

Job ID: 190-30671-1

Job ID: 190-30671-1

Laboratory: Eurofins Michigan

Narrative

Job Narrative
190-30671-1

Comments

No additional comments.

Revision

The report being provided is a revision of the original report sent on 12/30/2022. The report (revision 1) is being revised due to: The project name needs to be updated to match the COC "S43620".

Receipt

The sample was received on 12/19/2022 2:46 PM. Unless otherwise noted below, the sample arrived in good condition, and was required, properly preserved and on ice. The temperature of the cooler at receipt was 2.3° C.

GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

Client Sample Results

Client: Merit Laboratories
Project/Site: S43620

Job ID: 190-30671-1

Client Sample ID: S43620.01

Lab Sample ID: 190-30671-1

Date Collected: 12/16/22 09:10

Matrix: Water

Date Received: 12/19/22 14:46

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/21/22 20:18	1
Ethanol	<5.0		5.0	mg/L			12/21/22 20:18	1
n-Butanol	<5.0		5.0	mg/L			12/21/22 20:18	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/21/22 10:46	12/27/22 19:56	2

QC Sample Results

Client: Merit Laboratories
Project/Site: S43620

Job ID: 190-30671-1

Method: 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Lab Sample ID: MB 680-756335/10
Matrix: Water
Analysis Batch: 756335

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/21/22 15:20	1
Ethanol	<5.0		5.0	mg/L			12/21/22 15:20	1
n-Butanol	<5.0		5.0	mg/L			12/21/22 15:20	1

Lab Sample ID: LCS 680-756335/6
Matrix: Water
Analysis Batch: 756335

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methanol	20.0	20.5		mg/L		102	43 - 143
Ethanol	20.0	20.8		mg/L		104	38 - 156
n-Butanol	20.0	20.5		mg/L		102	70 - 130

Lab Sample ID: LCSD 680-756335/7
Matrix: Water
Analysis Batch: 756335

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methanol	20.0	20.6		mg/L		103	43 - 143	1	50
Ethanol	20.0	20.3		mg/L		102	38 - 156	2	50
n-Butanol	20.0	19.2		mg/L		96	70 - 130	6	30

Lab Sample ID: 190-30671-1 MS
Matrix: Water
Analysis Batch: 756335

Client Sample ID: S43620.01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Methanol	<3.7		20.0	23.9		mg/L		119	43 - 143
Ethanol	<5.0		20.0	23.7		mg/L		119	38 - 156
n-Butanol	<5.0		20.0	22.7		mg/L		113	70 - 130

Lab Sample ID: 190-30671-1 MSD
Matrix: Water
Analysis Batch: 756335

Client Sample ID: S43620.01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methanol	<3.7		20.0	22.0		mg/L		110	43 - 143	8	50
Ethanol	<5.0		20.0	21.8		mg/L		109	38 - 156	9	50
n-Butanol	<5.0		20.0	20.2		mg/L		101	70 - 130	12	30

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 160-594437/1-A
Matrix: Water
Analysis Batch: 594869

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 594437

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/21/22 10:46	12/27/22 18:16	2

Eurofins Michigan

QC Sample Results

Client: Merit Laboratories
Project/Site: S43620

Job ID: 190-30671-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 160-594437/2-A
Matrix: Water
Analysis Batch: 594869

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 594437

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Thorium	995	1030		ug/L		103	80 - 120

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Definitions/Glossary

Client: Merit Laboratories
Project/Site: S43620

Job ID: 190-30671-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Association Summary

Client: Merit Laboratories
Project/Site: S43620

Job ID: 190-30671-1

GC Semi VOA

Analysis Batch: 756335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30671-1	S43620.01	Total/NA	Water	8015D	
MB 680-756335/10	Method Blank	Total/NA	Water	8015D	
LCS 680-756335/6	Lab Control Sample	Total/NA	Water	8015D	
LCSD 680-756335/7	Lab Control Sample Dup	Total/NA	Water	8015D	
190-30671-1 MS	S43620.01	Total/NA	Water	8015D	
190-30671-1 MSD	S43620.01	Total/NA	Water	8015D	

Metals

Prep Batch: 594437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30671-1	S43620.01	Total/NA	Water	3010A	
MB 160-594437/1-A	Method Blank	Total/NA	Water	3010A	
LCS 160-594437/2-A	Lab Control Sample	Total/NA	Water	3010A	

Analysis Batch: 594869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30671-1	S43620.01	Total/NA	Water	6020B	594437
MB 160-594437/1-A	Method Blank	Total/NA	Water	6020B	594437
LCS 160-594437/2-A	Lab Control Sample	Total/NA	Water	6020B	594437

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43620

Job ID: 190-30671-1

Client Sample ID: S43620.01

Lab Sample ID: 190-30671-1

Date Collected: 12/16/22 09:10

Matrix: Water

Date Received: 12/19/22 14:46

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Analyst</u>	<u>Lab</u>	<u>Prepared or Analyzed</u>
Total/NA	Analysis	8015D		1	756335	JCK	EET SAV	12/21/22 20:18
Total/NA	Prep	3010A			594437	LKP	EET SL	12/21/22 10:46
Total/NA	Analysis	6020B		2	594869	CGB	EET SL	12/27/22 19:56

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Analyst References:

Lab: EET SAV

Batch Type: Analysis

JCK = Joshua Kellar

Lab: EET SL

Batch Type: Prep

LKP = Laura Pemberton

Batch Type: Analysis

CGB = Cory Buffington

Accreditation/Certification Summary

Client: Merit Laboratories
Project/Site: S43620

Job ID: 190-30671-1

Laboratory: Eurofins Savannah

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	SAVLAB	
Alabama	State	41450	06-30-23
ANAB	Dept. of Defense ELAP	L2463	09-22-24
Arkansas DEQ	State	19-015-0	02-01-23
California	State	2939	06-30-22 *
Connecticut	State	PH-0161	03-31-23
Florida	NELAP	E87052	06-23-23
Georgia	State	E87052	06-30-23
Georgia (DW)	State	803	06-30-23
Guam	State	19-007R	04-17-23
Hawaii	State	<cert No.>	06-30-23
Illinois	NELAP	200022	11-30-22 *
Indiana	State	C-GA-02	06-30-23
Iowa	State	353	07-01-23
Kentucky (UST)	State	NA	06-30-23
Louisiana	NELAP	30690	06-30-23
Louisiana (All)	NELAP	30690	06-30-23
Louisiana (DW)	State	LA009	12-31-22
Maine	State	GA00006	12-27-22
Maryland	State	250	12-31-23
Massachusetts	State	M-GA006	07-30-23
Michigan	State	9925	06-30-23
Mississippi	State	<cert No.>	06-30-23
Nebraska	State	NE-OS-7-04	06-30-23
New Jersey	NELAP	GA769	06-30-23
New Mexico	State	GA00006	06-30-23
New York	NELAP	10842	04-01-23
North Carolina (DW)	State	13701	07-31-23
North Carolina (WW/SW)	State	269	12-31-22
Pennsylvania	NELAP	68-00474	06-30-23
Puerto Rico	State	GA00006	12-30-22
South Carolina	State	98001	06-30-23
Tennessee	State	TN02961	06-30-23
Texas	NELAP	T1047004185-19-14	11-30-23
Texas	TCEQ Water Supply	T104704185	06-30-23
USDA	US Federal Programs	P330-18-00313	09-03-24
Virginia	NELAP	460161	06-14-23
Wisconsin	State	999819810	08-31-23
Wyoming	State	8TMS-L	06-30-23

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-23
California	Los Angeles County Sanitation Districts	10259	06-30-22 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Michigan

Accreditation/Certification Summary

Client: Merit Laboratories
 Project/Site: S43620

Job ID: 190-30671-1

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2886	06-30-23
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-23
HI - RadChem Recognition	State	n/a	06-30-23
Illinois	NELAP	200023	11-30-23
Iowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-23
Kentucky (DW)	State	KY90125	12-31-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-22
Louisiana (All)	NELAP	04080	06-30-23
Louisiana (DW)	State	LA011	12-31-22
Maryland	State	310	09-30-23
MI - RadChem Recognition	State	9005	06-30-23
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-23
New Jersey	NELAP	MO002	06-30-23
New York	NELAP	11616	04-01-23
North Dakota	State	R-207	06-30-23
NRC	NRC	24-24817-01	12-31-22
Oklahoma	NELAP	9997	08-31-23
Oregon	NELAP	4157	09-01-23
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-23
Texas	NELAP	T104704193	07-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-24
Washington	State	C592	08-30-23
West Virginia DEP	State	381	12-31-22

Method Summary

Client: Merit Laboratories
Project/Site: S43620

Job ID: 190-30671-1

Method	Method Description	Protocol	Laboratory
8015D	Nonhalogenated Organic Compounds - Direct Injection (GC)	SW846	EET SAV
6020B	Metals (ICP/MS)	SW846	EET SL
3010A	Preparation, Total Metals	SW846	EET SL

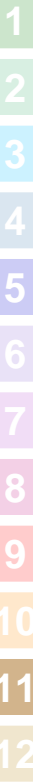
Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566





2680 East Lansing Dr., East Lansing, MI 48823
 Phone (517) 332-0167 Fax (517) 332-4034
 www.meritlabs.com

C.O.C. PAGE # 1 OF 1

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME Project Management Team		CONTACT NAME Julie Teague	
COMPANY Merit Laboratories		COMPANY Merit Laboratories	
ADDRESS 2680 East Lansing Drive		ADDRESS 2680 East Lansing Drive	
CITY East Lansing	STATE MI	CITY East Lansing	STATE MI
ZIP CODE 48823	ZIP CODE 48823	PHONE NO. 517-332-0167	E-MAIL ADDRESS juliet@meritlabs.com

PROJECT NO. NAME: **S43620**

SAMPLER(S) - IN CASE PRINT/SIGN NAME:

TURNAROUND TIME REQUIRED: 1 DAY 2 DAYS 3 DAYS STANDARD OTHER

DELIVERABLES REQUIRED: STD LEVEL II LEVEL III LEVEL IV EDD OTHER

MATRIX CODE: **GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID**
SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIFE A=AIR W=WASTE

YEAR	DATE	TIME	IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives
12/16/22	0910		S43620-01	GW	4	3

REINQUIRED BY SIGNATURE/ORGANIZATION	RECEIVED BY SIGNATURE/ORGANIZATION	DATE	TIME
<i>[Signature]</i>	<i>[Signature]</i>	12/19/22	1330
	<i>[Signature]</i>	12/19/22	1446

190-30671 Chain of Custody

Subcontracted to Eurofins

REINQUIRED BY SIGNATURE/ORGANIZATION	RECEIVED BY SIGNATURE/ORGANIZATION	DATE	TIME
	<i>[Signature]</i>	12/19/22	1330
	<i>[Signature]</i>	12/19/22	1446

SEAL NO. INITIALS NOTES

SEAL INTACT YES [] NO [] SEAL INTACT YES [] NO []

TEMP ON ARRIVAL

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE





Environment Testing
TestAmerica

SDS or Known Hazard Information Supplied by Client
 Discrepancies
 Short Hold
 Rush 24 Hr 2-Day 3-Day 5-Day Other:
Client ID: Merif
Work Order #: 3067
Receipt Evaluation Performed by: Initials: TH Date: 12/19/22 Time: 1946

Cooler / Sample Receipt

After hours receipt: complete gray areas. Place cooler in walk-in, place form in Receiving box. Date: _____ Time: _____

Method of Shipment:

Walk-In Client Eurofins TA Field/Courier
Other Client / 3rd Party Courier: _____
Fed Ex Tracking #: _____
UPS Tracking #: _____
Other: _____

Shipping Container Type:

Cooler Box
 None Other: _____

Custody Seals Intact:

Yes No
 NA (not used or required)

Packing Materials:

Plastic Bags Foam
 Bubble Wrap Paper
 Packing Peanuts None
 Other: _____

Cooling Materials:

Ice (Solid) Ice (Melted)
 Blue Ice None
 Other: _____

Bacteriological Samples	Temp Corrected (°C)	Frozen?		Rec'd Within 2 Hrs?		Sample Flagged?	
		Yes	No	Yes	No	Yes	No

Received on same day sampled? Yes No Additional Sheets Required? Yes No

Receipt Temperatures

Thermometer ID	Observed (°C)	Corrected (°C)	Temp Blank	Sample Temp	Acceptable	Cooler ID	Affected Samples
CP313204	2.3	2.3		X	X Y N		
					Y N		
					Y N		

Receipt Questions**	Y	N	NA	"No" answers require additional comment
CoC present and ETA receipt signature, date, and time properly documented?	X			
Containers and Labels in good condition? (unbroken, not leaking, appropriately filled, labels legible & attached)	X			
Appropriate containers used and adequate volume provided?	X			Preserved bottles checked for pH? Yes No pH strip lot # _____
Number of sample containers match CoC?	X			
Samples received within hold?	X			
Samples submitted for GRO and Volatiles analysis (8260, 624, 524) received without headspace?	X			
Was a Trip Blank received with VOA samples?			X	
Were the samples free of any questionable physical conformities? (i.e.; field duplicates or multiple bottles of the same sample do not significantly vary in appearance - color, solid proportions, etc.)	X			
Were the CoC bottle labels and all other items free of all other discrepancies or issues that would need to be addressed with the Project Manager and/or Client?	X			
**May not be applicable if samples are not for compliance testing				*Excludes FOG, VOAs, TOC Vials, HEM

Client Contact Record

Contact Via: Phone Email Other: _____ Person Contacted: _____ Date/Time: _____
 Discrepancy allowance agreement is on record in the client project file

Discussion / Resolution

Any additional documentation and clarification from the client must be noted in the narrative and/or scanned into the CoC directory.

Reviewed by [Signature] Date: 12/19/22

WI-MI-010_020720

Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler: Lab PM Schafer, Sue		COC No: 190-34951.1	
Client Contact: Shipping/Receiving		Phone: E-Mail: Sue.Schafer@et.eurofins.com		Page 1 of 1	
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Job #: 190-30671-1	
Address: 13715 Rider Trail North,		Due Date Requested: 1/4/2023		Preservation Codes:	
City: Earth City		TAT Requested (days):		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSC4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNBO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)	
State, Zip: MO, 63045		PO #:		Other:	
Phone: 314-298-8566(Tel) 314-298-8757(Fax)		WO #:			
Email:		Project #: 19001249			
Site: S43620.01 (190-30671-1)		SSOW#:			
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time	
S43620.01 (190-30671-1)		12/16/22		09:10 Eastern	
Matrix (Wwwater, Brackish, Overstabil, Br-Tissue, Awa)		Sample Type (C=Comp, G=grab)		Preservation Code:	
Water					
Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Total Number of Containers	
X		X		1	
Special Instructions/Note:					
<p>Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to Eurofins Environment Testing North Central, LLC.</p>					
Possible Hazard Identification					
Unconfirmed					
Deliverable Requested: I, II, III, IV, Other (specify)					
Empty Kit Relinquished by: Primary Deliverable Rank: 2					
Time: _____ Date: _____					
Relinquished by: <i>Jeri Hol</i>		Date/Time: 12/18/22 1700		Company: _____	
Relinquished by: FEP 6X		Date/Time: _____		Company: _____	
Relinquished by: _____		Date/Time: _____		Company: _____	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	
<p>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</p> <p><input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months</p> <p>Special Instructions/QC Requirements:</p>					
Received by: FEP 6X		Date/Time: 12/20/22 9:40		Company: ERASTL	
Received by: <i>B. Long</i>		Date/Time: _____		Company: _____	
Received by: _____		Date/Time: _____		Company: _____	



Analytical Laboratory Report

Report ID: S43621.01(01)
Generated on 01/05/2023

Report to
Attention: Kelly Cratsenburg
TRC
1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: 734-412-5424 FAX:
Email: KCratsenburg@trccompanies.com

Additional Contacts: Vince Buening

Report produced by
Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary
Lab Sample ID(s): S43621.01-S43621.04
Project: Southern Boundary Detroit Axle
Collected Date(s): 12/16/2022
Submitted Date/Time: 12/19/2022 11:20
Sampled by: Javier Jasso
P.O. #: 193431

Table of Contents
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Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
E200.8	EPA Method 200.8 Revision 5.4
E245.1	EPA Method 245.1 Revision 3.0
E608.3	EPA Method 608.3 December 2016
N/A	Not Applicable
SW3015A	SW 846 Method 3015A Revision 1 February 2007
SW3510C	SW 846 Method 3510C Revision 3 December 1996
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003
SW8260B - SIM	SW 846 Method 8260B Revision 2 December 1996 SIMs
SW8270D	SW 846 Method 8270D Revision 4 February 2007



Analytical Laboratory Report

Sample Summary (4 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S43621.01	MW-101	Groundwater	12/16/22 08:27
S43621.02	MW-103	Groundwater	12/16/22 10:06
S43621.03	MW-129	Groundwater	12/16/22 11:30
S43621.04	MW-128	Groundwater	12/16/22 12:30



Analytical Laboratory Report

Lab Sample ID: S43621.01

Sample Tag: MW-101

Collected Date/Time: 12/16/2022 08:27

Matrix: Groundwater

COC Reference: 145628

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	5.0	IR
3	40ml Glass	None	Yes	5.0	IR
2	125ml Plastic	HNO3	Yes	5.0	IR
4	1L Amber	None	Yes	5.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	12/19/22 01:42	CTV	
pH check for VOCs*	<2	N/A	12/21/22 10:30	JKJ	
Metal Digestion	Completed	SW3015A	12/19/22 11:40	CCM	
BNA Extraction	Completed	SW3510C	12/22/22 10:30	JWR	
Extraction, PCB*	Completed	E608.3	12/22/22 13:00	JWR	

Metals

Method: E200.8, Run Date: 12/19/22 13:11, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	Not detected	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		
Barium	0.022	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Boron	0.09	0.04		mg/L	2	7440-42-8		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	Not detected	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	Not detected	0.005		mg/L	2	7439-96-5		
Molybdenum	Not detected	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.133	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		

Method: E200.8, Run Date: 12/19/22 15:49, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	57.4	0.50		mg/L	2	7440-70-2		
Magnesium	8.50	0.50		mg/L	2	7439-95-4		
Potassium	3.13	0.50		mg/L	2	7440-09-7		
Sodium	97.1	0.50		mg/L	2	7440-23-5		



Analytical Laboratory Report

Lab Sample ID: S43621.01 (continued)

Sample Tag: MW-101

Method: E245.1, Run Date: 12/19/22 01:33, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 12/22/22 17:10, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2		
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2		
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5		
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9		
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6		
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1		
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5		
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/05/23 05:23, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		



Analytical Laboratory Report

Lab Sample ID: S43621.01 (continued)

Sample Tag: MW-101

Method: SW8270D, Run Date: 01/05/23 05:23, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 12/27/22 05:19, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 12/20/22 08:45, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 12/22/22 00:21, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/20/22 08:45, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700



Analytical Laboratory Report

Lab Sample ID: S43621.01 (continued)

Sample Tag: MW-101

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/20/22 08:45, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		



Analytical Laboratory Report

Lab Sample ID: S43621.01 (continued)

Sample Tag: MW-101

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/20/22 08:45, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 12/21/22 18:12, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/21/22 10:46, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43621.02

Sample Tag: MW-103

Collected Date/Time: 12/16/2022 10:06

Matrix: Groundwater

COC Reference: 145628

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	5.0	IR
3	40ml Glass	None	Yes	5.0	IR
2	125ml Plastic	HNO3	Yes	5.0	IR
4	1L Amber	None	Yes	5.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	12/19/22 01:42	CTV	
pH check for VOCs*	<2	N/A	12/21/22 10:30	JKJ	
Metal Digestion	Completed	SW3015A	12/19/22 11:40	CCM	
BNA Extraction	Completed	SW3510C	12/22/22 10:30	JWR	
Extraction, PCB*	Completed	E608.3	12/22/22 13:00	JWR	

Metals

Method: E200.8, Run Date: 12/19/22 13:12, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.047	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		
Barium	0.020	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Boron	0.13	0.04		mg/L	2	7440-42-8		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	0.009	0.005		mg/L	2	7440-50-8		
Iron	0.02	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.036	0.005		mg/L	2	7439-96-5		
Molybdenum	0.028	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.051	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		

Method: E200.8, Run Date: 12/19/22 15:50, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	16.9	0.50		mg/L	2	7440-70-2		
Magnesium	2.63	0.50		mg/L	2	7439-95-4		
Potassium	54.8	0.50		mg/L	2	7440-09-7		
Sodium	69.3	0.50		mg/L	2	7440-23-5		



Analytical Laboratory Report

Lab Sample ID: S43621.02 (continued)

Sample Tag: MW-103

Method: E245.1, Run Date: 12/19/22 01:37, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 12/22/22 17:21, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2		
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2		
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5		
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9		
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6		
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1		
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5		
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/05/23 05:54, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		



Analytical Laboratory Report

Lab Sample ID: S43621.02 (continued)

Sample Tag: MW-103

Method: SW8270D, Run Date: 01/05/23 05:54, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 12/27/22 05:43, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 12/20/22 09:04, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 12/22/22 00:42, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/20/22 09:04, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700



Analytical Laboratory Report

Lab Sample ID: S43621.02 (continued)

Sample Tag: MW-103

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/20/22 09:04, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		



Analytical Laboratory Report

Lab Sample ID: S43621.02 (continued)

Sample Tag: MW-103

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/20/22 09:04, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 12/21/22 18:33, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/21/22 10:46, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43621.03

Sample Tag: MW-129

Collected Date/Time: 12/16/2022 11:30

Matrix: Groundwater

COC Reference: 145628

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	5.0	IR
3	40ml Glass	None	Yes	5.0	IR
2	125ml Plastic	HNO3	Yes	5.0	IR
4	1L Amber	None	Yes	5.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	12/19/22 01:42	CTV	
pH check for VOCs*	<2	N/A	12/21/22 10:30	JKJ	
Metal Digestion	Completed	SW3015A	12/19/22 11:40	CCM	
BNA Extraction	Completed	SW3510C	12/22/22 10:30	JWR	
Extraction, PCB*	Completed	E608.3	12/22/22 13:00	JWR	

Metals

Method: E200.8, Run Date: 12/19/22 13:15, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.012	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	0.009	0.002		mg/L	2	7440-38-2		
Barium	0.050	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Boron	0.53	0.04		mg/L	2	7440-42-8		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.26	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.230	0.005		mg/L	2	7439-96-5		
Molybdenum	0.038	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.452	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	0.002	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		

Method: E200.8, Run Date: 12/19/22 15:52, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	114	0.50		mg/L	2	7440-70-2		
Magnesium	7.73	0.50		mg/L	2	7439-95-4		
Potassium	51.8	0.50		mg/L	2	7440-09-7		
Sodium	40.3	0.50		mg/L	2	7440-23-5		



Analytical Laboratory Report

Lab Sample ID: S43621.03 (continued)

Sample Tag: MW-129

Method: E245.1, Run Date: 12/19/22 01:41, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 12/22/22 17:32, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2		
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2		
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5		
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9		
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6		
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1		
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5		
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/05/23 06:24, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		



Analytical Laboratory Report

Lab Sample ID: S43621.03 (continued)

Sample Tag: MW-129

Method: SW8270D, Run Date: 01/05/23 06:24, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 12/27/22 06:07, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 12/20/22 09:23, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 12/22/22 01:02, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/20/22 09:23, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	2	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	7	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700



Analytical Laboratory Report

Lab Sample ID: S43621.03 (continued)

Sample Tag: MW-129

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/20/22 09:23, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	9	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	2	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	2	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		



Analytical Laboratory Report

Lab Sample ID: S43621.03 (continued)

Sample Tag: MW-129

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/20/22 09:23, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 12/21/22 18:54, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/21/22 10:46, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43621.04

Sample Tag: MW-128

Collected Date/Time: 12/16/2022 12:30

Matrix: Groundwater

COC Reference: 145628

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	5.0	IR
3	40ml Glass	None	Yes	5.0	IR
2	125ml Plastic	HNO3	Yes	5.0	IR
4	1L Amber	None	Yes	5.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	12/19/22 01:42	CTV	
pH check for VOCs*	<2	N/A	12/21/22 10:30	JKJ	
Metal Digestion	Completed	SW3015A	12/19/22 11:40	CCM	
BNA Extraction	Completed	SW3510C	12/22/22 10:30	JWR	
Extraction, PCB*	Completed	E608.3	12/22/22 13:00	JWR	

Metals

Method: E200.8, Run Date: 12/19/22 13:16, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	Not detected	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		
Barium	0.135	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Boron	0.77	0.04		mg/L	2	7440-42-8		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.04	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.420	0.005		mg/L	2	7439-96-5		
Molybdenum	0.015	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.695	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		

Method: E200.8, Run Date: 12/19/22 16:00, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	189	10.0		mg/L	50	7440-70-2		
Magnesium	39.7	10.0		mg/L	50	7439-95-4		
Potassium	30.6	10.0		mg/L	50	7440-09-7		
Sodium	82.4	10.0		mg/L	50	7440-23-5		



Analytical Laboratory Report

Lab Sample ID: S43621.04 (continued)

Sample Tag: MW-128

Method: E245.1, Run Date: 12/19/22 01:44, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 12/22/22 17:43, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2		
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2		
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5		
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9		
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6		
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1		
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5		
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/05/23 06:55, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		



Analytical Laboratory Report

Lab Sample ID: S43621.04 (continued)

Sample Tag: MW-128

Method: SW8270D, Run Date: 01/05/23 06:55, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 12/27/22 06:31, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 12/20/22 09:43, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 12/22/22 01:23, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/20/22 09:43, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700



Analytical Laboratory Report

Lab Sample ID: S43621.04 (continued)

Sample Tag: MW-128

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/20/22 09:43, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	26	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		



Analytical Laboratory Report

Lab Sample ID: S43621.04 (continued)

Sample Tag: MW-128

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/20/22 09:43, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 12/21/22 19:15, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/21/22 10:46, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.

Merit Laboratories Login Checklist

Lab Set ID:S43621

Client:TRC (TRC)

Project: Southern Boundary Detroit Axle

Submitted: 12/19/2022 11:20 Login User: PFD

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place

Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Selection	Description	Note
-----------	-------------	------

Sample Receiving

- | | | |
|-----|--|--|
| 01. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples are received at 4C +/- 2C Thermometer # IR 5.0 |
| 02. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Received on ice/ cooling process begun |
| 03. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples shipped |
| 04. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples left in 24 hr. drop box |
| 05. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Are there custody seals/tape or is the drop box locked |

Chain of Custody

- | | | |
|-----|--|---|
| 06. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC adequately filled out |
| 07. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC signed and relinquished to the lab |
| 08. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sample tag on bottles match COC |
| 09. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Subcontracting needed? Subcontracted to: Eurofins |

Preservation

- | | | |
|-----|--|---|
| 10. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Do sample have correct chemical preservation |
| 11. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Completed pH checks on preserved samples? (no VOAs) |
| 12. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Did any samples need to be preserved in the lab? |

Bottle Conditions

- | | | |
|-----|--|---|
| 13. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | All bottles intact |
| 14. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Appropriate analytical bottles are used |
| 15. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Merit bottles used |
| 16. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sufficient sample volume received |
| 17. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples require laboratory filtration |
| 18. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples submitted within holding time |
| 19. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Do water VOC or TOX bottles contain headspace |

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____

Merit Laboratories Bottle Preservation Check

Lab Set ID: S43621 Submitted: 12/19/2022 11:20

Client: TRC (TRC)

Project: Southern Boundary Detroit Axle

Initial Preservation Check: 12/19/2022 11:48 PFD

Preservation Recheck (E200.8): N/A

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Sample ID	Bottle / Preservation	pH (Orig)	Add ml	pH (New)	Notes
S43621.01	125ml Plastic HNO3	<2			
S43621.01	125ml Plastic HNO3	<2			
S43621.02	125ml Plastic HNO3	<2			
S43621.02	125ml Plastic HNO3	<2			
S43621.03	125ml Plastic HNO3	<2			
S43621.03	125ml Plastic HNO3	<2			
S43621.04	125ml Plastic HNO3	<2			
S43621.04	125ml Plastic HNO3	<2			



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 www.meritlabs.com

C.O.C. PAGE # 2 OF 2 145628

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME Kelly Cradsenburg
 COMPANY TRC
 ADDRESS 1540 Eisenhower Place
 CITY Ann Arbor STATE MI ZIP CODE 48106
 PHONE NO. FAX NO. P.O. NO. 193431
 E-MAIL ADDRESS QUOTE NO.

CONTACT NAME SAME
 COMPANY
 ADDRESS
 CITY STATE ZIP CODE
 PHONE NO. E-MAIL ADDRESS

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME Southern Boundary Detroit Axle SAMPLER(S) - PLEASE PRINT/SIGN NAME Javier Jasso
 TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER
 DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER TRC EDD

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

Containers & Preservatives
 OHIO VAP Drinking Water
 DoD NPDES
 Project Locations
 Detroit New York
 Other
 Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	20 YEAR 22		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives														
	DATE	TIME				NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER								
<u>43621.01</u>	<u>12/10</u>	<u>0637</u>	<u>MW-101</u>	<u>W</u>	<u>17</u>	<u>+</u>	<u>+</u>	<u>+</u>												
<u>.02</u>	<u>11</u>	<u>1000</u>	<u>MW-103</u>	<u>W</u>	<u>18</u>	<u>+</u>	<u>+</u>	<u>+</u>												
<u>.03</u>	<u>11</u>	<u>1130</u>	<u>MW-129</u>	<u>W</u>	<u>17</u>	<u>+</u>	<u>+</u>	<u>+</u>												
<u>.04</u>	<u>11</u>	<u>1230</u>	<u>MW-128</u>	<u>W</u>	<u>17</u>	<u>+</u>	<u>+</u>	<u>+</u>												

VOC + TIC
 1,4, Dioxan
 SVOC + TIC
 metals
 PFAS 3T
 PCBs
 Thorium
 3 Alcohols
~~Tetrahydrofuran~~

PFAS on
 Separate COC

RELINQUISHED BY: SIGNATURE/ORGANIZATION [Signature] DATE 12/16/20 TIME 1445
 RECEIVED BY: SIGNATURE/ORGANIZATION [Signature] DATE 12/19/20 TIME 800

RELINQUISHED BY: SIGNATURE/ORGANIZATION [Signature] DATE 12/16/20 TIME 1445
 RECEIVED BY: SIGNATURE/ORGANIZATION [Signature] DATE 12/19/20 TIME 1120
 SEAL NO. SEAL INTACT YES NO INITIALS
 NOTES: TEMP. ON ARRIVAL 5.0

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Lab Results
Merit Laboratories
2680 E Lansing Drive
East Lansing, Michigan 48823

Generated 12/30/2022 9:23:01 AM

JOB DESCRIPTION

S43621

JOB NUMBER

190-30669-1

Eurofins Michigan

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



Generated
12/30/2022 9:23:01 AM

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Designee for
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Sample Summary

Client: Merit Laboratories
Project/Site: S43621

Job ID: 190-30669-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
190-30669-1	S43621.01	Water	12/16/22 08:27	12/19/22 14:46
190-30669-2	S43621.02	Water	12/16/22 10:06	12/19/22 14:46
190-30669-3	S43621.03	Water	12/16/22 11:30	12/19/22 14:46
190-30669-4	S43621.04	Water	12/16/22 12:30	12/19/22 14:46

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Case Narrative

Client: Merit Laboratories
Project/Site: S43621

Job ID: 190-30669-1

Job ID: 190-30669-1

Laboratory: Eurofins Michigan

Narrative

Job Narrative
190-30669-1

Receipt

The samples were received on 12/19/2022 2:46 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.3°C

GC Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Client Sample Results

Client: Merit Laboratories
Project/Site: S43621

Job ID: 190-30669-1

Client Sample ID: S43621.01

Lab Sample ID: 190-30669-1

Date Collected: 12/16/22 08:27

Matrix: Water

Date Received: 12/19/22 14:46

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/21/22 18:12	1
Ethanol	<5.0		5.0	mg/L			12/21/22 18:12	1
n-Butanol	<5.0		5.0	mg/L			12/21/22 18:12	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/21/22 10:46	12/27/22 19:25	2

Client Sample ID: S43621.02

Lab Sample ID: 190-30669-2

Date Collected: 12/16/22 10:06

Matrix: Water

Date Received: 12/19/22 14:46

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/21/22 18:33	1
Ethanol	<5.0		5.0	mg/L			12/21/22 18:33	1
n-Butanol	<5.0		5.0	mg/L			12/21/22 18:33	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/21/22 10:46	12/27/22 19:28	2

Client Sample ID: S43621.03

Lab Sample ID: 190-30669-3

Date Collected: 12/16/22 11:30

Matrix: Water

Date Received: 12/19/22 14:46

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/21/22 18:54	1
Ethanol	<5.0		5.0	mg/L			12/21/22 18:54	1
n-Butanol	<5.0		5.0	mg/L			12/21/22 18:54	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/21/22 10:46	12/27/22 19:32	2

Client Sample ID: S43621.04

Lab Sample ID: 190-30669-4

Date Collected: 12/16/22 12:30

Matrix: Water

Date Received: 12/19/22 14:46

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/21/22 19:15	1
Ethanol	<5.0		5.0	mg/L			12/21/22 19:15	1
n-Butanol	<5.0		5.0	mg/L			12/21/22 19:15	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/21/22 10:46	12/27/22 19:35	2

QC Sample Results

Client: Merit Laboratories
Project/Site: S43621

Job ID: 190-30669-1

Method: 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Lab Sample ID: MB 680-756335/10
Matrix: Water
Analysis Batch: 756335

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/21/22 15:20	1
Ethanol	<5.0		5.0	mg/L			12/21/22 15:20	1
n-Butanol	<5.0		5.0	mg/L			12/21/22 15:20	1

Lab Sample ID: LCS 680-756335/6
Matrix: Water
Analysis Batch: 756335

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methanol	20.0	20.5		mg/L		102	43 - 143
Ethanol	20.0	20.8		mg/L		104	38 - 156
n-Butanol	20.0	20.5		mg/L		102	70 - 130

Lab Sample ID: LCSD 680-756335/7
Matrix: Water
Analysis Batch: 756335

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methanol	20.0	20.6		mg/L		103	43 - 143	1	50
Ethanol	20.0	20.3		mg/L		102	38 - 156	2	50
n-Butanol	20.0	19.2		mg/L		96	70 - 130	6	30

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 160-594437/1-A
Matrix: Water
Analysis Batch: 594869

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 594437

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/21/22 10:46	12/27/22 18:16	2

Lab Sample ID: LCS 160-594437/2-A
Matrix: Water
Analysis Batch: 594869

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 594437

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Thorium	995	1030		ug/L		103	80 - 120

Definitions/Glossary

Client: Merit Laboratories
Project/Site: S43621

Job ID: 190-30669-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Association Summary

Client: Merit Laboratories
Project/Site: S43621

Job ID: 190-30669-1

GC Semi VOA

Analysis Batch: 756335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30669-1	S43621.01	Total/NA	Water	8015D	
190-30669-2	S43621.02	Total/NA	Water	8015D	
190-30669-3	S43621.03	Total/NA	Water	8015D	
190-30669-4	S43621.04	Total/NA	Water	8015D	
MB 680-756335/10	Method Blank	Total/NA	Water	8015D	
LCS 680-756335/6	Lab Control Sample	Total/NA	Water	8015D	
LCSD 680-756335/7	Lab Control Sample Dup	Total/NA	Water	8015D	

Metals

Prep Batch: 594437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30669-1	S43621.01	Total/NA	Water	3010A	
190-30669-2	S43621.02	Total/NA	Water	3010A	
190-30669-3	S43621.03	Total/NA	Water	3010A	
190-30669-4	S43621.04	Total/NA	Water	3010A	
MB 160-594437/1-A	Method Blank	Total/NA	Water	3010A	
LCS 160-594437/2-A	Lab Control Sample	Total/NA	Water	3010A	

Analysis Batch: 594869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30669-1	S43621.01	Total/NA	Water	6020B	594437
190-30669-2	S43621.02	Total/NA	Water	6020B	594437
190-30669-3	S43621.03	Total/NA	Water	6020B	594437
190-30669-4	S43621.04	Total/NA	Water	6020B	594437
MB 160-594437/1-A	Method Blank	Total/NA	Water	6020B	594437
LCS 160-594437/2-A	Lab Control Sample	Total/NA	Water	6020B	594437

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43621

Job ID: 190-30669-1

Client Sample ID: S43621.01

Date Collected: 12/16/22 08:27

Date Received: 12/19/22 14:46

Lab Sample ID: 190-30669-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	756335	JCK	EET SAV	12/21/22 18:12
Total/NA	Prep	3010A			594437	LKP	EET SL	12/21/22 10:46
Total/NA	Analysis	6020B		2	594869	CGB	EET SL	12/27/22 19:25

Client Sample ID: S43621.02

Date Collected: 12/16/22 10:06

Date Received: 12/19/22 14:46

Lab Sample ID: 190-30669-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	756335	JCK	EET SAV	12/21/22 18:33
Total/NA	Prep	3010A			594437	LKP	EET SL	12/21/22 10:46
Total/NA	Analysis	6020B		2	594869	CGB	EET SL	12/27/22 19:28

Client Sample ID: S43621.03

Date Collected: 12/16/22 11:30

Date Received: 12/19/22 14:46

Lab Sample ID: 190-30669-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	756335	JCK	EET SAV	12/21/22 18:54
Total/NA	Prep	3010A			594437	LKP	EET SL	12/21/22 10:46
Total/NA	Analysis	6020B		2	594869	CGB	EET SL	12/27/22 19:32

Client Sample ID: S43621.04

Date Collected: 12/16/22 12:30

Date Received: 12/19/22 14:46

Lab Sample ID: 190-30669-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	756335	JCK	EET SAV	12/21/22 19:15
Total/NA	Prep	3010A			594437	LKP	EET SL	12/21/22 10:46
Total/NA	Analysis	6020B		2	594869	CGB	EET SL	12/27/22 19:35

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Analyst References:

Lab: EET SAV

Batch Type: Analysis

JCK = Joshua Kellar

Lab: EET SL

Batch Type: Prep

LKP = Laura Pemberton

Batch Type: Analysis

CGB = Cory Buffington

Accreditation/Certification Summary

Client: Merit Laboratories
Project/Site: S43621

Job ID: 190-30669-1

Laboratory: Eurofins Savannah

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	SAVLAB	
Alabama	State	41450	06-30-23
ANAB	Dept. of Defense ELAP	L2463	09-22-24
Arkansas DEQ	State	19-015-0	02-01-23
California	State	2939	06-30-22 *
Connecticut	State	PH-0161	03-31-23
Florida	NELAP	E87052	06-23-23
Georgia	State	E87052	06-30-23
Georgia (DW)	State	803	06-30-23
Guam	State	19-007R	04-17-23
Hawaii	State	<cert No.>	06-30-23
Illinois	NELAP	200022	11-30-22 *
Indiana	State	C-GA-02	06-30-23
Iowa	State	353	07-01-23
Kentucky (UST)	State	NA	06-30-23
Louisiana	NELAP	30690	06-30-23
Louisiana (All)	NELAP	30690	06-30-23
Louisiana (DW)	State	LA009	12-31-22
Maine	State	GA00006	12-27-22
Maryland	State	250	12-31-23
Massachusetts	State	M-GA006	07-30-23
Michigan	State	9925	06-30-23
Mississippi	State	<cert No.>	06-30-23
Nebraska	State	NE-OS-7-04	06-30-23
New Jersey	NELAP	GA769	06-30-23
New Mexico	State	GA00006	06-30-23
New York	NELAP	10842	04-01-23
North Carolina (DW)	State	13701	07-31-23
North Carolina (WW/SW)	State	269	12-31-22
Pennsylvania	NELAP	68-00474	06-30-23
Puerto Rico	State	GA00006	12-30-22
South Carolina	State	98001	06-30-23
Tennessee	State	TN02961	06-30-23
Texas	NELAP	T1047004185-19-14	11-30-23
Texas	TCEQ Water Supply	T104704185	06-30-23
USDA	US Federal Programs	P330-18-00313	09-03-24
Virginia	NELAP	460161	06-14-23
Wisconsin	State	999819810	08-31-23
Wyoming	State	8TMS-L	06-30-23

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-23
California	Los Angeles County Sanitation Districts	10259	06-30-22 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Michigan

Accreditation/Certification Summary

Client: Merit Laboratories
Project/Site: S43621

Job ID: 190-30669-1

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2886	06-30-23
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-23
HI - RadChem Recognition	State	n/a	06-30-23
Illinois	NELAP	200023	11-30-23
Iowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-23
Kentucky (DW)	State	KY90125	12-31-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-22
Louisiana (All)	NELAP	04080	06-30-23
Louisiana (DW)	State	LA011	12-31-22
Maryland	State	310	09-30-23
MI - RadChem Recognition	State	9005	06-30-23
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-23
New Jersey	NELAP	MO002	06-30-23
New York	NELAP	11616	04-01-23
North Dakota	State	R-207	06-30-23
NRC	NRC	24-24817-01	12-31-22
Oklahoma	NELAP	9997	08-31-23
Oregon	NELAP	4157	09-01-23
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-23
Texas	NELAP	T104704193	07-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-24
Washington	State	C592	08-30-23
West Virginia DEP	State	381	12-31-22

Method Summary

Client: Merit Laboratories
Project/Site: S43621

Job ID: 190-30669-1

Method	Method Description	Protocol	Laboratory
8015D	Nonhalogenated Organic Compounds - Direct Injection (GC)	SW846	EET SAV
6020B	Metals (ICP/MS)	SW846	EET SL
3010A	Preparation, Total Metals	SW846	EET SL

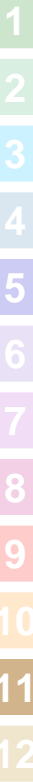
Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566





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C.O.C. PAGE # 1 OF 1

REPORT TO CONTACT NAME: Julie Teague
INVOICE TO CONTACT NAME: **ES** SAME

COMPANY: Project Management Team
 COMPANY: Merit Laboratories

ADDRESS: 2680 East Lansing Drive
 ADDRESS: 2680 East Lansing Drive

CITY: East Lansing MI ZIP CODE: 48823
 CITY: East Lansing MI ZIP CODE: 48823

PHONE NO: 517-332-0167
 PHONE NO: 517-332-0167

E-MAIL ADDRESS: results@meritlabs.com
 E-MAIL ADDRESS: juliet@meritlabs.com

PROJECT NO./NAME: S43621

SAMPLER(S): PLEASE PRINT/SIGN NAME

TURNAROUND TIME REQUIRED: 1 DAY 2 DAYS 3 DAYS STANDARD OTHER

DELIVERABLES REQUIRED: STD LEVEL II LEVEL III LEVEL IV EDD OTHER

MATRIX CODE	YEAR		IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives							OTHER						
	DATE	TIME				NONE	H ₂ O	H ₂ SO ₄	NH ₄	NH ₄ OH	MeOH	OTHER							
	12/16/22	0827	S43621.01	GW	4	3	1												
	12/16/22	1006	S43621.02	GW	4	3	1												
	12/16/22	1130	S43621.03	GW	4	3	1												
	12/16/22	1230	S43621.04	GW	4	3	1												

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications: OHIO VAP Drinking Water DoD NPDES

Project Locations: Detroit New York Other

Special Instructions: *Methanol RL 3,700ppb
*Ethanol, N-Butanol

Subcontracted to: Eurofims

Barcode: 190-30669 Chain of Custody

REINQUISHED BY: SIGNATURE/Organization: [Signature] DATE: 12/19/22 TIME: [Time]

RECEIVED BY: SIGNATURE/Organization: [Signature] DATE: 12/19/22 TIME: 11:40

REINQUISHED BY: SIGNATURE/Organization: [Signature] DATE: 12/19/22 TIME: 1446

RECEIVED BY: SIGNATURE/Organization: [Signature] DATE: [Date] TIME: [Time]

SEAL NO. SEAL INTACT YES/NO INITIALS

SEAL NO. SEAL INTACT YES/NO INITIALS

TEMP ON ARRIVAL

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE





Environment Testing
TestAmerica

SDS or Known Hazard Information Supplied by Client
 Discrepancies Client ID: Merif
 Short Hold Work Order #: 30669
 Rush 24 Hr 2-Day 3-Day 5-Day Other: _____
Receipt Evaluation Performed by: Initials: TH Date: 12/19/22 Time: 1946

Cooler / Sample Receipt

After hours receipt: complete gray areas. Place cooler in walk-in, place form in Receiving box. Date: _____ Time: _____

Method of Shipment:

Walk-In Client Eurofins TA Field/Courier
Other Client / 3rd Party Courier: _____
Fed Ex Tracking #: _____
UPS Tracking #: _____
Other: _____

Shipping Container Type:

Cooler Box
 None Other: _____

Custody Seals Intact:

Yes No
 NA (not used or required)

Packing Materials:

Plastic Bags Foam
 Bubble Wrap Paper
 Packing Peanuts None
 Other: _____

Cooling Materials:

Ice (Solid) Ice (Melted)
 Blue Ice None
 Other: _____

Bacteriological Samples	Temp Corrected (°C)	Frozen?		Rec'd Within 2 Hrs?		Sample Flagged?	
		Yes	No	Yes	No	Yes	No

Received on same day sampled? Yes No Additional Sheets Required? Yes No

Receipt Temperatures

Thermometer ID	Observed (°C)	Corrected (°C)	Temp Blank	Sample Temp	Acceptable	Cooler ID	Affected Samples
<u>CP313207</u>	<u>2.3</u>	<u>2.3</u>		<u>X</u>	<u>X</u> Y <u> </u> N		
					<u> </u> Y <u> </u> N		
					<u> </u> Y <u> </u> N		

Receipt Questions**	Y	N	NA	"No" answers require additional comment
CoC present and ETA receipt signature, date, and time properly documented?	<u>X</u>			
Containers and Labels in good condition? (unbroken, not leaking, appropriately filled, labels legible & attached)	<u>X</u>			
Appropriate containers used and adequate volume provided?	<u>X</u>			Preserved bottles checked for pH? Yes <input checked="" type="checkbox"/> No
Number of sample containers match CoC?	<u>X</u>			pH strip lot # _____
Samples received within hold?	<u>X</u>			
Samples submitted for GRO and Volatiles analysis (8260, 624, 524) received without headspace?	<u>X</u>			
Was a Trip Blank received with VOA samples?			<u>X</u>	
Were the samples free of any questionable physical conformities? (i.e.; field duplicates or multiple bottles of the same sample do not significantly vary in appearance - color, solid proportions, etc.)	<u>X</u>			
Were the CoC bottle labels and all other items free of all other discrepancies or issues that would need to be addressed with the Project Manager and/or Client?	<u>X</u>			
**May not be applicable if samples are not for compliance testing				*Excludes FOG, VOAs, TOC Vials, HEM

Client Contact Record

Contact Via: Phone Email Other: _____ Person Contacted: _____ Date/Time: _____
 Discrepancy allowance agreement is on record in the client project file

Discussion / Resolution

Any additional documentation and clarification from the client must be noted in the narrative and/or scanned into the CoC directory.

Reviewed by [Signature] Date: 12/19/22

WI-MI-010_020720

Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler: Schrafer, Sue		Carrier Tracking No(s):		COC No: 190-34947.1																																																			
Client Contact: Sue.Schrafer@eurofins.com		E-Mail: Sue.Schrafer@eurofins.com		State of Origin: Michigan		Page: Page 1 of 1																																																			
Shipping/Receiving Company: TestAmerica Laboratories, Inc.		Phone: 19001249		Accreditations Required (See note):		Job #: 190-30669-1																																																			
Address: 13715 Rider Trail North,		Due Date Requested: 1/4/2023		Analysis Requested																																																					
City: Earth City		TAT Requested (days):																																																							
State, Zip: MO, 63045		PO #:		<table border="1"> <tr> <th>Sample ID (Lab ID)</th> <th>Sample Date</th> <th>Sample Time</th> <th>Sample Type (C=comp, G=grab)</th> <th>Matrix (W=water, S=solid, O=other)</th> <th>Preservation Code</th> <th>Field Filtered Sample (Yes or No)</th> <th>Perform M/MSD (Yes or No)</th> <th>Total Number of Containers</th> <th>Special Instructions/Note:</th> </tr> <tr> <td>S43621.01 (190-30669-1)</td> <td>12/16/22</td> <td>08:27 Eastern</td> <td>Water</td> <td>Water</td> <td></td> <td>X</td> <td>X</td> <td>1</td> <td></td> </tr> <tr> <td>S43621.02 (190-30669-2)</td> <td>12/16/22</td> <td>10:06 Eastern</td> <td>Water</td> <td>Water</td> <td></td> <td>X</td> <td>X</td> <td>1</td> <td></td> </tr> <tr> <td>S43621.03 (190-30669-3)</td> <td>12/16/22</td> <td>11:30 Eastern</td> <td>Water</td> <td>Water</td> <td></td> <td>X</td> <td>X</td> <td>1</td> <td></td> </tr> <tr> <td>S43621.04 (190-30669-4)</td> <td>12/16/22</td> <td>12:30 Eastern</td> <td>Water</td> <td>Water</td> <td></td> <td>X</td> <td>X</td> <td>1</td> <td></td> </tr> </table>				Sample ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=other)	Preservation Code	Field Filtered Sample (Yes or No)	Perform M/MSD (Yes or No)	Total Number of Containers	Special Instructions/Note:	S43621.01 (190-30669-1)	12/16/22	08:27 Eastern	Water	Water		X	X	1		S43621.02 (190-30669-2)	12/16/22	10:06 Eastern	Water	Water		X	X	1		S43621.03 (190-30669-3)	12/16/22	11:30 Eastern	Water	Water		X	X	1		S43621.04 (190-30669-4)	12/16/22	12:30 Eastern	Water	Water		X	X	1	
Sample ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)					Matrix (W=water, S=solid, O=other)	Preservation Code	Field Filtered Sample (Yes or No)	Perform M/MSD (Yes or No)	Total Number of Containers	Special Instructions/Note:																																												
S43621.01 (190-30669-1)	12/16/22	08:27 Eastern	Water	Water		X	X	1																																																	
S43621.02 (190-30669-2)	12/16/22	10:06 Eastern	Water	Water		X	X	1																																																	
S43621.03 (190-30669-3)	12/16/22	11:30 Eastern	Water	Water		X	X	1																																																	
S43621.04 (190-30669-4)	12/16/22	12:30 Eastern	Water	Water		X	X	1																																																	
Phone: 314-298-8566(Tel) 314-298-8757(Fax)		WO #:		<p>Preservation Codes:</p> <p>M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA Y - Trizma Z - other (specify)</p> <p>Other:</p>																																																					
Email:		Project # 19001249																																																							
Site: S43621		SSOW#:																																																							

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes in accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central.

possible Hazard Identification

Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): Return To Client Disposal By Lab Archive For Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by: *JAF* Date: *12/19/22* Time: *1500* Company: *Company*

Relinquished by: *FED EX* Date/Time: *12/19/22 9:40* Company: *ETA SRL*

Relinquished by: *FED EX* Date/Time: *12/20/22 9:40* Company: *Company*

Custody Seals Intact: Yes No Other Remarks: *Cooler Temperature(s) °C and Other Remarks:*



Analytical Laboratory Report

Report ID: S43622.01(01)
Generated on 01/18/2023

Report to
Attention: Kelly Cratsenburg
TRC
1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: 734-412-5424 FAX:
Email: KCratsenburg@trccompanies.com

Report produced by
Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Additional Contacts: Vince Buening

Report Summary
Lab Sample ID(s): S43622.01-S43622.07
Project: Detroit Axle South
Collected Date(s): 12/16/2022
Submitted Date/Time: 12/19/2022 11:20
Sampled by: A. Whaley
P.O. #: 193431

Table of Contents

- Cover Page (Page 1)
- General Report Notes (Page 2)
- Report Narrative (Page 2)
- Laboratory Certifications (Page 3)
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- Glossary of Abbreviations (Page 3)
- Method Summary (Page 4)
- Sample Summary (Page 5)

Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
ASTMD7979-19M	ASTM Method D7979 - 19 Modified (Isotopic Dilution)

Parameter Summary

Parameter	Synonym	Cas #
PFBA	Perfluorobutanoic Acid	375-22-4
PFPeA	Perfluoropentanoic Acid	2706-90-3
4:2 FTSA	4:2 Fluorotelomer Sulfonic Acid	757124-72-4
PFHxA	Perfluorohexanoic Acid	307-24-4
PFBS	Perfluorobutane sulfonic Acid	375-73-5
PFHpA	Perfluoroheptanoic Acid	375-85-9
PFPeS	Perfluoropentane Sulfonic Acid	2706-91-4
6:2 FTSA	6:2 Fluorotelomer Sulfonic Acid	27619-97-2
PFOA	Perfluorooctanoic Acid	335-67-1
PFHxS	Perfluorohexane Sulfonic Acid	355-46-4
PFHxS-LN	Perfluorohexane Sulfonic Acid - LN	355-46-4-LN
PFHxS-BR	Perfluorohexane Sulfonic Acid - BR	355-46-4-BR
PFNA	Perfluorononanoic Acid	375-95-1
8:2 FTSA	8:2 Fluorotelomer Sulfonic Acid	39108-34-4
PFHpS	Perfluoroheptane Sulfonic Acid	375-92-8
PFDA	Perfluorodecanoic Acid	335-76-2
N-MeFOSAA	N-methyl perfluorooctanesulfonamidoacetic acid	2355-31-9
EtFOSAA	N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	2991-50-6
PFOS	Perfluorooctane Sulfonic Acid	1763-23-1
PFOS-LN	Perfluorooctane Sulfonic Acid - LN	1763-23-1-LN
PFOS-BR	Perfluorooctane Sulfonic Acid - BR	1763-23-1-BR
PFUnDA	Perfluoroundecanoic Acid	2058-94-8
PFNS	Perfluorononane Sulfonic Acid	68259-12-1
PFDoDA	Perfluorododecanoic Acid	307-55-1
PFDS	Perfluorodecane Sulfonic Acid	335-77-3
PFTTrDA	Perfluorotridecanoic Acid	72629-94-8
FOSA	Perfluorooctane Sulfonamide	754-91-6
PFTeDA	Perfluorotetradecanoic Acid	376-06-7
11Cl-PF3OUdS	11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	763051-92-9
9Cl-PF3ONS	9-chlorohexadecafluoro-3-oxanone1-sulfonic acid	756426-58-1
ADONA	4,8-dioxa-3H-perfluorononanoic acid	919005-14-4
HFPO-DA	Hexafluoropropylene oxide dimer	13252-13-6
PFECBS	Perfluoro-4-ethylcyclohexanesulfonate	67584-42-3
PFBSA	Perfluorobutanesulfonamide	30334-69-1
PFHxSA	Perfluorohexanesulfonamide	41997-13-1



Analytical Laboratory Report

Sample Summary (7 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S43622.01	MW-22-12	Groundwater	12/16/22 09:10
S43622.02	FB-01	Water	12/16/22 10:30
S43622.03	EB-01	Water	12/16/22 11:00
S43622.04	MW-101	Groundwater	12/16/22 08:27
S43622.05	MW-103	Groundwater	12/16/22 10:06
S43622.06	MW-129	Groundwater	12/16/22 11:30
S43622.07	MW-128	Groundwater	12/16/22 12:30



Analytical Laboratory Report

Lab Sample ID: S43622.01

Sample Tag: MW-22-12

Collected Date/Time: 12/16/2022 09:10

Matrix: Groundwater

COC Reference: 158673

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	5.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.56/6.49/10	ASTMD7979-19M	01/10/23 13:33	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 01/10/23 21:49, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	9.9		ng/L	1.97	375-22-4		
PFPeA*	Not detected	3.9		ng/L	1.97	2706-90-3		
4:2 FTSA*	Not detected	2.0		ng/L	1.97	757124-72-4		
PFHxA*	Not detected	2.0		ng/L	1.97	307-24-4		
PFBS*	2.8	2.0		ng/L	1.97	375-73-5		
PFHpA*	Not detected	2.0		ng/L	1.97	375-85-9		
PFPeS*	Not detected	2.0		ng/L	1.97	2706-91-4		
6:2 FTSA*	Not detected	2.0		ng/L	1.97	27619-97-2		
PFOA*	4.9	2.0		ng/L	1.97	335-67-1		
PFHxS*	4.4	2.0		ng/L	1.97	355-46-4		
PFHxS-LN*	3.7	2.0		ng/L	1.97	355-46-4-LN		
PFHxS-BR*	Not detected	2.0		ng/L	1.97	355-46-4-BR		
PFNA*	Not detected	2.0		ng/L	1.97	375-95-1		
8:2 FTSA*	Not detected	2.0		ng/L	1.97	39108-34-4		
PFHpS*	Not detected	2.0		ng/L	1.97	375-92-8		
PFDA*	Not detected	2.0		ng/L	1.97	335-76-2		
N-MeFOSAA*	Not detected	2.0		ng/L	1.97	2355-31-9		
EtFOSAA*	Not detected	3.9		ng/L	1.97	2991-50-6		
PFOS*	Not detected	2.0		ng/L	1.97	1763-23-1		
PFOS-LN*	Not detected	2.0		ng/L	1.97	1763-23-1-LN		
PFOS-BR*	Not detected	2.0		ng/L	1.97	1763-23-1-BR		
PFUnDA*	Not detected	2.0		ng/L	1.97	2058-94-8		
PFNS*	Not detected	2.0		ng/L	1.97	68259-12-1		
PFDODA*	Not detected	2.0		ng/L	1.97	307-55-1		
PFDS*	Not detected	2.0		ng/L	1.97	335-77-3		
PFTTrDA*	Not detected	2.0		ng/L	1.97	72629-94-8		
FOSA*	Not detected	2.0		ng/L	1.97	754-91-6		
PFTeDA*	Not detected	3.9		ng/L	1.97	376-06-7		
11Cl-PF3OUdS*	Not detected	2.0		ng/L	1.97	763051-92-9		
9Cl-PF3ONS*	Not detected	2.0		ng/L	1.97	756426-58-1		
ADONA*	Not detected	2.0		ng/L	1.97	919005-14-4		
HFPO-DA*	Not detected	2.0		ng/L	1.97	13252-13-6		
PFECHS*	Not detected	2.0		ng/L	1.97	67584-42-3		
PFBSA*	Not detected	2.0		ng/L	1.97	30334-69-1		
PFHxSA*	Not detected	2.0		ng/L	1.97	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43622.02

Sample Tag: FB-01

Collected Date/Time: 12/16/2022 10:30

Matrix: Water

COC Reference: 158673

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	5.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	10.72/6.55/8	ASTMD7979-19M	01/10/23 13:33	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 01/11/23 10:59, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	9.6		ng/L	1.92	375-22-4		
PFPeA*	Not detected	3.8		ng/L	1.92	2706-90-3		
4:2 FTSA*	Not detected	1.9		ng/L	1.92	757124-72-4		
PFHxA*	Not detected	1.9		ng/L	1.92	307-24-4		
PFBS*	Not detected	1.9		ng/L	1.92	375-73-5		
PFHpA*	Not detected	1.9		ng/L	1.92	375-85-9		
PFPeS*	Not detected	1.9		ng/L	1.92	2706-91-4		
6:2 FTSA*	Not detected	1.9		ng/L	1.92	27619-97-2		
PFOA*	Not detected	1.9		ng/L	1.92	335-67-1		
PFHxS*	Not detected	1.9		ng/L	1.92	355-46-4		
PFHxS-LN*	Not detected	1.9		ng/L	1.92	355-46-4-LN		
PFHxS-BR*	Not detected	1.9		ng/L	1.92	355-46-4-BR		
PFNA*	Not detected	1.9		ng/L	1.92	375-95-1		
8:2 FTSA*	Not detected	1.9		ng/L	1.92	39108-34-4		
PFHpS*	Not detected	1.9		ng/L	1.92	375-92-8		
PFDA*	Not detected	1.9		ng/L	1.92	335-76-2		
N-MeFOSAA*	Not detected	1.9		ng/L	1.92	2355-31-9		
EtFOSAA*	Not detected	3.8		ng/L	1.92	2991-50-6		
PFOS*	Not detected	1.9		ng/L	1.92	1763-23-1		
PFOS-LN*	Not detected	1.9		ng/L	1.92	1763-23-1-LN		
PFOS-BR*	Not detected	1.9		ng/L	1.92	1763-23-1-BR		
PFUnDA*	Not detected	1.9		ng/L	1.92	2058-94-8		
PFNS*	Not detected	1.9		ng/L	1.92	68259-12-1		
PFDODA*	Not detected	1.9		ng/L	1.92	307-55-1		
PFDS*	Not detected	1.9		ng/L	1.92	335-77-3		
PFTTrDA*	Not detected	1.9		ng/L	1.92	72629-94-8		
FOSA*	Not detected	1.9		ng/L	1.92	754-91-6		
PFTeDA*	Not detected	3.8		ng/L	1.92	376-06-7		
11Cl-PF3OUdS*	Not detected	1.9		ng/L	1.92	763051-92-9		
9Cl-PF3ONS*	Not detected	1.9		ng/L	1.92	756426-58-1		
ADONA*	Not detected	1.9		ng/L	1.92	919005-14-4		
HFPO-DA*	Not detected	1.9		ng/L	1.92	13252-13-6		
PFECHS*	Not detected	1.9		ng/L	1.92	67584-42-3		
PFBSA*	Not detected	1.9		ng/L	1.92	30334-69-1		
PFHxSA*	Not detected	1.9		ng/L	1.92	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43622.03

Sample Tag: EB-01

Collected Date/Time: 12/16/2022 11:00

Matrix: Water

COC Reference: 158673

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	5.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.36/6.47/10	ASTMD7979-19M	01/10/23 13:33	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 01/11/23 11:19, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	10		ng/L	2.04	375-22-4		
PFPeA*	Not detected	4.1		ng/L	2.04	2706-90-3		
4:2 FTSA*	Not detected	2.0		ng/L	2.04	757124-72-4		
PFHxA*	Not detected	2.0		ng/L	2.04	307-24-4		
PFBS*	Not detected	2.0		ng/L	2.04	375-73-5		
PFHpA*	Not detected	2.0		ng/L	2.04	375-85-9		
PFPeS*	Not detected	2.0		ng/L	2.04	2706-91-4		
6:2 FTSA*	Not detected	2.0		ng/L	2.04	27619-97-2		
PFOA*	Not detected	2.0		ng/L	2.04	335-67-1		
PFHxS*	Not detected	2.0		ng/L	2.04	355-46-4		
PFHxS-LN*	Not detected	2.0		ng/L	2.04	355-46-4-LN		
PFHxS-BR*	Not detected	2.0		ng/L	2.04	355-46-4-BR		
PFNA*	Not detected	2.0		ng/L	2.04	375-95-1		
8:2 FTSA*	Not detected	2.0		ng/L	2.04	39108-34-4		
PFHpS*	Not detected	2.0		ng/L	2.04	375-92-8		
PFDA*	Not detected	2.0		ng/L	2.04	335-76-2		
N-MeFOSAA*	Not detected	2.0		ng/L	2.04	2355-31-9		
EtFOSAA*	Not detected	4.1		ng/L	2.04	2991-50-6		
PFOS*	Not detected	2.0		ng/L	2.04	1763-23-1		
PFOS-LN*	Not detected	2.0		ng/L	2.04	1763-23-1-LN		
PFOS-BR*	Not detected	2.0		ng/L	2.04	1763-23-1-BR		
PFUnDA*	Not detected	2.0		ng/L	2.04	2058-94-8		
PFNS*	Not detected	2.0		ng/L	2.04	68259-12-1		
PFDODA*	Not detected	2.0		ng/L	2.04	307-55-1		
PFDS*	Not detected	2.0		ng/L	2.04	335-77-3		
PFTTrDA*	Not detected	2.0		ng/L	2.04	72629-94-8		
FOSA*	Not detected	2.0		ng/L	2.04	754-91-6		
PFTeDA*	Not detected	4.1		ng/L	2.04	376-06-7		
11Cl-PF3OUdS*	Not detected	2.0		ng/L	2.04	763051-92-9		
9Cl-PF3ONS*	Not detected	2.0		ng/L	2.04	756426-58-1		
ADONA*	Not detected	2.0		ng/L	2.04	919005-14-4		
HFPO-DA*	Not detected	2.0		ng/L	2.04	13252-13-6		
PFECHS*	Not detected	2.0		ng/L	2.04	67584-42-3		
PFBSA*	Not detected	2.0		ng/L	2.04	30334-69-1		
PFHxSA*	Not detected	2.0		ng/L	2.04	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43622.04

Sample Tag: MW-101

Collected Date/Time: 12/16/2022 08:27

Matrix: Groundwater

COC Reference: 158673

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	5.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.51/6.52/10	ASTMD7979-19M	01/10/23 13:33	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 01/11/23 11:59, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	10		ng/L	2	375-22-4		
PFPeA*	Not detected	4.0		ng/L	2	2706-90-3		
4:2 FTSA*	Not detected	2.0		ng/L	2	757124-72-4		
PFHxA*	Not detected	2.0		ng/L	2	307-24-4		
PFBS*	2.3	2.0		ng/L	2	375-73-5		
PFHpA*	Not detected	2.0		ng/L	2	375-85-9		
PFPeS*	Not detected	2.0		ng/L	2	2706-91-4		
6:2 FTSA*	Not detected	2.0		ng/L	2	27619-97-2		
PFOA*	3.9	2.0		ng/L	2	335-67-1		
PFHxS*	2.7	2.0		ng/L	2	355-46-4		
PFHxS-LN*	2.3	2.0		ng/L	2	355-46-4-LN		
PFHxS-BR*	Not detected	2.0		ng/L	2	355-46-4-BR		
PFNA*	Not detected	2.0		ng/L	2	375-95-1		
8:2 FTSA*	Not detected	2.0		ng/L	2	39108-34-4		
PFHpS*	Not detected	2.0		ng/L	2	375-92-8		
PFDA*	Not detected	2.0		ng/L	2	335-76-2		
N-MeFOSAA*	Not detected	2.0		ng/L	2	2355-31-9		
EtFOSAA*	Not detected	4.0		ng/L	2	2991-50-6		
PFOS*	Not detected	2.0		ng/L	2	1763-23-1		
PFOS-LN*	Not detected	2.0		ng/L	2	1763-23-1-LN		
PFOS-BR*	Not detected	2.0		ng/L	2	1763-23-1-BR		
PFUnDA*	Not detected	2.0		ng/L	2	2058-94-8		
PFNS*	Not detected	2.0		ng/L	2	68259-12-1		
PFDoDA*	Not detected	2.0		ng/L	2	307-55-1		
PFDS*	Not detected	2.0		ng/L	2	335-77-3		
PFTTrDA*	Not detected	2.0		ng/L	2	72629-94-8		
FOSA*	Not detected	2.0		ng/L	2	754-91-6		
PFTeDA*	Not detected	4.0		ng/L	2	376-06-7		
11Cl-PF3OUdS*	Not detected	2.0		ng/L	2	763051-92-9		
9Cl-PF3ONS*	Not detected	2.0		ng/L	2	756426-58-1		
ADONA*	Not detected	2.0		ng/L	2	919005-14-4		
HFPO-DA*	Not detected	2.0		ng/L	2	13252-13-6		
PFECHS*	Not detected	2.0		ng/L	2	67584-42-3		
PFBSA*	Not detected	2.0		ng/L	2	30334-69-1		
PFHxSA*	Not detected	2.0		ng/L	2	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43622.05

Sample Tag: MW-103

Collected Date/Time: 12/16/2022 10:06

Matrix: Groundwater

COC Reference: 158673

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	5.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.14/6.49/9	ASTMD7979-19M	01/10/23 13:33	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 01/11/23 12:18, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	9.7		ng/L	1.94	375-22-4		
PFPeA*	4.7	3.9		ng/L	1.94	2706-90-3		
4:2 FTSA*	Not detected	1.9		ng/L	1.94	757124-72-4		
PFHxA*	5.6	1.9		ng/L	1.94	307-24-4		
PFBS*	3.0	1.9		ng/L	1.94	375-73-5		
PFHpA*	4.3	1.9		ng/L	1.94	375-85-9		
PFPeS*	Not detected	1.9		ng/L	1.94	2706-91-4		
6:2 FTSA*	13	1.9		ng/L	1.94	27619-97-2		
PFOA*	13	1.9		ng/L	1.94	335-67-1		
PFHxS*	7.8	1.9		ng/L	1.94	355-46-4		
PFHxS-LN*	6.6	1.9		ng/L	1.94	355-46-4-LN		
PFHxS-BR*	Not detected	1.9		ng/L	1.94	355-46-4-BR		
PFNA*	Not detected	1.9		ng/L	1.94	375-95-1		
8:2 FTSA*	Not detected	1.9		ng/L	1.94	39108-34-4		
PFHpS*	Not detected	1.9		ng/L	1.94	375-92-8		
PFDA*	Not detected	1.9		ng/L	1.94	335-76-2		
N-MeFOSAA*	Not detected	1.9		ng/L	1.94	2355-31-9		
EtFOSAA*	Not detected	3.9		ng/L	1.94	2991-50-6		
PFOS*	18	1.9		ng/L	1.94	1763-23-1		
PFOS-LN*	10	1.9		ng/L	1.94	1763-23-1-LN		
PFOS-BR*	7.5	1.9		ng/L	1.94	1763-23-1-BR		
PFUnDA*	Not detected	1.9		ng/L	1.94	2058-94-8		
PFNS*	Not detected	1.9		ng/L	1.94	68259-12-1		
PFDODA*	Not detected	1.9		ng/L	1.94	307-55-1		
PFDS*	Not detected	1.9		ng/L	1.94	335-77-3		
PFTTrDA*	Not detected	1.9		ng/L	1.94	72629-94-8		
FOSA*	Not detected	1.9		ng/L	1.94	754-91-6		
PFTeDA*	Not detected	3.9		ng/L	1.94	376-06-7		
11Cl-PF3OUdS*	Not detected	1.9		ng/L	1.94	763051-92-9		
9Cl-PF3ONS*	Not detected	1.9		ng/L	1.94	756426-58-1		
ADONA*	Not detected	1.9		ng/L	1.94	919005-14-4		
HFPO-DA*	Not detected	1.9		ng/L	1.94	13252-13-6		
PFECHS*	Not detected	1.9		ng/L	1.94	67584-42-3		
PFBSA*	Not detected	1.9		ng/L	1.94	30334-69-1		
PFHxSA*	Not detected	1.9		ng/L	1.94	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43622.06

Sample Tag: MW-129

Collected Date/Time: 12/16/2022 11:30

Matrix: Groundwater

COC Reference: 158673

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	5.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.22/6.58/9	ASTMD7979-19M	01/10/23 13:33	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 01/11/23 21:59, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	27	9.7		ng/L	1.94	375-22-4		
PFPeA*	82	3.9		ng/L	1.94	2706-90-3		
4:2 FTSA*	Not detected	1.9		ng/L	1.94	757124-72-4		
PFHxA*	56	1.9		ng/L	1.94	307-24-4		
PFBS*	3.4	1.9		ng/L	1.94	375-73-5		
PFHpA*	31	1.9		ng/L	1.94	375-85-9		
PFPeS*	Not detected	1.9		ng/L	1.94	2706-91-4		
6:2 FTSA*	Not detected	1.9		ng/L	1.94	27619-97-2		
PFOA*	61	1.9		ng/L	1.94	335-67-1		
PFHxS*	6.8	1.9		ng/L	1.94	355-46-4		
PFHxS-LN*	5.8	1.9		ng/L	1.94	355-46-4-LN		
PFHxS-BR*	Not detected	1.9		ng/L	1.94	355-46-4-BR		
PFNA*	2.4	1.9		ng/L	1.94	375-95-1		
8:2 FTSA*	Not detected	1.9		ng/L	1.94	39108-34-4		
PFHpS*	Not detected	1.9		ng/L	1.94	375-92-8		
PFDA*	5.1	1.9		ng/L	1.94	335-76-2		
N-MeFOSAA*	Not detected	1.9		ng/L	1.94	2355-31-9		
EtFOSAA*	Not detected	3.9		ng/L	1.94	2991-50-6		
PFOS*	53	1.9		ng/L	1.94	1763-23-1		
PFOS-LN*	33	1.9		ng/L	1.94	1763-23-1-LN		
PFOS-BR*	19	1.9		ng/L	1.94	1763-23-1-BR		
PFUnDA*	Not detected	1.9		ng/L	1.94	2058-94-8		
PFNS*	Not detected	1.9		ng/L	1.94	68259-12-1		
PFDoDA*	Not detected	1.9		ng/L	1.94	307-55-1		
PFDS*	Not detected	1.9		ng/L	1.94	335-77-3		
PFTTrDA*	Not detected	1.9		ng/L	1.94	72629-94-8		
FOSA*	7.2	1.9		ng/L	1.94	754-91-6		
PFTeDA*	Not detected	3.9		ng/L	1.94	376-06-7		
11Cl-PF3OUdS*	Not detected	1.9		ng/L	1.94	763051-92-9		
9Cl-PF3ONS*	Not detected	1.9		ng/L	1.94	756426-58-1		
ADONA*	Not detected	1.9		ng/L	1.94	919005-14-4		
HFPO-DA*	Not detected	1.9		ng/L	1.94	13252-13-6		
PFECHS*	Not detected	1.9		ng/L	1.94	67584-42-3		
PFBSA*	Not detected	1.9		ng/L	1.94	30334-69-1		
PFHxSA*	Not detected	1.9		ng/L	1.94	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43622.07

Sample Tag: MW-128

Collected Date/Time: 12/16/2022 12:30

Matrix: Groundwater

COC Reference: 158673

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	5.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	10.80/6.48/8	ASTMD7979-19M	01/10/23 13:33	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 01/11/23 12:57, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	12	9.3		ng/L	1.85	375-22-4		
PFPeA*	11	3.7		ng/L	1.85	2706-90-3		
4:2 FTSA*	Not detected	1.9		ng/L	1.85	757124-72-4		
PFHxA*	13	1.9		ng/L	1.85	307-24-4		
PFBS*	4.3	1.9		ng/L	1.85	375-73-5		
PFHpA*	9.9	1.9		ng/L	1.85	375-85-9		
PFPeS*	Not detected	1.9		ng/L	1.85	2706-91-4		
6:2 FTSA*	Not detected	1.9		ng/L	1.85	27619-97-2		
PFOA*	35	1.9		ng/L	1.85	335-67-1		
PFHxS*	5.8	1.9		ng/L	1.85	355-46-4		
PFHxS-LN*	4.8	1.9		ng/L	1.85	355-46-4-LN		
PFHxS-BR*	Not detected	1.9		ng/L	1.85	355-46-4-BR		
PFNA*	2.1	1.9		ng/L	1.85	375-95-1		
8:2 FTSA*	Not detected	1.9		ng/L	1.85	39108-34-4		
PFHpS*	Not detected	1.9		ng/L	1.85	375-92-8		
PFDA*	2.2	1.9		ng/L	1.85	335-76-2		
N-MeFOSAA*	Not detected	1.9		ng/L	1.85	2355-31-9		
EtFOSAA*	Not detected	3.7		ng/L	1.85	2991-50-6		
PFOS*	31	1.9		ng/L	1.85	1763-23-1		
PFOS-LN*	18	1.9		ng/L	1.85	1763-23-1-LN		
PFOS-BR*	13	1.9		ng/L	1.85	1763-23-1-BR		
PFUnDA*	Not detected	1.9		ng/L	1.85	2058-94-8		
PFNS*	Not detected	1.9		ng/L	1.85	68259-12-1		
PFDODA*	Not detected	1.9		ng/L	1.85	307-55-1		
PFDS*	Not detected	1.9		ng/L	1.85	335-77-3		
PFTTrDA*	Not detected	1.9		ng/L	1.85	72629-94-8		
FOSA*	Not detected	1.9		ng/L	1.85	754-91-6		
PFTeDA*	Not detected	3.7		ng/L	1.85	376-06-7		
11Cl-PF3OUdS*	Not detected	1.9		ng/L	1.85	763051-92-9		
9Cl-PF3ONS*	Not detected	1.9		ng/L	1.85	756426-58-1		
ADONA*	Not detected	1.9		ng/L	1.85	919005-14-4		
HFPO-DA*	Not detected	1.9		ng/L	1.85	13252-13-6		
PFECHS*	Not detected	1.9		ng/L	1.85	67584-42-3		
PFBSA*	Not detected	1.9		ng/L	1.85	30334-69-1		
PFHxSA*	Not detected	1.9		ng/L	1.85	41997-13-1		

Merit Laboratories Login Checklist

Lab Set ID:S43622

Client:TRC (TRC)

Project: Detroit Axle South

Submitted: 12/19/2022 11:20 Login User: PFD

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place

Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Selection	Description	Note
-----------	-------------	------

Sample Receiving

- | | | |
|-----|--|--|
| 01. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples are received at 4C +/- 2C Thermometer # IR 5.0 |
| 02. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Received on ice/ cooling process begun |
| 03. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples shipped |
| 04. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples left in 24 hr. drop box |
| 05. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Are there custody seals/tape or is the drop box locked |

Chain of Custody

- | | | |
|-----|--|--|
| 06. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC adequately filled out |
| 07. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC signed and relinquished to the lab |
| 08. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sample tag on bottles match COC |
| 09. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Subcontracting needed? Subcontracted to: |

Preservation

- | | | |
|-----|--|---|
| 10. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Do sample have correct chemical preservation |
| 11. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Completed pH checks on preserved samples? (no VOAs) |
| 12. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Did any samples need to be preserved in the lab? |

Bottle Conditions

- | | | |
|-----|--|---|
| 13. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | All bottles intact |
| 14. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Appropriate analytical bottles are used |
| 15. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Merit bottles used |
| 16. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sufficient sample volume received |
| 17. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples require laboratory filtration |
| 18. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples submitted within holding time |
| 19. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Do water VOC or TOX bottles contain headspace |

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____



2680 East Lansing Dr., East Lansing, MI 48823
 Phone (517) 332-0167 Fax (517) 332-4034
 www.meritlabs.com

C.O.C. PAGE # 1 OF 1 158673

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME Kelly Cratsenburg
 COMPANY TRC
 ADDRESS 1540 Eisenhower Place
 CITY Ann Arbor STATE MI ZIP CODE 48108
 PHONE NO. 734-210-9287 CELL NO. _____ P.O. NO. 193431
 E-MAIL ADDRESS KCratsenburg@trccompanies.com QUOTE NO. _____

CONTACT NAME _____ SAME
 COMPANY _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP CODE _____
 PHONE NO. _____ E-MAIL ADDRESS _____

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME Detroit Axle South SAMPLER(S) - PLEASE PRINT/SIGN NAME A. Whaley
 TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____
 DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER TRC EDD

Certifications
 OHIO VAP Drinking Water
 DoD NPDES
 Project Locations
 Detroit New York
 Other _____
 Special Instructions

MATRIX W=WATER GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 CODE: SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR WS=WASTE

Containers & Preservatives

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	COLLECTION		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	PFAS 31
	DATE	TIME											
43622.01	12.16.22	0910	MW-22-12	GW	3	3							X
.02		1030	FB-01	W	1	1							X
.03		1100	EB-01	W	3	3							X
.04		0827	MW-101	GW	3	3							X
.05		1006	MW-103	GW	3	3							X
.06		1130	MW-129	GW	3	3							X
.07		1230	MW-128	GW	3	3							X

RELINQUISHED BY: A. Whaley TRC Sampler DATE 12.16.22 TIME 1500
 RECEIVED BY: Ian DATE 12/19/22 TIME 8:00
 RELINQUISHED BY: _____ DATE _____ TIME _____
 RECEIVED BY: _____ DATE _____ TIME _____

RELINQUISHED BY: Jay DATE 12/19/22 TIME 1120
 RECEIVED BY: Pat DATE 12/19/22 TIME 1120
 SEAL NO. SEAL INTACT YES NO INITIALS _____ NOTES: TEMP. ON ARRIVAL 5.0
 SEAL NO. SEAL INTACT YES NO INITIALS _____



Analytical Laboratory Report

Report ID: S43700.01(01)
Generated on 01/10/2023

Report to
Attention: Kelly Cratsenburg
TRC
1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: 734-412-5424 FAX:
Email: KCratsenburg@trccompanies.com

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Report Summary
Lab Sample ID(s): S43700.01-S43700.06
Project: Southern Boundary Detroit Axle
Collected Date(s): 12/20/2022
Submitted Date/Time: 12/21/2022 10:20
Sampled by: Javier Jasso
P.O. #: 193431

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Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
E200.8	EPA Method 200.8 Revision 5.4
E245.1	EPA Method 245.1 Revision 3.0
E608.3	EPA Method 608.3 December 2016
N/A	Not Applicable
SW3015A	SW 846 Method 3015A Revision 1 February 2007
SW3510C	SW 846 Method 3510C Revision 3 December 1996
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003
SW8260B - SIM	SW 846 Method 8260B Revision 2 December 1996 SIMs
SW8270D	SW 846 Method 8270D Revision 4 February 2007



Analytical Laboratory Report

Sample Summary (6 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S43700.01	MW-22-21	Groundwater	12/20/22 06:10
S43700.02	MW-22-20	Groundwater	12/20/22 09:40
S43700.03	MW-22-19	Groundwater	12/20/22 10:45
S43700.04	MW-22-18	Groundwater	12/20/22 12:00
S43700.05	MW-22-16	Groundwater	12/20/22 12:50
S43700.06	MW-22-17	Groundwater	12/20/22 13:35



Analytical Laboratory Report

Lab Sample ID: S43700.01

Sample Tag: MW-22-21

Collected Date/Time: 12/20/2022 06:10

Matrix: Groundwater

COC Reference: 145629

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	4.0	IR
3	40ml Glass	None	Yes	4.0	IR
2	125ml Plastic	HNO3	Yes	4.0	IR
4	1L Amber	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	12/29/22 12:33	CTV	
pH check for VOCs*	<2	N/A	12/23/22 12:15	BML	
Metal Digestion	Completed	SW3015A	12/27/22 10:10	CCM	
BNA Extraction	Completed	SW3510C	12/27/22 11:00	JWR	
Extraction, PCB*	Completed	E608.3	12/27/22 11:00	JWR	

Metals

Method: E200.8, Run Date: 12/29/22 11:45, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Boron	0.09	0.04		mg/L	5	7440-42-8		

Method: E200.8, Run Date: 12/27/22 11:37, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.036	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		
Barium	0.088	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	0.005	0.005		mg/L	2	7440-50-8		
Iron	0.04	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.137	0.005		mg/L	2	7439-96-5		
Molybdenum	Not detected	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.290	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43700.01 (continued)

Sample Tag: MW-22-21

Method: E200.8, Run Date: 12/27/22 13:49, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	83.9	0.50		mg/L	2	7440-70-2		
Magnesium	14.2	0.50		mg/L	2	7439-95-4		
Potassium	4.16	0.50		mg/L	2	7440-09-7		
Sodium	139	0.50		mg/L	2	7440-23-5		

Method: E245.1, Run Date: 12/29/22 13:05, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 12/28/22 16:58, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2		
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2		
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5		
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9		
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6		
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1		
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5		
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/07/23 15:24, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		



Analytical Laboratory Report

Lab Sample ID: S43700.01 (continued)

Sample Tag: MW-22-21

Method: SW8270D, Run Date: 01/07/23 15:24, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 12/27/22 06:55, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 12/23/22 04:21, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 12/26/22 00:36, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 04:21, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000



Analytical Laboratory Report

Lab Sample ID: S43700.01 (continued)

Sample Tag: MW-22-21

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 04:21, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		



Analytical Laboratory Report

Lab Sample ID: S43700.01 (continued)

Sample Tag: MW-22-21

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 04:21, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 12/29/22 20:26, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 13:43, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43700.02

Sample Tag: MW-22-20

Collected Date/Time: 12/20/2022 09:40

Matrix: Groundwater

COC Reference: 145629

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	4.0	IR
3	40ml Glass	None	Yes	4.0	IR
2	125ml Plastic	HNO3	Yes	4.0	IR
4	1L Amber	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	12/29/22 12:33	CTV	
pH check for VOCs*	<2	N/A	12/23/22 12:15	BML	
Metal Digestion	Completed	SW3015A	12/27/22 10:10	CCM	
BNA Extraction	Completed	SW3510C	12/27/22 11:00	JWR	
Extraction, PCB*	Completed	E608.3	12/27/22 11:00	JWR	

Metals

Method: E200.8, Run Date: 12/29/22 11:48, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Boron	0.13	0.04		mg/L	5	7440-42-8		

Method: E200.8, Run Date: 12/27/22 11:42, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.020	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	0.004	0.002		mg/L	2	7440-38-2		
Barium	0.104	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.02	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.097	0.005		mg/L	2	7439-96-5		
Molybdenum	0.010	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.241	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	0.002	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43700.02 (continued)

Sample Tag: MW-22-20

Method: E200.8, Run Date: 12/27/22 13:51, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	70.8	0.50		mg/L	2	7440-70-2		
Magnesium	12.3	0.50		mg/L	2	7439-95-4		
Potassium	11.5	0.50		mg/L	2	7440-09-7		
Sodium	174	0.50		mg/L	2	7440-23-5		

Method: E245.1, Run Date: 12/29/22 13:15, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 12/28/22 17:10, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2		
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2		
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5		
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9		
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6		
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1		
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5		
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/07/23 15:54, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		



Analytical Laboratory Report

Lab Sample ID: S43700.02 (continued)

Sample Tag: MW-22-20

Method: SW8270D, Run Date: 01/07/23 15:54, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 12/27/22 07:19, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 12/23/22 04:45, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 12/26/22 00:56, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 04:45, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000



Analytical Laboratory Report

Lab Sample ID: S43700.02 (continued)

Sample Tag: MW-22-20

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 04:45, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		



Analytical Laboratory Report

Lab Sample ID: S43700.02 (continued)

Sample Tag: MW-22-20

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 04:45, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 12/29/22 20:47, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 13:43, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43700.03

Sample Tag: MW-22-19

Collected Date/Time: 12/20/2022 10:45

Matrix: Groundwater

COC Reference: 145629

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	4.0	IR
3	40ml Glass	None	Yes	4.0	IR
2	125ml Plastic	HNO3	Yes	4.0	IR
4	1L Amber	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	12/29/22 12:33	CTV	
pH check for VOCs*	<2	N/A	12/23/22 12:15	BML	
Metal Digestion	Completed	SW3015A	12/27/22 10:10	CCM	
BNA Extraction	Completed	SW3510C	12/27/22 11:00	JWR	
Extraction, PCB*	Completed	E608.3	12/27/22 11:00	JWR	

Metals

Method: E200.8, Run Date: 12/29/22 11:50, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Boron	0.32	0.04		mg/L	5	7440-42-8		

Method: E200.8, Run Date: 12/27/22 11:47, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.097	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		
Barium	0.129	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.31	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.183	0.005		mg/L	2	7439-96-5		
Molybdenum	0.012	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.443	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	0.009	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43700.03 (continued)

Sample Tag: MW-22-19

Method: E200.8, Run Date: 12/27/22 13:52, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	121	0.50		mg/L	2	7440-70-2		
Magnesium	21.7	0.50		mg/L	2	7439-95-4		
Potassium	18.1	0.50		mg/L	2	7440-09-7		
Sodium	157	0.50		mg/L	2	7440-23-5		

Method: E245.1, Run Date: 12/29/22 13:18, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 12/28/22 17:21, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2		
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2		
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5		
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9		
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6		
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1		
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5		
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/07/23 16:24, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		



Analytical Laboratory Report

Lab Sample ID: S43700.03 (continued)

Sample Tag: MW-22-19

Method: SW8270D, Run Date: 01/07/23 16:24, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 12/27/22 07:43, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 12/23/22 05:08, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 12/26/22 01:17, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 05:08, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000



Analytical Laboratory Report

Lab Sample ID: S43700.03 (continued)

Sample Tag: MW-22-19

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 05:08, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		



Analytical Laboratory Report

Lab Sample ID: S43700.03 (continued)

Sample Tag: MW-22-19

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 05:08, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 12/29/22 21:09, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 13:43, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43700.04

Sample Tag: MW-22-18

Collected Date/Time: 12/20/2022 12:00

Matrix: Groundwater

COC Reference: 145629

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	4.0	IR
3	40ml Glass	None	Yes	4.0	IR
2	125ml Plastic	HNO3	Yes	4.0	IR
4	1L Amber	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	12/29/22 12:33	CTV	
pH check for VOCs*	<2	N/A	12/23/22 12:15	BML	
Metal Digestion	Completed	SW3015A	12/27/22 10:10	CCM	
BNA Extraction	Completed	SW3510C	12/27/22 11:00	JWR	
Extraction, PCB*	Completed	E608.3	12/27/22 11:00	JWR	

Metals

Method: E200.8, Run Date: 12/29/22 11:53, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Boron	0.47	0.04		mg/L	5	7440-42-8		

Method: E200.8, Run Date: 12/27/22 11:50, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.287	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	0.002	0.002		mg/L	2	7440-38-2		
Barium	0.166	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.44	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.144	0.005		mg/L	2	7439-96-5		
Molybdenum	0.007	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.553	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	0.011	0.005		mg/L	2	7440-32-6		
Vanadium	0.002	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43700.04 (continued)

Sample Tag: MW-22-18

Method: E200.8, Run Date: 12/27/22 13:54, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	152	0.50		mg/L	2	7440-70-2		
Magnesium	39.4	0.50		mg/L	2	7439-95-4		
Potassium	25.2	0.50		mg/L	2	7440-09-7		
Sodium	81.3	0.50		mg/L	2	7440-23-5		

Method: E245.1, Run Date: 12/29/22 13:21, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 12/28/22 17:32, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2		
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2		
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5		
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9		
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6		
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1		
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5		
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/07/23 16:55, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		



Analytical Laboratory Report

Lab Sample ID: S43700.04 (continued)

Sample Tag: MW-22-18

Method: SW8270D, Run Date: 01/07/23 16:55, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 12/27/22 08:07, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW8260B - SIM, Run Date: 12/26/22 01:37, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 05:32, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		



Analytical Laboratory Report

Lab Sample ID: S43700.04 (continued)

Sample Tag: MW-22-18

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 05:32, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		



Analytical Laboratory Report

Lab Sample ID: S43700.04 (continued)

Sample Tag: MW-22-18

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 05:32, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

TICs Volatiles, Method: SW5030C/8260C, Run Date: 12/23/22 05:32, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Completed			ug/L	1			
Ethane, 1-chloro-1-fluoro-*	Found			ug/L	1			

Other / Misc.

Method: , Run Date: 12/29/22 21:30, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 13:43, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43700.05

Sample Tag: MW-22-16

Collected Date/Time: 12/20/2022 12:50

Matrix: Groundwater

COC Reference: 145629

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	4.0	IR
3	40ml Glass	None	Yes	4.0	IR
2	125ml Plastic	HNO3	Yes	4.0	IR
4	1L Amber	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	12/29/22 12:33	CTV	
pH check for VOCs*	<2	N/A	12/23/22 12:15	BML	
Metal Digestion	Completed	SW3015A	12/27/22 10:10	CCM	
BNA Extraction	Completed	SW3510C	12/27/22 11:00	JWR	
Extraction, PCB*	Completed	E608.3	12/27/22 11:00	JWR	

Metals

Method: E200.8, Run Date: 12/29/22 11:56, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Boron	0.07	0.04		mg/L	5	7440-42-8		

Method: E200.8, Run Date: 12/27/22 11:54, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.032	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	0.002	0.002		mg/L	2	7440-38-2		
Barium	0.064	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.06	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.064	0.005		mg/L	2	7439-96-5		
Molybdenum	Not detected	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.256	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43700.05 (continued)

Sample Tag: MW-22-16

Method: E200.8, Run Date: 12/27/22 13:55, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	72.4	0.50		mg/L	2	7440-70-2		
Magnesium	11.3	0.50		mg/L	2	7439-95-4		
Potassium	4.72	0.50		mg/L	2	7440-09-7		
Sodium	228	0.50		mg/L	2	7440-23-5		

Method: E245.1, Run Date: 12/29/22 13:24, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 12/28/22 17:43, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2		
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2		
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5		
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9		
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6		
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1		
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5		
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/07/23 17:25, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		



Analytical Laboratory Report

Lab Sample ID: S43700.05 (continued)

Sample Tag: MW-22-16

Method: SW8270D, Run Date: 01/07/23 17:25, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 12/27/22 08:31, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 12/23/22 05:55, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 12/26/22 01:58, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 05:55, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000



Analytical Laboratory Report

Lab Sample ID: S43700.05 (continued)

Sample Tag: MW-22-16

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 05:55, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		



Analytical Laboratory Report

Lab Sample ID: S43700.05 (continued)

Sample Tag: MW-22-16

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 05:55, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 12/29/22 21:52, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 13:43, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S43700.06

Sample Tag: MW-22-17

Collected Date/Time: 12/20/2022 13:35

Matrix: Groundwater

COC Reference: 145629

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	4.0	IR
3	40ml Glass	None	Yes	4.0	IR
2	125ml Plastic	HNO3	Yes	4.0	IR
4	1L Amber	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	12/29/22 12:33	CTV	
pH check for VOCs*	<2	N/A	12/23/22 12:15	BML	
Metal Digestion	Completed	SW3015A	12/27/22 10:10	CCM	
BNA Extraction	Completed	SW3510C	12/27/22 11:00	JWR	
Extraction, PCB*	Completed	E608.3	12/27/22 11:00	JWR	

Metals

Method: E200.8, Run Date: 12/29/22 11:58, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Boron	0.05	0.04		mg/L	5	7440-42-8		

Method: E200.8, Run Date: 12/27/22 14:16, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Sodium	128	2.0		mg/L	20	7440-23-5		

Method: E200.8, Run Date: 12/27/22 11:57, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.011	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		
Barium	0.060	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	Not detected	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.109	0.005		mg/L	2	7439-96-5		
Molybdenum	Not detected	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.228	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43700.06 (continued)

Sample Tag: MW-22-17

Method: E200.8, Run Date: 12/27/22 13:57, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	63.1	0.50		mg/L	2	7440-70-2		
Magnesium	9.77	0.50		mg/L	2	7439-95-4		
Potassium	5.31	0.50		mg/L	2	7440-09-7		

Method: E245.1, Run Date: 12/29/22 13:28, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 12/28/22 17:54, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2		
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2		
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5		
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9		
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6		
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1		
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5		
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/07/23 17:55, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		

Lab Sample ID: S43700.06 (continued)

Sample Tag: MW-22-17

Method: SW8270D, Run Date: 01/07/23 17:55, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 12/27/22 08:56, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 12/23/22 06:19, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 12/26/22 02:18, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 06:19, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		



Analytical Laboratory Report

Lab Sample ID: S43700.06 (continued)

Sample Tag: MW-22-17

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 06:19, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		



Analytical Laboratory Report

Lab Sample ID: S43700.06 (continued)

Sample Tag: MW-22-17

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 06:19, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 12/29/22 22:14, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 13:43, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.

Merit Laboratories Login Checklist

Lab Set ID:S43700

Client:TRC (TRC)

Project: Southern Boundary Detroit Axle

Submitted: 12/21/2022 10:20 Login User: MMC

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place

Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Selection	Description	Note
-----------	-------------	------

Sample Receiving

- | | | |
|-----|--|--|
| 01. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples are received at 4C +/- 2C Thermometer # IR 4.0 |
| 02. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Received on ice/ cooling process begun |
| 03. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples shipped |
| 04. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples left in 24 hr. drop box |
| 05. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Are there custody seals/tape or is the drop box locked |

Chain of Custody

- | | | |
|-----|--|---|
| 06. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC adequately filled out |
| 07. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC signed and relinquished to the lab |
| 08. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sample tag on bottles match COC |
| 09. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Subcontracting needed? Subcontracted to: Eurofins |

Preservation

- | | | |
|-----|--|---|
| 10. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Do sample have correct chemical preservation |
| 11. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Completed pH checks on preserved samples? (no VOAs) |
| 12. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Did any samples need to be preserved in the lab? |

Bottle Conditions

- | | | |
|-----|--|---|
| 13. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | All bottles intact |
| 14. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Appropriate analytical bottles are used |
| 15. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Merit bottles used |
| 16. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sufficient sample volume received |
| 17. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples require laboratory filtration |
| 18. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples submitted within holding time |
| 19. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Do water VOC or TOX bottles contain headspace |

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____

Merit Laboratories Bottle Preservation Check

Lab Set ID: S43700 Submitted: 12/21/2022 10:20

Client: TRC (TRC)

Project: Southern Boundary Detroit Axle

Initial Preservation Check: 12/21/2022 10:47 MMC

Preservation Recheck (E200.8): N/A

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Sample ID	Bottle / Preservation	pH (Orig)	Add ml	pH (New)	Notes
S43700.01	125ml Plastic HNO3	<2			
S43700.01	125ml Plastic HNO3	<2			
S43700.02	125ml Plastic HNO3	<2			
S43700.02	125ml Plastic HNO3	<2			
S43700.03	125ml Plastic HNO3	<2			
S43700.03	125ml Plastic HNO3	<2			
S43700.04	125ml Plastic HNO3	<2			
S43700.04	125ml Plastic HNO3	<2			
S43700.05	125ml Plastic HNO3	<2			
S43700.05	125ml Plastic HNO3	<2			
S43700.06	125ml Plastic HNO3	<2			
S43700.06	125ml Plastic HNO3	<2			



2680 East Lansing Dr., East Lansing, MI 48823
 Phone (517) 332-0167 Fax (517) 332-4034
 www.meritlabs.com

C.O.C. PAGE # 1 OF 1 145629

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME Kelly Cratsen burg
 COMPANY TRC
 ADDRESS 1540 Eisenhower Place
 CITY Ann Arbor STATE MI ZIP CODE 48106
 PHONE NO. _____ FAX NO. _____ P.O. NO. 193431
 E-MAIL ADDRESS kcratsenburg@trccompanies.com QUOTE NO. _____

CONTACT NAME [Signature] SAME
 COMPANY _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP CODE _____
 PHONE NO. _____ E-MAIL ADDRESS _____

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME Southern Boundary Detroit A16 SAMPLER(S) PLEASE PRINT/SIGN NAME Javier Jasso
 TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____
 DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER TRCAD

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

Containers & Preservatives

MERIT LAB NO. FOR LAB USE ONLY	20 YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	Analysis							Certifications	Project Locations	Special Instructions		
	DATE	TIME											Voc + Tic	1,4 Dioxane	SVOC + Tic	metals	PFAS 31	PCBs	Thorium				3 Alcohols	Tetraethyl lead
43700.01	1/20	0820	MW- 22-24	W	17	+	+	+						+	+	+	+	+	+	+				43701.01
.02	"	"	MW- 22-20	W	17	+	+	+						+	+	+	+	+	+	+				.02
.03	"	"	MW- 22-19	W	17	+	+	+						+	+	+	+	+	+	+				.03
.04	"	"	MW- 22-18	W	17	+	+	+						+	+	+	+	+	+	+				.04
.05	"	"	MW 22-14	W	17	+	+	+						+	+	+	+	+	+	+				.05
.06	"	"	MW 22-17	W	17	+	+	+						+	+	+	+	+	+	+				.06

RELINQUISHED BY: [Signature] DATE 12/20/22 TIME 1:50
 SIGNATURE/Organization TRC
 RECEIVED BY: [Signature] DATE 12/20/22 TIME _____
 SIGNATURE/Organization _____
 RELINQUISHED BY: [Signature] DATE 12/21/22 TIME 8:00
 SIGNATURE/Organization TRC
 RECEIVED BY: [Signature] DATE 12/21/22 TIME 8:00
 SIGNATURE/Organization _____

RELINQUISHED BY: [Signature] DATE 12/20/22 TIME 1:50
 SIGNATURE/Organization TRC
 RECEIVED BY: [Signature] DATE 12/21/22 TIME 10:20
 SIGNATURE/Organization M. Calabro
 SEAL NO. _____ SEAL INTACT YES NO INITIALS _____
 SEAL NO. _____ SEAL INTACT YES NO INITIALS _____
 NOTES: TEMP. ON ARRIVAL 4.0

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Lab Results
Merit Laboratories
2680 E Lansing Drive
East Lansing, Michigan 48823

Generated 1/2/2023 7:38:05 AM

JOB DESCRIPTION

S43700

JOB NUMBER

190-30696-1

Eurofins Michigan

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



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1/2/2023 7:38:05 AM

Authorized for release by
Sue Schafer, Project Manager II
Sue.Schafer@et.eurofinsus.com
(810)229-2763



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Sample Summary

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
190-30696-1	S43700.01	Water	12/20/22 06:10	12/21/22 14:11
190-30696-2	S43700.02	Water	12/20/22 09:40	12/21/22 14:11
190-30696-3	S43700.03	Water	12/20/22 10:45	12/21/22 14:11
190-30696-4	S43700.04	Water	12/20/22 12:00	12/21/22 14:11
190-30696-5	S43700.05	Water	12/20/22 12:50	12/21/22 14:11
190-30696-6	S43700.06	Water	12/20/22 13:35	12/21/22 14:11

1

2

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12

Case Narrative

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Job ID: 190-30696-1

Laboratory: Eurofins Michigan

Narrative

**Job Narrative
190-30696-1**

Receipt

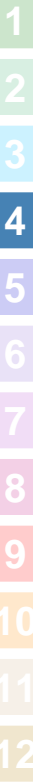
The samples were received on 12/21/2022 2:11 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.9°C

GC Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.



Client Sample Results

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Client Sample ID: S43700.01

Lab Sample ID: 190-30696-1

Date Collected: 12/20/22 06:10

Matrix: Water

Date Received: 12/21/22 14:11

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/29/22 20:26	1
Ethanol	<5.0		5.0	mg/L			12/29/22 20:26	1
n-Butanol	<5.0		5.0	mg/L			12/29/22 20:26	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/27/22 13:43	12/28/22 12:03	2

Client Sample ID: S43700.02

Lab Sample ID: 190-30696-2

Date Collected: 12/20/22 09:40

Matrix: Water

Date Received: 12/21/22 14:11

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/29/22 20:47	1
Ethanol	<5.0		5.0	mg/L			12/29/22 20:47	1
n-Butanol	<5.0		5.0	mg/L			12/29/22 20:47	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/27/22 13:43	12/28/22 12:10	2

Client Sample ID: S43700.03

Lab Sample ID: 190-30696-3

Date Collected: 12/20/22 10:45

Matrix: Water

Date Received: 12/21/22 14:11

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/29/22 21:09	1
Ethanol	<5.0		5.0	mg/L			12/29/22 21:09	1
n-Butanol	<5.0		5.0	mg/L			12/29/22 21:09	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/27/22 13:43	12/28/22 12:13	2

Client Sample ID: S43700.04

Lab Sample ID: 190-30696-4

Date Collected: 12/20/22 12:00

Matrix: Water

Date Received: 12/21/22 14:11

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/29/22 21:30	1
Ethanol	<5.0		5.0	mg/L			12/29/22 21:30	1
n-Butanol	<5.0		5.0	mg/L			12/29/22 21:30	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/27/22 13:43	12/28/22 12:27	2

Client Sample Results

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Client Sample ID: S43700.05

Lab Sample ID: 190-30696-5

Date Collected: 12/20/22 12:50

Matrix: Water

Date Received: 12/21/22 14:11

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/29/22 21:52	1
Ethanol	<5.0		5.0	mg/L			12/29/22 21:52	1
n-Butanol	<5.0		5.0	mg/L			12/29/22 21:52	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/27/22 13:43	12/28/22 12:30	2

Client Sample ID: S43700.06

Lab Sample ID: 190-30696-6

Date Collected: 12/20/22 13:35

Matrix: Water

Date Received: 12/21/22 14:11

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/29/22 22:14	1
Ethanol	<5.0		5.0	mg/L			12/29/22 22:14	1
n-Butanol	<5.0		5.0	mg/L			12/29/22 22:14	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/27/22 13:43	12/28/22 12:34	2

QC Sample Results

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Method: 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Lab Sample ID: MB 680-757245/23
Matrix: Water
Analysis Batch: 757245

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/29/22 18:59	1
Ethanol	<5.0		5.0	mg/L			12/29/22 18:59	1
n-Butanol	<5.0		5.0	mg/L			12/29/22 18:59	1

Lab Sample ID: LCS 680-757245/6
Matrix: Water
Analysis Batch: 757245

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methanol	20.0	19.4		mg/L		97	43 - 143
Ethanol	20.0	19.1		mg/L		96	38 - 156
n-Butanol	20.0	19.3		mg/L		96	70 - 130

Lab Sample ID: LCSD 680-757245/7
Matrix: Water
Analysis Batch: 757245

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methanol	20.0	19.0		mg/L		95	43 - 143	2	50
Ethanol	20.0	18.9		mg/L		94	38 - 156	1	50
n-Butanol	20.0	18.8		mg/L		94	70 - 130	2	30

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 160-594840/1-A
Matrix: Water
Analysis Batch: 594925

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 594840

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/27/22 13:43	12/28/22 11:42	2

Lab Sample ID: LCS 160-594840/2-A
Matrix: Water
Analysis Batch: 594925

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 594840

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Thorium	995	1040		ug/L		105	80 - 120

Definitions/Glossary

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Association Summary

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

GC Semi VOA

Analysis Batch: 757245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30696-1	S43700.01	Total/NA	Water	8015D	
190-30696-2	S43700.02	Total/NA	Water	8015D	
190-30696-3	S43700.03	Total/NA	Water	8015D	
190-30696-4	S43700.04	Total/NA	Water	8015D	
190-30696-5	S43700.05	Total/NA	Water	8015D	
190-30696-6	S43700.06	Total/NA	Water	8015D	
MB 680-757245/23	Method Blank	Total/NA	Water	8015D	
LCS 680-757245/6	Lab Control Sample	Total/NA	Water	8015D	
LCS 680-757245/7	Lab Control Sample Dup	Total/NA	Water	8015D	

Metals

Prep Batch: 594840

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30696-1	S43700.01	Total/NA	Water	3010A	
190-30696-2	S43700.02	Total/NA	Water	3010A	
190-30696-3	S43700.03	Total/NA	Water	3010A	
190-30696-4	S43700.04	Total/NA	Water	3010A	
190-30696-5	S43700.05	Total/NA	Water	3010A	
190-30696-6	S43700.06	Total/NA	Water	3010A	
MB 160-594840/1-A	Method Blank	Total/NA	Water	3010A	
LCS 160-594840/2-A	Lab Control Sample	Total/NA	Water	3010A	

Analysis Batch: 594925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30696-1	S43700.01	Total/NA	Water	6020B	594840
190-30696-2	S43700.02	Total/NA	Water	6020B	594840
190-30696-3	S43700.03	Total/NA	Water	6020B	594840
190-30696-4	S43700.04	Total/NA	Water	6020B	594840
190-30696-5	S43700.05	Total/NA	Water	6020B	594840
190-30696-6	S43700.06	Total/NA	Water	6020B	594840
MB 160-594840/1-A	Method Blank	Total/NA	Water	6020B	594840
LCS 160-594840/2-A	Lab Control Sample	Total/NA	Water	6020B	594840

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Client Sample ID: S43700.01

Lab Sample ID: 190-30696-1

Date Collected: 12/20/22 06:10

Matrix: Water

Date Received: 12/21/22 14:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	757245	JCK	EET SAV	12/29/22 20:26
Total/NA	Prep	3010A			594840	CGB	EET SL	12/27/22 13:43
Total/NA	Analysis	6020B		2	594925	CGB	EET SL	12/28/22 12:03

Client Sample ID: S43700.02

Lab Sample ID: 190-30696-2

Date Collected: 12/20/22 09:40

Matrix: Water

Date Received: 12/21/22 14:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	757245	JCK	EET SAV	12/29/22 20:47
Total/NA	Prep	3010A			594840	CGB	EET SL	12/27/22 13:43
Total/NA	Analysis	6020B		2	594925	CGB	EET SL	12/28/22 12:10

Client Sample ID: S43700.03

Lab Sample ID: 190-30696-3

Date Collected: 12/20/22 10:45

Matrix: Water

Date Received: 12/21/22 14:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	757245	JCK	EET SAV	12/29/22 21:09
Total/NA	Prep	3010A			594840	CGB	EET SL	12/27/22 13:43
Total/NA	Analysis	6020B		2	594925	CGB	EET SL	12/28/22 12:13

Client Sample ID: S43700.04

Lab Sample ID: 190-30696-4

Date Collected: 12/20/22 12:00

Matrix: Water

Date Received: 12/21/22 14:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	757245	JCK	EET SAV	12/29/22 21:30
Total/NA	Prep	3010A			594840	CGB	EET SL	12/27/22 13:43
Total/NA	Analysis	6020B		2	594925	CGB	EET SL	12/28/22 12:27

Client Sample ID: S43700.05

Lab Sample ID: 190-30696-5

Date Collected: 12/20/22 12:50

Matrix: Water

Date Received: 12/21/22 14:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	757245	JCK	EET SAV	12/29/22 21:52
Total/NA	Prep	3010A			594840	CGB	EET SL	12/27/22 13:43
Total/NA	Analysis	6020B		2	594925	CGB	EET SL	12/28/22 12:30

Client Sample ID: S43700.06

Lab Sample ID: 190-30696-6

Date Collected: 12/20/22 13:35

Matrix: Water

Date Received: 12/21/22 14:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	757245	JCK	EET SAV	12/29/22 22:14

Eurofins Michigan

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Client Sample ID: S43700.06

Lab Sample ID: 190-30696-6

Date Collected: 12/20/22 13:35

Matrix: Water

Date Received: 12/21/22 14:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3010A			594840	CGB	EET SL	12/27/22 13:43
Total/NA	Analysis	6020B		2	594925	CGB	EET SL	12/28/22 12:34

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Analyst References:

Lab: EET SAV

Batch Type: Analysis

JCK = Joshua Kellar

Lab: EET SL

Batch Type: Prep

CGB = Cory Buffington

Batch Type: Analysis

CGB = Cory Buffington

Accreditation/Certification Summary

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Laboratory: Eurofins Savannah

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	SAVLAB	
Alabama	State	41450	06-30-23
ANAB	Dept. of Defense ELAP	L2463	09-22-24
Arkansas DEQ	State	19-015-0	02-01-23
California	State	2939	06-30-22 *
Connecticut	State	PH-0161	03-31-23
Florida	NELAP	E87052	06-23-23
Georgia	State	E87052	06-30-23
Georgia (DW)	State	803	06-30-23
Guam	State	19-007R	04-17-23
Hawaii	State	<cert No.>	06-30-23
Illinois	NELAP	200022	11-30-22 *
Indiana	State	C-GA-02	06-30-23
Iowa	State	353	07-01-23
Kentucky (UST)	State	NA	06-30-23
Louisiana	NELAP	30690	06-30-23
Louisiana (All)	NELAP	30690	06-30-23
Louisiana (DW)	State	LA009	12-31-22
Maine	State	GA00006	09-25-24
Maryland	State	250	12-31-23
Massachusetts	State	M-GA006	07-30-23
Michigan	State	9925	06-30-23
Mississippi	State	<cert No.>	06-30-23
Nebraska	State	NE-OS-7-04	06-30-23
New Jersey	NELAP	GA769	06-30-23
New Mexico	State	GA00006	06-30-23
New York	NELAP	10842	04-01-23
North Carolina (DW)	State	13701	07-31-23
North Carolina (WW/SW)	State	269	12-31-22
Pennsylvania	NELAP	68-00474	06-30-23
Puerto Rico	State	GA00006	12-30-22
South Carolina	State	98001	06-30-23
Tennessee	State	TN02961	06-30-23
Texas	NELAP	T1047004185-19-14	11-30-23
Texas	TCEQ Water Supply	T104704185	06-30-23
USDA	US Federal Programs	P330-18-00313	09-03-24
Virginia	NELAP	460161	06-14-23
Wisconsin	State	999819810	08-31-23
Wyoming	State	8TMS-L	06-30-23

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-23
California	Los Angeles County Sanitation Districts	10259	06-30-22 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Michigan

Accreditation/Certification Summary

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2886	06-30-23
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-23
HI - RadChem Recognition	State	n/a	06-30-23
Illinois	NELAP	200023	11-30-23
Iowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-23
Kentucky (DW)	State	KY90125	12-31-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-22
Louisiana (All)	NELAP	04080	06-30-23
Louisiana (DW)	State	LA011	12-31-22
Maryland	State	310	09-30-23
MI - RadChem Recognition	State	9005	06-30-23
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-23
New Jersey	NELAP	MO002	06-30-23
New York	NELAP	11616	04-01-23
North Dakota	State	R-207	06-30-23
NRC	NRC	24-24817-01	12-31-22
Oklahoma	NELAP	9997	08-31-23
Oregon	NELAP	4157	09-01-23
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-23
Texas	NELAP	T104704193	07-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-24
Washington	State	C592	08-30-23
West Virginia DEP	State	381	12-31-22

Method Summary

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Method	Method Description	Protocol	Laboratory
8015D	Nonhalogenated Organic Compounds - Direct Injection (GC)	SW846	EET SAV
6020B	Metals (ICP/MS)	SW846	EET SL
3010A	Preparation, Total Metals	SW846	EET SL

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

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2680 East Lansing Dr., East Lansing, MI 48823
 Phone (517) 332-0167 Fax (517) 332-4034
 www.meritlabs.com

C.O.C. PAGE # 1 OF 1

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME: Project Management Team
 COMPANY: Merit Laboratories
 ADDRESS: 2680 East Lansing Drive
 CITY: East Lansing MI 48823
 PHONE NO.: 517-332-0167
 E-MAIL ADDRESS: results@meritlabs.com

CONTACT NAME: Julie Teague
 COMPANY: Merit Laboratories
 ADDRESS: 2680 East Lansing Drive
 CITY: East Lansing MI 48823
 PHONE NO.: 517-332-0167
 E-MAIL ADDRESS: juliet@meritlabs.com

PROJECT NO./NAME: S43700

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

TURNAROUND TIME REQUIRED: 1 DAY 2 DAYS 3 DAYS STANDARD OTHER

Certifications
 OHIO VAP Drinking Water
 DoD NPDES
 Project Locations
 Detroit New York
 Other
 Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR	DATE	TIME	IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives														
							MEOH	H ₂ SO ₄	H ₂ O	HCl	NONE	OTHER	Alcohols	Thorium							
	12/20/22	0610		S43700.01	GW	4	3	1													
	12/20/22	0940		S43700.02	GW	4	3	1													
	12/20/22	1045		S43700.03	GW	4	3	1													
	12/20/22	1200		S43700.04	GW	4	3	1													
	12/20/22	1250		S43700.05	GW	4	3	1													
	12/20/22	1335		S43700.06	GW	4	3	1													



190-30696 Chain of Custody

Subcontracted to
Eurofins

RELINQUISHED BY: [Signature] DATE: 12/21/22 TIME: 1305
 RECEIVED BY: [Signature] DATE: 12/21/22 TIME: 1305
 SEAL NO. [] SEAL INTACT [] INITIALS: []
 SEAL NO. [] SEAL INTACT [] INITIALS: []

RELINQUISHED BY: [Signature] DATE: 12/21/22 TIME: 1305
 RECEIVED BY: [Signature] DATE: 12/21/22 TIME: 1305
 SEAL NO. [] SEAL INTACT [] INITIALS: []
 SEAL NO. [] SEAL INTACT [] INITIALS: []

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE





Environment Testing
TestAmerica

SDS or Known Hazard Information Supplied by Client
 Discrepancies
 Short Hold
 Rush 24 Hr 2-Day 3-Day 5-Day Other:
Client ID: Merit
Work Order #: 30696
Receipt Evaluation Performed by: Initials: TH Date: 12/21/22 Time: 1411

Cooler / Sample Receipt

After hours receipt: complete gray areas. Place cooler in walk-in, place form in Receiving box. Date: _____ Time: _____

Method of Shipment:

Walk-In Client Eurofins TA Field/Courier
Other Client / 3rd Party Courier: _____
Fed Ex Tracking #: _____
UPS Tracking #: _____
Other: _____

Shipping Container Type:

Cooler Box
 None Other: _____

Custody Seals Intact:

Yes No
 NA (not used or required)

Packing Materials:

Plastic Bags Foam
 Bubble Wrap Paper
 Packing Peanuts None
 Other: _____

Cooling Materials:

Ice (Solid) Ice (Melted)
 Blue Ice None
 Other: _____

Bacteriological Samples	Temp Corrected (°C)	Frozen?		Rec'd Within 2 Hrs?		Sample Flagged?	
		Yes	No	Yes	No	Yes	No

Received on same day sampled? Yes No Additional Sheets Required? Yes No

Receipt Temperatures

Thermometer ID	Observed (°C)	Corrected (°C)	Temp Blank	Sample Temp	Acceptable	Cooler ID	Affected Samples
CP313207	2.9	2.9		X	X Y N		
					Y N		
					Y N		

Receipt Questions**	Y	N	NA	"No" answers require additional comment
CoC present and ETA receipt signature, date, and time properly documented?				
Containers and Labels in good condition? (unbroken, not leaking, appropriately filled, labels legible & attached)				
Appropriate containers used and adequate volume provided?				Preserved bottles checked for pH? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Number of sample containers match CoC?				pH strip lot # _____
Samples received within hold?				
Samples submitted for GRO and Volatiles analysis (8260, 624, 524) received without headspace?				
Was a Trip Blank received with VOA samples?				
Were the samples free of any questionable physical conformities? (i.e.; field duplicates or multiple bottles of the same sample do not significantly vary in appearance - color, solid proportions, etc.)				
Were the CoC bottle labels and all other items free of all other discrepancies or issues that would need to be addressed with the Project Manager and/or Client?				
**May not be applicable if samples are not for compliance testing				*Excludes FOG, VOAs, TOC Vials, HEM

Client Contact Record

Contact Via: Phone Email Other: _____ Person Contacted: _____ Date/Time: _____
 Discrepancy allowance agreement is on record in the client project file

Discussion / Resolution

Any additional documentation and clarification from the client must be noted in the narrative and/or scanned into the CoC directory.

Reviewed by Ji He Date: 12/21/22

WI-MI-010_020720

Chain of Custody Record



Client Information (Sub Contract Lab)

Client Contact: Schaffer, Sue
Shipping/Receiving: Sue.Schaffer@et.eurofins.com
Company: TestAmerica Laboratories, Inc.
Address: 13715 Rider Trail North, Earth City, MO, 63045
Phone: 314-298-8566 (Tel) 314-298-8757 (Fax)
Email: [Blank]
Project Name: S43700
Site: [Blank]

Lab PM: Schaffer, Sue
E-Mail: Sue.Schaffer@et.eurofins.com
Carrier Tracking No(s): 190-34979-1
State of Origin: Michigan
Page: Page 1 of 1
Job #: 190-30696-1

Analysis Requested

Due Date Requested: 1/9/2023
TAT Requested (days): [Blank]

PO #: [Blank]
WO #: [Blank]
Project #: 19001249
SSOW#: [Blank]

Accreditations Required (See note): [Blank]

Preservation Codes:

- A - HCL
- B - NaOH
- C - Zn Acetate
- D - Nitric Acid
- E - NaHSO4
- F - MeOH
- G - Amchlor
- H - Ascorbic Acid
- I - Ice
- J - DI Water
- K - EDTA
- L - EDA
- Other: [Blank]
- M - Hexane
- N - None
- O - AshNaO2
- P - Na2O4S
- Q - Na2SO3
- R - NaHSO4
- S - H2SO4
- T - TSP Dodecahydrate
- U - Acetone
- V - MCAA
- W - pH 4-5
- Y - Trizma
- Z - other (specify)

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=organic, BT=Trace, A=Al)	Field Filtered Sample (Yes or No)	Performance MS/MSD (Yes or No)	602B/3010A_2% THORIUM ONLY	Total Number of Containers	Special Instructions/Note:
S43700.01 (190-30696-1)	12/20/22	06:10 Eastern	Water	Water	X	X	X	1	
S43700.02 (190-30696-2)	12/20/22	09:40 Eastern	Water	Water	X	X	X	1	
S43700.03 (190-30696-3)	12/20/22	10:45 Eastern	Water	Water	X	X	X	1	
S43700.04 (190-30696-4)	12/20/22	12:00 Eastern	Water	Water	X	X	X	1	
S43700.05 (190-30696-5)	12/20/22	12:50 Eastern	Water	Water	X	X	X	1	
S43700.06 (190-30696-6)	12/20/22	13:35 Eastern	Water	Water	X	X	X	1	

Possible Hazard Identification

Unconfirmed

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return To Client Disposal By Lab Archive For [Blank] Months

Special Instructions/QC Requirements: [Blank]

Empty Kit Relinquished by: [Blank] Date: [Blank] Time: [Blank]

Relinquished by: [Signature] Date/Time: 12/21/22 1600 Company: FEDEX

Relinquished by: [Signature] Date/Time: [Blank] Company: [Blank]

Relinquished by: [Signature] Date/Time: [Blank] Company: [Blank]

Custody Seals Intact: [Blank] Custody Seal No.: [Blank]

Δ Yes Δ No

Received by: [Signature] Date/Time: DEC 22 2022 1010 Company: [Blank]

Received by: [Signature] Date/Time: [Blank] Company: [Blank]

Received by: [Signature] Date/Time: [Blank] Company: [Blank]

Cooler Temperature(s) °C and Other Remarks: [Blank]





Analytical Laboratory Report

Revised Report

Report ID: S43700.01(02)
Generated on 02/02/2023
Replaces report S43700.01(01) generated on 01/10/2023

Report to
Attention: Kelly Cratsenburg
TRC
1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: 734-412-5424 FAX:
Email: KCratsenburg@trccompanies.com

Report produced by
Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Additional Contacts: Vince Buening

Report Summary

Lab Sample ID(s): S43700.01-S43700.06
Project: Southern Boundary Detroit Axle
Collected Date(s): 12/20/2022
Submitted Date/Time: 12/21/2022 10:20
Sampled by: Javier Jasso
P.O. #: 193431

Table of Contents

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Maya Murshak
Technical Director



General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

Correct RLs reported



Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Method Summary

Method	Version
E200.8	EPA Method 200.8 Revision 5.4
E245.1	EPA Method 245.1 Revision 3.0
E608.3	EPA Method 608.3 December 2016
N/A	Not Applicable
SW3015A	SW 846 Method 3015A Revision 1 February 2007
SW3510C	SW 846 Method 3510C Revision 3 December 1996
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003
SW8260B - SIM	SW 846 Method 8260B Revision 2 December 1996 SIMs
SW8270D	SW 846 Method 8270D Revision 4 February 2007



Sample Summary (6 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S43700.01	MW-22-21	Groundwater	12/20/22 06:10
S43700.02	MW-22-20	Groundwater	12/20/22 09:40
S43700.03	MW-22-19	Groundwater	12/20/22 10:45
S43700.04	MW-22-18	Groundwater	12/20/22 12:00
S43700.05	MW-22-16	Groundwater	12/20/22 12:50
S43700.06	MW-22-17	Groundwater	12/20/22 13:35



Analytical Laboratory Report

Revised Report

Lab Sample ID: S43700.01

Sample Tag: MW-22-21

Collected Date/Time: 12/20/2022 06:10

Matrix: Groundwater

COC Reference: 145629

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	4.0	IR
3	40ml Glass	None	Yes	4.0	IR
2	125ml Plastic	HNO3	Yes	4.0	IR
4	1L Amber	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	12/29/22 12:33	CTV	
pH check for VOCs*	<2	N/A	12/23/22 12:15	BML	
Metal Digestion	Completed	SW3015A	12/27/22 10:10	CCM	
BNA Extraction	Completed	SW3510C	12/27/22 11:00	JWR	
Extraction, PCB*	Completed	E608.3	12/27/22 11:00	JWR	

Metals

Method: E200.8, Run Date: 12/29/22 11:45, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Boron	0.09	0.04		mg/L	5	7440-42-8		

Method: E200.8, Run Date: 12/27/22 11:37, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.036	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		
Barium	0.088	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	0.005	0.005		mg/L	2	7440-50-8		
Iron	0.04	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.137	0.005		mg/L	2	7439-96-5		
Molybdenum	Not detected	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.290	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		



Analytical Laboratory Report

Revised Report

Lab Sample ID: S43700.01 (continued)

Sample Tag: MW-22-21

Method: E200.8, Run Date: 12/27/22 13:49, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	83.9	0.50		mg/L	2	7440-70-2		
Magnesium	14.2	0.50		mg/L	2	7439-95-4		
Potassium	4.16	0.50		mg/L	2	7440-09-7		
Sodium	139	0.50		mg/L	2	7440-23-5		

Method: E245.1, Run Date: 12/29/22 13:05, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 12/28/22 16:58, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2		
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2		
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5		
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9		
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6		
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1		
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5		
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/07/23 15:24, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		

Lab Sample ID: S43700.01 (continued)

Sample Tag: MW-22-21

Method: SW8270D, Run Date: 01/07/23 15:24, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles
Method: SW5030C/8260C, Run Date: 12/27/22 06:55, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 12/23/22 04:21, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 12/26/22 00:36, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 04:21, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000



Analytical Laboratory Report

Revised Report

Lab Sample ID: S43700.01 (continued)

Sample Tag: MW-22-21

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 04:21, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		



Analytical Laboratory Report

Revised Report

Lab Sample ID: S43700.01 (continued)

Sample Tag: MW-22-21

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 04:21, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 12/29/22 20:26, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 13:43, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Revised Report

Lab Sample ID: S43700.02

Sample Tag: MW-22-20

Collected Date/Time: 12/20/2022 09:40

Matrix: Groundwater

COC Reference: 145629

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	4.0	IR
3	40ml Glass	None	Yes	4.0	IR
2	125ml Plastic	HNO3	Yes	4.0	IR
4	1L Amber	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	12/29/22 12:33	CTV	
pH check for VOCs*	<2	N/A	12/23/22 12:15	BML	
Metal Digestion	Completed	SW3015A	12/27/22 10:10	CCM	
BNA Extraction	Completed	SW3510C	12/27/22 11:00	JWR	
Extraction, PCB*	Completed	E608.3	12/27/22 11:00	JWR	

Metals

Method: E200.8, Run Date: 12/29/22 11:48, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Boron	0.13	0.04		mg/L	5	7440-42-8		

Method: E200.8, Run Date: 12/27/22 11:42, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.020	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	0.004	0.002		mg/L	2	7440-38-2		
Barium	0.104	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.02	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.097	0.005		mg/L	2	7439-96-5		
Molybdenum	0.010	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.241	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	0.002	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		



Analytical Laboratory Report

Revised Report

Lab Sample ID: S43700.02 (continued)

Sample Tag: MW-22-20

Method: E200.8, Run Date: 12/27/22 13:51, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	70.8	0.50		mg/L	2	7440-70-2		
Magnesium	12.3	0.50		mg/L	2	7439-95-4		
Potassium	11.5	0.50		mg/L	2	7440-09-7		
Sodium	174	0.50		mg/L	2	7440-23-5		

Method: E245.1, Run Date: 12/29/22 13:15, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 12/28/22 17:10, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2		
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2		
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5		
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9		
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6		
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1		
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5		
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/07/23 15:54, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		

Lab Sample ID: S43700.02 (continued)

Sample Tag: MW-22-20

Method: SW8270D, Run Date: 01/07/23 15:54, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles
Method: SW5030C/8260C, Run Date: 12/27/22 07:19, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 12/23/22 04:45, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 12/26/22 00:56, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 04:45, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000



Analytical Laboratory Report

Revised Report

Lab Sample ID: S43700.02 (continued)

Sample Tag: MW-22-20

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 04:45, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		



Analytical Laboratory Report

Revised Report

Lab Sample ID: S43700.02 (continued)

Sample Tag: MW-22-20

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 04:45, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 12/29/22 20:47, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 13:43, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Revised Report

Lab Sample ID: S43700.03

Sample Tag: MW-22-19

Collected Date/Time: 12/20/2022 10:45

Matrix: Groundwater

COC Reference: 145629

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	4.0	IR
3	40ml Glass	None	Yes	4.0	IR
2	125ml Plastic	HNO3	Yes	4.0	IR
4	1L Amber	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	12/29/22 12:33	CTV	
pH check for VOCs*	<2	N/A	12/23/22 12:15	BML	
Metal Digestion	Completed	SW3015A	12/27/22 10:10	CCM	
BNA Extraction	Completed	SW3510C	12/27/22 11:00	JWR	
Extraction, PCB*	Completed	E608.3	12/27/22 11:00	JWR	

Metals

Method: E200.8, Run Date: 12/29/22 11:50, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Boron	0.32	0.04		mg/L	5	7440-42-8		

Method: E200.8, Run Date: 12/27/22 11:47, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.097	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		
Barium	0.129	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.31	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.183	0.005		mg/L	2	7439-96-5		
Molybdenum	0.012	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.443	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	0.009	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		



Analytical Laboratory Report

Revised Report

Lab Sample ID: S43700.03 (continued)

Sample Tag: MW-22-19

Method: E200.8, Run Date: 12/27/22 13:52, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	121	0.50		mg/L	2	7440-70-2		
Magnesium	21.7	0.50		mg/L	2	7439-95-4		
Potassium	18.1	0.50		mg/L	2	7440-09-7		
Sodium	157	0.50		mg/L	2	7440-23-5		

Method: E245.1, Run Date: 12/29/22 13:18, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 12/28/22 17:21, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2		
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2		
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5		
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9		
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6		
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1		
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5		
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/07/23 16:24, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		

Lab Sample ID: S43700.03 (continued)

Sample Tag: MW-22-19

Method: SW8270D, Run Date: 01/07/23 16:24, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles
Method: SW5030C/8260C, Run Date: 12/27/22 07:43, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 12/23/22 05:08, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 12/26/22 01:17, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 05:08, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000



Analytical Laboratory Report

Revised Report

Lab Sample ID: S43700.03 (continued)

Sample Tag: MW-22-19

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 05:08, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		



Analytical Laboratory Report

Revised Report

Lab Sample ID: S43700.03 (continued)

Sample Tag: MW-22-19

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 05:08, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 12/29/22 21:09, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 13:43, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Revised Report

Lab Sample ID: S43700.04

Sample Tag: MW-22-18

Collected Date/Time: 12/20/2022 12:00

Matrix: Groundwater

COC Reference: 145629

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	4.0	IR
3	40ml Glass	None	Yes	4.0	IR
2	125ml Plastic	HNO3	Yes	4.0	IR
4	1L Amber	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	12/29/22 12:33	CTV	
pH check for VOCs*	<2	N/A	12/23/22 12:15	BML	
Metal Digestion	Completed	SW3015A	12/27/22 10:10	CCM	
BNA Extraction	Completed	SW3510C	12/27/22 11:00	JWR	
Extraction, PCB*	Completed	E608.3	12/27/22 11:00	JWR	

Metals

Method: E200.8, Run Date: 12/29/22 11:53, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Boron	0.47	0.04		mg/L	5	7440-42-8		

Method: E200.8, Run Date: 12/27/22 11:50, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.287	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	0.002	0.002		mg/L	2	7440-38-2		
Barium	0.166	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.44	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.144	0.005		mg/L	2	7439-96-5		
Molybdenum	0.007	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.553	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	0.011	0.005		mg/L	2	7440-32-6		
Vanadium	0.002	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		



Analytical Laboratory Report

Revised Report

Lab Sample ID: S43700.04 (continued)

Sample Tag: MW-22-18

Method: E200.8, Run Date: 12/27/22 13:54, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	152	0.50		mg/L	2	7440-70-2		
Magnesium	39.4	0.50		mg/L	2	7439-95-4		
Potassium	25.2	0.50		mg/L	2	7440-09-7		
Sodium	81.3	0.50		mg/L	2	7440-23-5		

Method: E245.1, Run Date: 12/29/22 13:21, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 12/28/22 17:32, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2		
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2		
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5		
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9		
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6		
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1		
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5		
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/07/23 16:55, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		



Analytical Laboratory Report

Revised Report

Lab Sample ID: S43700.04 (continued)

Sample Tag: MW-22-18

Method: SW8270D, Run Date: 01/07/23 16:55, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 12/27/22 08:07, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW8260B - SIM, Run Date: 12/26/22 01:37, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 05:32, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		



Analytical Laboratory Report

Revised Report

Lab Sample ID: S43700.04 (continued)

Sample Tag: MW-22-18

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 05:32, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		



Analytical Laboratory Report

Revised Report

Lab Sample ID: S43700.04 (continued)

Sample Tag: MW-22-18

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 05:32, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

TICs Volatiles, Method: SW5030C/8260C, Run Date: 12/23/22 05:32, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Completed			ug/L	1			
Ethane, 1-chloro-1-fluoro-*	Found			ug/L	1			

Other / Misc.

Method: , Run Date: 12/29/22 21:30, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 13:43, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Revised Report

Lab Sample ID: S43700.05

Sample Tag: MW-22-16

Collected Date/Time: 12/20/2022 12:50

Matrix: Groundwater

COC Reference: 145629

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	4.0	IR
3	40ml Glass	None	Yes	4.0	IR
2	125ml Plastic	HNO3	Yes	4.0	IR
4	1L Amber	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	12/29/22 12:33	CTV	
pH check for VOCs*	<2	N/A	12/23/22 12:15	BML	
Metal Digestion	Completed	SW3015A	12/27/22 10:10	CCM	
BNA Extraction	Completed	SW3510C	12/27/22 11:00	JWR	
Extraction, PCB*	Completed	E608.3	12/27/22 11:00	JWR	

Metals

Method: E200.8, Run Date: 12/29/22 11:56, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Boron	0.07	0.04		mg/L	5	7440-42-8		

Method: E200.8, Run Date: 12/27/22 11:54, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.032	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	0.002	0.002		mg/L	2	7440-38-2		
Barium	0.064	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.06	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.064	0.005		mg/L	2	7439-96-5		
Molybdenum	Not detected	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.256	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		



Analytical Laboratory Report

Revised Report

Lab Sample ID: S43700.05 (continued)

Sample Tag: MW-22-16

Method: E200.8, Run Date: 12/27/22 13:55, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	72.4	0.50		mg/L	2	7440-70-2		
Magnesium	11.3	0.50		mg/L	2	7439-95-4		
Potassium	4.72	0.50		mg/L	2	7440-09-7		
Sodium	228	0.50		mg/L	2	7440-23-5		

Method: E245.1, Run Date: 12/29/22 13:24, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 12/28/22 17:43, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2		
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2		
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5		
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9		
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6		
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1		
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5		
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/07/23 17:25, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		



Analytical Laboratory Report

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Lab Sample ID: S43700.05 (continued)

Sample Tag: MW-22-16

Method: SW8270D, Run Date: 01/07/23 17:25, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 12/27/22 08:31, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 12/23/22 05:55, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 12/26/22 01:58, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 05:55, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000

Lab Sample ID: S43700.05 (continued)

Sample Tag: MW-22-16

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 05:55, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		



Analytical Laboratory Report

Revised Report

Lab Sample ID: S43700.05 (continued)

Sample Tag: MW-22-16

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 05:55, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 12/29/22 21:52, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 13:43, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Revised Report

Lab Sample ID: S43700.06

Sample Tag: MW-22-17

Collected Date/Time: 12/20/2022 13:35

Matrix: Groundwater

COC Reference: 145629

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	4.0	IR
3	40ml Glass	None	Yes	4.0	IR
2	125ml Plastic	HNO3	Yes	4.0	IR
4	1L Amber	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	12/29/22 12:33	CTV	
pH check for VOCs*	<2	N/A	12/23/22 12:15	BML	
Metal Digestion	Completed	SW3015A	12/27/22 10:10	CCM	
BNA Extraction	Completed	SW3510C	12/27/22 11:00	JWR	
Extraction, PCB*	Completed	E608.3	12/27/22 11:00	JWR	

Metals

Method: E200.8, Run Date: 12/29/22 11:58, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Boron	0.05	0.04		mg/L	5	7440-42-8		

Method: E200.8, Run Date: 12/27/22 14:16, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Sodium	128	2.0		mg/L	20	7440-23-5		

Method: E200.8, Run Date: 12/27/22 11:57, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.011	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		
Barium	0.060	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	Not detected	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.109	0.005		mg/L	2	7439-96-5		
Molybdenum	Not detected	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.228	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		



Analytical Laboratory Report

Revised Report

Lab Sample ID: S43700.06 (continued)

Sample Tag: MW-22-17

Method: E200.8, Run Date: 12/27/22 13:57, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	63.1	0.50		mg/L	2	7440-70-2		
Magnesium	9.77	0.50		mg/L	2	7439-95-4		
Potassium	5.31	0.50		mg/L	2	7440-09-7		

Method: E245.1, Run Date: 12/29/22 13:28, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 12/28/22 17:54, Analyst: JANB

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2		
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2		
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5		
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9		
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6		
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1		
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5		
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/07/23 17:55, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		

Lab Sample ID: S43700.06 (continued)

Sample Tag: MW-22-17

Method: SW8270D, Run Date: 01/07/23 17:55, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles
Method: SW5030C/8260C, Run Date: 12/27/22 08:56, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 12/23/22 06:19, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 12/26/22 02:18, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 06:19, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		

Lab Sample ID: S43700.06 (continued)

Sample Tag: MW-22-17

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 06:19, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		



Analytical Laboratory Report

Revised Report

Lab Sample ID: S43700.06 (continued)

Sample Tag: MW-22-17

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/23/22 06:19, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 12/29/22 22:14, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 12/27/22 13:43, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.

Merit Laboratories Login Checklist

Lab Set ID:S43700

Client:TRC (TRC)

Project: Southern Boundary Detroit Axle

Submitted: 12/21/2022 10:20 Login User: MMC

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place

Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Selection	Description	Note
-----------	-------------	------

Sample Receiving

- | | | |
|-----|--|--|
| 01. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples are received at 4C +/- 2C Thermometer # IR 4.0 |
| 02. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Received on ice/ cooling process begun |
| 03. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples shipped |
| 04. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples left in 24 hr. drop box |
| 05. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Are there custody seals/tape or is the drop box locked |

Chain of Custody

- | | | |
|-----|--|---|
| 06. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC adequately filled out |
| 07. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC signed and relinquished to the lab |
| 08. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sample tag on bottles match COC |
| 09. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Subcontracting needed? Subcontracted to: Eurofins |

Preservation

- | | | |
|-----|--|---|
| 10. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Do sample have correct chemical preservation |
| 11. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Completed pH checks on preserved samples? (no VOAs) |
| 12. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Did any samples need to be preserved in the lab? |

Bottle Conditions

- | | | |
|-----|--|---|
| 13. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | All bottles intact |
| 14. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Appropriate analytical bottles are used |
| 15. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Merit bottles used |
| 16. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sufficient sample volume received |
| 17. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples require laboratory filtration |
| 18. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples submitted within holding time |
| 19. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Do water VOC or TOX bottles contain headspace |

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____

Merit Laboratories Bottle Preservation Check

Lab Set ID: S43700 Submitted: 12/21/2022 10:20

Client: TRC (TRC)

Project: Southern Boundary Detroit Axle

Initial Preservation Check: 12/21/2022 10:47 MMC

Preservation Recheck (E200.8): N/A

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Sample ID	Bottle / Preservation	pH (Orig)	Add ml	pH (New)	Notes
S43700.01	125ml Plastic HNO3	<2			
S43700.01	125ml Plastic HNO3	<2			
S43700.02	125ml Plastic HNO3	<2			
S43700.02	125ml Plastic HNO3	<2			
S43700.03	125ml Plastic HNO3	<2			
S43700.03	125ml Plastic HNO3	<2			
S43700.04	125ml Plastic HNO3	<2			
S43700.04	125ml Plastic HNO3	<2			
S43700.05	125ml Plastic HNO3	<2			
S43700.05	125ml Plastic HNO3	<2			
S43700.06	125ml Plastic HNO3	<2			
S43700.06	125ml Plastic HNO3	<2			



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 Phone (517) 332-0167 Fax (517) 332-4034
 www.meritlabs.com

C.O.C. PAGE # 1 OF 1 145629

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME Kelly Cratsen burg
 COMPANY TRC
 ADDRESS 1540 Eisenhower Place
 CITY Ann Arbor STATE MI ZIP CODE 48106
 PHONE NO. FAX NO. P.O. NO. 193431
 E-MAIL ADDRESS kcratsenburg@trccompanies.com QUOTE NO.

CONTACT NAME SAME
 COMPANY
 ADDRESS
 CITY STATE ZIP CODE
 PHONE NO. E-MAIL ADDRESS

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME Southern Boundary Detroit A16 SAMPLER(S) PLEASE PRINT/SIGN NAME Javier Jasso
 TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER
 DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER TRCAD

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

Containers & Preservatives

MERIT LAB NO. FOR LAB USE ONLY	20 YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	Analysis							Certifications	Project Locations	Special Instructions		
	DATE	TIME											Voc + Tic	1,4 Dioxane	SVOC + Tic	metals	PFAS 31	PCBs	Thorium				3 Alcohols	Tetraethyl lead
43700.01	1/20	0820	MW- 22-24	W	17	+	+	+						+	+	+	+	+	+	+				43701.01
.02	" "	0940	MW- 22-20	W	17	+	+	+						+	+	+	+	+	+	+				.02
.03	" "	1045	MW- 22-19	W	17	+	+	+						+	+	+	+	+	+	+				.03
.04	" "	1200	MW- 22-18	W	17	+	+	+						+	+	+	+	+	+	+				.04
.05	" "	1250	MW 22-14	W	17	+	+	+						+	+	+	+	+	+	+				.05
.06	" "	1335	MW 22-17	W	17	+	+	+						+	+	+	+	+	+	+				.06

RELINQUISHED BY: [Signature] DATE 12/20/22 TIME 1:50
 SIGNATURE/ORGANIZATION TRC
 RECEIVED BY: [Signature] DATE 12/20/22 TIME
 SIGNATURE/ORGANIZATION
 RELINQUISHED BY: [Signature] DATE 12/21/22 TIME 8:00
 SIGNATURE/ORGANIZATION TRC
 RECEIVED BY: [Signature] DATE 12/21/22 TIME 8:00
 SIGNATURE/ORGANIZATION

RELINQUISHED BY: [Signature] DATE 12/20/22 TIME 1:50
 SIGNATURE/ORGANIZATION TRC
 RECEIVED BY: [Signature] DATE 12/21/22 TIME 10:20
 SIGNATURE/ORGANIZATION M. Calabro
 SEAL NO. SEAL INTACT YES NO INITIALS
 SEAL NO. SEAL INTACT YES NO INITIALS
 NOTES: TEMP. ON ARRIVAL 4.0

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Lab Results
Merit Laboratories
2680 E Lansing Drive
East Lansing, Michigan 48823

Generated 1/2/2023 7:38:05 AM

JOB DESCRIPTION

S43700

JOB NUMBER

190-30696-1

Eurofins Michigan

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



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Authorized for release by
Sue Schafer, Project Manager II
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Sample Summary

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
190-30696-1	S43700.01	Water	12/20/22 06:10	12/21/22 14:11
190-30696-2	S43700.02	Water	12/20/22 09:40	12/21/22 14:11
190-30696-3	S43700.03	Water	12/20/22 10:45	12/21/22 14:11
190-30696-4	S43700.04	Water	12/20/22 12:00	12/21/22 14:11
190-30696-5	S43700.05	Water	12/20/22 12:50	12/21/22 14:11
190-30696-6	S43700.06	Water	12/20/22 13:35	12/21/22 14:11

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Case Narrative

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Job ID: 190-30696-1

Laboratory: Eurofins Michigan

Narrative

Job Narrative
190-30696-1

Receipt

The samples were received on 12/21/2022 2:11 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.9°C

GC Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.



Client Sample Results

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Client Sample ID: S43700.01

Lab Sample ID: 190-30696-1

Date Collected: 12/20/22 06:10

Matrix: Water

Date Received: 12/21/22 14:11

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/29/22 20:26	1
Ethanol	<5.0		5.0	mg/L			12/29/22 20:26	1
n-Butanol	<5.0		5.0	mg/L			12/29/22 20:26	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/27/22 13:43	12/28/22 12:03	2

Client Sample ID: S43700.02

Lab Sample ID: 190-30696-2

Date Collected: 12/20/22 09:40

Matrix: Water

Date Received: 12/21/22 14:11

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/29/22 20:47	1
Ethanol	<5.0		5.0	mg/L			12/29/22 20:47	1
n-Butanol	<5.0		5.0	mg/L			12/29/22 20:47	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/27/22 13:43	12/28/22 12:10	2

Client Sample ID: S43700.03

Lab Sample ID: 190-30696-3

Date Collected: 12/20/22 10:45

Matrix: Water

Date Received: 12/21/22 14:11

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/29/22 21:09	1
Ethanol	<5.0		5.0	mg/L			12/29/22 21:09	1
n-Butanol	<5.0		5.0	mg/L			12/29/22 21:09	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/27/22 13:43	12/28/22 12:13	2

Client Sample ID: S43700.04

Lab Sample ID: 190-30696-4

Date Collected: 12/20/22 12:00

Matrix: Water

Date Received: 12/21/22 14:11

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/29/22 21:30	1
Ethanol	<5.0		5.0	mg/L			12/29/22 21:30	1
n-Butanol	<5.0		5.0	mg/L			12/29/22 21:30	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/27/22 13:43	12/28/22 12:27	2

Client Sample Results

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Client Sample ID: S43700.05

Lab Sample ID: 190-30696-5

Date Collected: 12/20/22 12:50

Matrix: Water

Date Received: 12/21/22 14:11

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/29/22 21:52	1
Ethanol	<5.0		5.0	mg/L			12/29/22 21:52	1
n-Butanol	<5.0		5.0	mg/L			12/29/22 21:52	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/27/22 13:43	12/28/22 12:30	2

Client Sample ID: S43700.06

Lab Sample ID: 190-30696-6

Date Collected: 12/20/22 13:35

Matrix: Water

Date Received: 12/21/22 14:11

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/29/22 22:14	1
Ethanol	<5.0		5.0	mg/L			12/29/22 22:14	1
n-Butanol	<5.0		5.0	mg/L			12/29/22 22:14	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/27/22 13:43	12/28/22 12:34	2

QC Sample Results

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Method: 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Lab Sample ID: MB 680-757245/23
Matrix: Water
Analysis Batch: 757245

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/29/22 18:59	1
Ethanol	<5.0		5.0	mg/L			12/29/22 18:59	1
n-Butanol	<5.0		5.0	mg/L			12/29/22 18:59	1

Lab Sample ID: LCS 680-757245/6
Matrix: Water
Analysis Batch: 757245

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methanol	20.0	19.4		mg/L		97	43 - 143
Ethanol	20.0	19.1		mg/L		96	38 - 156
n-Butanol	20.0	19.3		mg/L		96	70 - 130

Lab Sample ID: LCSD 680-757245/7
Matrix: Water
Analysis Batch: 757245

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methanol	20.0	19.0		mg/L		95	43 - 143	2	50
Ethanol	20.0	18.9		mg/L		94	38 - 156	1	50
n-Butanol	20.0	18.8		mg/L		94	70 - 130	2	30

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 160-594840/1-A
Matrix: Water
Analysis Batch: 594925

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 594840

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/27/22 13:43	12/28/22 11:42	2

Lab Sample ID: LCS 160-594840/2-A
Matrix: Water
Analysis Batch: 594925

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 594840

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Thorium	995	1040		ug/L		105	80 - 120

Definitions/Glossary

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Association Summary

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

GC Semi VOA

Analysis Batch: 757245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30696-1	S43700.01	Total/NA	Water	8015D	
190-30696-2	S43700.02	Total/NA	Water	8015D	
190-30696-3	S43700.03	Total/NA	Water	8015D	
190-30696-4	S43700.04	Total/NA	Water	8015D	
190-30696-5	S43700.05	Total/NA	Water	8015D	
190-30696-6	S43700.06	Total/NA	Water	8015D	
MB 680-757245/23	Method Blank	Total/NA	Water	8015D	
LCS 680-757245/6	Lab Control Sample	Total/NA	Water	8015D	
LCS 680-757245/7	Lab Control Sample Dup	Total/NA	Water	8015D	

Metals

Prep Batch: 594840

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30696-1	S43700.01	Total/NA	Water	3010A	
190-30696-2	S43700.02	Total/NA	Water	3010A	
190-30696-3	S43700.03	Total/NA	Water	3010A	
190-30696-4	S43700.04	Total/NA	Water	3010A	
190-30696-5	S43700.05	Total/NA	Water	3010A	
190-30696-6	S43700.06	Total/NA	Water	3010A	
MB 160-594840/1-A	Method Blank	Total/NA	Water	3010A	
LCS 160-594840/2-A	Lab Control Sample	Total/NA	Water	3010A	

Analysis Batch: 594925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30696-1	S43700.01	Total/NA	Water	6020B	594840
190-30696-2	S43700.02	Total/NA	Water	6020B	594840
190-30696-3	S43700.03	Total/NA	Water	6020B	594840
190-30696-4	S43700.04	Total/NA	Water	6020B	594840
190-30696-5	S43700.05	Total/NA	Water	6020B	594840
190-30696-6	S43700.06	Total/NA	Water	6020B	594840
MB 160-594840/1-A	Method Blank	Total/NA	Water	6020B	594840
LCS 160-594840/2-A	Lab Control Sample	Total/NA	Water	6020B	594840

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Client Sample ID: S43700.01

Lab Sample ID: 190-30696-1

Date Collected: 12/20/22 06:10

Matrix: Water

Date Received: 12/21/22 14:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	757245	JCK	EET SAV	12/29/22 20:26
Total/NA	Prep	3010A			594840	CGB	EET SL	12/27/22 13:43
Total/NA	Analysis	6020B		2	594925	CGB	EET SL	12/28/22 12:03

Client Sample ID: S43700.02

Lab Sample ID: 190-30696-2

Date Collected: 12/20/22 09:40

Matrix: Water

Date Received: 12/21/22 14:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	757245	JCK	EET SAV	12/29/22 20:47
Total/NA	Prep	3010A			594840	CGB	EET SL	12/27/22 13:43
Total/NA	Analysis	6020B		2	594925	CGB	EET SL	12/28/22 12:10

Client Sample ID: S43700.03

Lab Sample ID: 190-30696-3

Date Collected: 12/20/22 10:45

Matrix: Water

Date Received: 12/21/22 14:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	757245	JCK	EET SAV	12/29/22 21:09
Total/NA	Prep	3010A			594840	CGB	EET SL	12/27/22 13:43
Total/NA	Analysis	6020B		2	594925	CGB	EET SL	12/28/22 12:13

Client Sample ID: S43700.04

Lab Sample ID: 190-30696-4

Date Collected: 12/20/22 12:00

Matrix: Water

Date Received: 12/21/22 14:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	757245	JCK	EET SAV	12/29/22 21:30
Total/NA	Prep	3010A			594840	CGB	EET SL	12/27/22 13:43
Total/NA	Analysis	6020B		2	594925	CGB	EET SL	12/28/22 12:27

Client Sample ID: S43700.05

Lab Sample ID: 190-30696-5

Date Collected: 12/20/22 12:50

Matrix: Water

Date Received: 12/21/22 14:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	757245	JCK	EET SAV	12/29/22 21:52
Total/NA	Prep	3010A			594840	CGB	EET SL	12/27/22 13:43
Total/NA	Analysis	6020B		2	594925	CGB	EET SL	12/28/22 12:30

Client Sample ID: S43700.06

Lab Sample ID: 190-30696-6

Date Collected: 12/20/22 13:35

Matrix: Water

Date Received: 12/21/22 14:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	757245	JCK	EET SAV	12/29/22 22:14

Eurofins Michigan

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Client Sample ID: S43700.06

Lab Sample ID: 190-30696-6

Date Collected: 12/20/22 13:35

Matrix: Water

Date Received: 12/21/22 14:11

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Analyst</u>	<u>Lab</u>	<u>Prepared or Analyzed</u>
Total/NA	Prep	3010A			594840	CGB	EET SL	12/27/22 13:43
Total/NA	Analysis	6020B		2	594925	CGB	EET SL	12/28/22 12:34

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Analyst References:

Lab: EET SAV

Batch Type: Analysis

JCK = Joshua Kellar

Lab: EET SL

Batch Type: Prep

CGB = Cory Buffington

Batch Type: Analysis

CGB = Cory Buffington

Accreditation/Certification Summary

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Laboratory: Eurofins Savannah

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	SAVLAB	
Alabama	State	41450	06-30-23
ANAB	Dept. of Defense ELAP	L2463	09-22-24
Arkansas DEQ	State	19-015-0	02-01-23
California	State	2939	06-30-22 *
Connecticut	State	PH-0161	03-31-23
Florida	NELAP	E87052	06-23-23
Georgia	State	E87052	06-30-23
Georgia (DW)	State	803	06-30-23
Guam	State	19-007R	04-17-23
Hawaii	State	<cert No.>	06-30-23
Illinois	NELAP	200022	11-30-22 *
Indiana	State	C-GA-02	06-30-23
Iowa	State	353	07-01-23
Kentucky (UST)	State	NA	06-30-23
Louisiana	NELAP	30690	06-30-23
Louisiana (All)	NELAP	30690	06-30-23
Louisiana (DW)	State	LA009	12-31-22
Maine	State	GA00006	09-25-24
Maryland	State	250	12-31-23
Massachusetts	State	M-GA006	07-30-23
Michigan	State	9925	06-30-23
Mississippi	State	<cert No.>	06-30-23
Nebraska	State	NE-OS-7-04	06-30-23
New Jersey	NELAP	GA769	06-30-23
New Mexico	State	GA00006	06-30-23
New York	NELAP	10842	04-01-23
North Carolina (DW)	State	13701	07-31-23
North Carolina (WW/SW)	State	269	12-31-22
Pennsylvania	NELAP	68-00474	06-30-23
Puerto Rico	State	GA00006	12-30-22
South Carolina	State	98001	06-30-23
Tennessee	State	TN02961	06-30-23
Texas	NELAP	T1047004185-19-14	11-30-23
Texas	TCEQ Water Supply	T104704185	06-30-23
USDA	US Federal Programs	P330-18-00313	09-03-24
Virginia	NELAP	460161	06-14-23
Wisconsin	State	999819810	08-31-23
Wyoming	State	8TMS-L	06-30-23

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-23
California	Los Angeles County Sanitation Districts	10259	06-30-22 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Michigan

Accreditation/Certification Summary

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2886	06-30-23
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-23
HI - RadChem Recognition	State	n/a	06-30-23
Illinois	NELAP	200023	11-30-23
Iowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-23
Kentucky (DW)	State	KY90125	12-31-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-22
Louisiana (All)	NELAP	04080	06-30-23
Louisiana (DW)	State	LA011	12-31-22
Maryland	State	310	09-30-23
MI - RadChem Recognition	State	9005	06-30-23
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-23
New Jersey	NELAP	MO002	06-30-23
New York	NELAP	11616	04-01-23
North Dakota	State	R-207	06-30-23
NRC	NRC	24-24817-01	12-31-22
Oklahoma	NELAP	9997	08-31-23
Oregon	NELAP	4157	09-01-23
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-23
Texas	NELAP	T104704193	07-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-24
Washington	State	C592	08-30-23
West Virginia DEP	State	381	12-31-22

Method Summary

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Method	Method Description	Protocol	Laboratory
8015D	Nonhalogenated Organic Compounds - Direct Injection (GC)	SW846	EET SAV
6020B	Metals (ICP/MS)	SW846	EET SL
3010A	Preparation, Total Metals	SW846	EET SL

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566





2680 East Lansing Dr., East Lansing, MI 48823
 Phone (517) 332-0167 Fax (517) 332-4034
 www.meritlabs.com

C.O.C. PAGE # 1 OF 1

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME Project Management Team		CONTACT NAME Julie Teague	
COMPANY Merit Laboratories		COMPANY Merit Laboratories	
ADDRESS 2680 East Lansing Drive		ADDRESS 2680 East Lansing Drive	
CITY East Lansing	STATE MI	CITY East Lansing	STATE MI
PHONE NO. 517-332-0167	FAX NO. 48823	PHONE NO. 517-332-0167	ZIP CODE 48823
E-MAIL ADDRESS results@meritlabs.com		E-MAIL ADDRESS juliet@meritlabs.com	

PROJECT NO./NAME S43700

SAMPLER(S): PLEASE PRINT/SIGN NAME

TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER

DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER

MATRIX CODE:	GW=GROUNDWATER	WW=WASTEWATER	S=SOIL	L=LIQUID	SD=SOLID	W=WASTE
	SL=SLUDGE	DW=DRINKING WATER	O=OIL	WP=WIPE	A=AIR	

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	YEAR	DATE	TIME	IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	# Containers & Preservatives							Alcohols	Thorium	Certifications	Special Instructions
							MEOH	H ₂ SO ₄	H ₂ O	HCl	NONE	OTHER	OHIO VAP				
	12/20/22	0610		S43700.01	GW	4	3	1								*Methanol RL 3,700ppb	
	12/20/22	0940		S43700.02	GW	4	3	1								*Ethanol, N-Butanol	
	12/20/22	1045		S43700.03	GW	4	3	1									
	12/20/22	1200		S43700.04	GW	4	3	1									
	12/20/22	1250		S43700.05	GW	4	3	1									
	12/20/22	1335		S43700.06	GW	4	3	1									



Subcontracted to
Eurofins

RELINQUISHED BY SIGNATURE/Organization	RELINQUISHED BY SIGNATURE/Organization	DATE	DATE	TIME	TIME
<i>Patricia W...</i>	<i>Patricia W...</i>	12/21/22	12/21/22	1305	1305
RECEIVED BY SIGNATURE/Organization	RECEIVED BY SIGNATURE/Organization	DATE	DATE	TIME	TIME
<i>Julie Teague</i>	<i>Julie Teague</i>	12/21/22	12/21/22	1305	1305
RELINQUISHED BY SIGNATURE/Organization	RELINQUISHED BY SIGNATURE/Organization	DATE	DATE	TIME	TIME
<i>Julie Teague</i>	<i>Julie Teague</i>	12/21/22	12/21/22	1411	1411

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE





Environment Testing
TestAmerica

SDS or Known Hazard Information Supplied by Client
 Discrepancies
 Short Hold
 Rush 24 Hr 2-Day 3-Day 5-Day Other:
Client ID: Merit
Work Order #: 30696
Receipt Evaluation Performed by: Initials: TH Date: 12/21/22 Time: 1411

Cooler / Sample Receipt

After hours receipt: complete gray areas. Place cooler in walk-in, place form in Receiving box. Date: _____ Time: _____

Method of Shipment:

Walk-In Client Eurofins TA Field/Courier
Other Client / 3rd Party Courier: _____
Fed Ex Tracking #: _____
UPS Tracking #: _____
Other: _____

Shipping Container Type:

Cooler Box
 None Other: _____

Custody Seals Intact:

Yes No
 NA (not used or required)

Packing Materials:

Plastic Bags Foam
 Bubble Wrap Paper
 Packing Peanuts None
 Other: _____

Cooling Materials:

Ice (Solid) Ice (Melted)
 Blue Ice None
 Other: _____

Bacteriological Samples	Temp Corrected (°C)	Frozen?		Rec'd Within 2 Hrs?		Sample Flagged?	
		Yes	No	Yes	No	Yes	No

Received on same day sampled? Yes No Additional Sheets Required? Yes No

Receipt Temperatures

Thermometer ID	Observed (°C)	Corrected (°C)	Temp Blank	Sample Temp	Acceptable	Cooler ID	Affected Samples
CP313207	2.9	2.9		X	X Y N		
					Y N		
					Y N		

Receipt Questions**	Y	N	NA	"No" answers require additional comment
CoC present and ETA receipt signature, date, and time properly documented?				
Containers and Labels in good condition? (unbroken, not leaking, appropriately filled, labels legible & attached)				
Appropriate containers used and adequate volume provided?				Preserved bottles checked for pH? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Number of sample containers match CoC?				pH strip lot # _____
Samples received within hold?				
Samples submitted for GRO and Volatiles analysis (8260, 624, 524) received without headspace?				
Was a Trip Blank received with VOA samples?				
Were the samples free of any questionable physical conformities? (i.e.; field duplicates or multiple bottles of the same sample do not significantly vary in appearance - color, solid proportions, etc.)				
Were the CoC bottle labels and all other items free of all other discrepancies or issues that would need to be addressed with the Project Manager and/or Client?				
**May not be applicable if samples are not for compliance testing				*Excludes FOG, VOAs, TOC Vials, HEM

Client Contact Record

Contact Via: Phone Email Other: _____ Person Contacted: _____ Date/Time: _____
 Discrepancy allowance agreement is on record in the client project file

Discussion / Resolution

Any additional documentation and clarification from the client must be noted in the narrative and/or scanned into the CoC directory.

Reviewed by Ji He Date: 12/21/22

WI-MI-010_020720

Chain of Custody Record



Client Information (Sub Contract Lab)		Lab PM Schafer, Sue	Carrier Tracking No(s):	COC No. 190-34979-1
Client Contact Shipping/Receiving		E-Mail Sue.Schafer@et.eurofins.com	State of Origin Michigan	Page Page 1 of 1
Company TestAmerica Laboratories, Inc.		Accreditations Required (See note) 190-30696-1		
Address 13715 Rider Trail North,		Job # 190-30696-1		
City Earth City	Due Date Requested: 1/9/2023	Analysis Requested		
State, Zip MO, 63045	TAT Requested (days):			
Phone 314-298-8566(Tel) 314-298-8757(Fax)	PO #:	Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AshNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)		
Email	WO #:			
Project Name S43700	Project # 19001249	Total Number of containers		
Site	SSOW#:			
Sample Identification - Client ID (Lab ID)		Special Instructions/Note:		
S43700.01 (190-30696-1)	Sample Date 12/20/22	Sample Time 06:10 Eastern	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=other, BT=Trace, A=Al)
S43700.02 (190-30696-2)	12/20/22	09:40 Eastern	Water	Water
S43700.03 (190-30696-3)	12/20/22	10:45 Eastern	Water	Water
S43700.04 (190-30696-4)	12/20/22	12:00 Eastern	Water	Water
S43700.05 (190-30696-5)	12/20/22	12:50 Eastern	Water	Water
S43700.06 (190-30696-6)	12/20/22	13:35 Eastern	Water	Water
Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC. Possible Hazard Identification Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 Empty Kit Relinquished by: _____ Date: _____ Relinquished by: <i>J. Hill</i> Date: 12/21/22 Time: 1600 Relinquished by: _____ Date: _____ Relinquished by: _____ Date: _____ Custody Seals Intact: _____ Custody Seal No.: _____ Δ Yes Δ No Received by: _____ Date/Time: _____ Received by: <i>[Signature]</i> Date/Time: DEC 22 2022 1010 Received by: _____ Date/Time: _____ Cooler Temperature(s) °C and Other Remarks: _____				

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Lab Results
Merit Laboratories
2680 E Lansing Drive
East Lansing, Michigan 48823

Generated 2/2/2023 7:56:40 AM Revision 1

JOB DESCRIPTION

S43700

JOB NUMBER

190-30696-1

Eurofins Michigan

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



Generated
2/2/2023 7:56:40 AM
Revision 1

Authorized for release by
Sue Schafer, Project Manager II
Sue.Schafer@et.eurofinsus.com
(810)229-2763



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Sample Summary

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
190-30696-1	S43700.01	Water	12/20/22 06:10	12/21/22 14:11
190-30696-2	S43700.02	Water	12/20/22 09:40	12/21/22 14:11
190-30696-3	S43700.03	Water	12/20/22 10:45	12/21/22 14:11
190-30696-4	S43700.04	Water	12/20/22 12:00	12/21/22 14:11
190-30696-5	S43700.05	Water	12/20/22 12:50	12/21/22 14:11
190-30696-6	S43700.06	Water	12/20/22 13:35	12/21/22 14:11

1

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Case Narrative

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Job ID: 190-30696-1

Laboratory: Eurofins Michigan

Narrative

Job Narrative
190-30696-1

Revised report to correct Alcohol reporting limit as requested.

Receipt

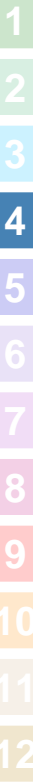
The samples were received on 12/21/2022 2:11 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.9°C

GC Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.



Client Sample Results

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Client Sample ID: S43700.01

Lab Sample ID: 190-30696-1

Date Collected: 12/20/22 06:10

Matrix: Water

Date Received: 12/21/22 14:11

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/29/22 20:26	1
Ethanol	<3.7		3.7	mg/L			12/29/22 20:26	1
n-Butanol	<3.7		3.7	mg/L			12/29/22 20:26	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/27/22 13:43	12/28/22 12:03	2

Client Sample ID: S43700.02

Lab Sample ID: 190-30696-2

Date Collected: 12/20/22 09:40

Matrix: Water

Date Received: 12/21/22 14:11

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/29/22 20:47	1
Ethanol	<3.7		3.7	mg/L			12/29/22 20:47	1
n-Butanol	<3.7		3.7	mg/L			12/29/22 20:47	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/27/22 13:43	12/28/22 12:10	2

Client Sample ID: S43700.03

Lab Sample ID: 190-30696-3

Date Collected: 12/20/22 10:45

Matrix: Water

Date Received: 12/21/22 14:11

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/29/22 21:09	1
Ethanol	<3.7		3.7	mg/L			12/29/22 21:09	1
n-Butanol	<3.7		3.7	mg/L			12/29/22 21:09	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/27/22 13:43	12/28/22 12:13	2

Client Sample ID: S43700.04

Lab Sample ID: 190-30696-4

Date Collected: 12/20/22 12:00

Matrix: Water

Date Received: 12/21/22 14:11

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/29/22 21:30	1
Ethanol	<3.7		3.7	mg/L			12/29/22 21:30	1
n-Butanol	<3.7		3.7	mg/L			12/29/22 21:30	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/27/22 13:43	12/28/22 12:27	2

Eurofins Michigan

Client Sample Results

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Client Sample ID: S43700.05

Lab Sample ID: 190-30696-5

Date Collected: 12/20/22 12:50

Matrix: Water

Date Received: 12/21/22 14:11

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/29/22 21:52	1
Ethanol	<3.7		3.7	mg/L			12/29/22 21:52	1
n-Butanol	<3.7		3.7	mg/L			12/29/22 21:52	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/27/22 13:43	12/28/22 12:30	2

Client Sample ID: S43700.06

Lab Sample ID: 190-30696-6

Date Collected: 12/20/22 13:35

Matrix: Water

Date Received: 12/21/22 14:11

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/29/22 22:14	1
Ethanol	<3.7		3.7	mg/L			12/29/22 22:14	1
n-Butanol	<3.7		3.7	mg/L			12/29/22 22:14	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/27/22 13:43	12/28/22 12:34	2

QC Sample Results

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Method: 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Lab Sample ID: MB 680-757245/23
Matrix: Water
Analysis Batch: 757245

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			12/29/22 18:59	1
Ethanol	<3.7		3.7	mg/L			12/29/22 18:59	1
n-Butanol	<3.7		3.7	mg/L			12/29/22 18:59	1

Lab Sample ID: LCS 680-757245/6
Matrix: Water
Analysis Batch: 757245

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methanol	20.0	19.4		mg/L		97	43 - 143
Ethanol	20.0	19.1		mg/L		96	38 - 156
n-Butanol	20.0	19.3		mg/L		96	70 - 130

Lab Sample ID: LCSD 680-757245/7
Matrix: Water
Analysis Batch: 757245

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methanol	20.0	19.0		mg/L		95	43 - 143	2	50
Ethanol	20.0	18.9		mg/L		94	38 - 156	1	50
n-Butanol	20.0	18.8		mg/L		94	70 - 130	2	30

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 160-594840/1-A
Matrix: Water
Analysis Batch: 594925

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 594840

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		12/27/22 13:43	12/28/22 11:42	2

Lab Sample ID: LCS 160-594840/2-A
Matrix: Water
Analysis Batch: 594925

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 594840

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Thorium	995	1040		ug/L		105	80 - 120

Definitions/Glossary

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Association Summary

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

GC Semi VOA

Analysis Batch: 757245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30696-1	S43700.01	Total/NA	Water	8015D	
190-30696-2	S43700.02	Total/NA	Water	8015D	
190-30696-3	S43700.03	Total/NA	Water	8015D	
190-30696-4	S43700.04	Total/NA	Water	8015D	
190-30696-5	S43700.05	Total/NA	Water	8015D	
190-30696-6	S43700.06	Total/NA	Water	8015D	
MB 680-757245/23	Method Blank	Total/NA	Water	8015D	
LCS 680-757245/6	Lab Control Sample	Total/NA	Water	8015D	
LCSD 680-757245/7	Lab Control Sample Dup	Total/NA	Water	8015D	

Metals

Prep Batch: 594840

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30696-1	S43700.01	Total/NA	Water	3010A	
190-30696-2	S43700.02	Total/NA	Water	3010A	
190-30696-3	S43700.03	Total/NA	Water	3010A	
190-30696-4	S43700.04	Total/NA	Water	3010A	
190-30696-5	S43700.05	Total/NA	Water	3010A	
190-30696-6	S43700.06	Total/NA	Water	3010A	
MB 160-594840/1-A	Method Blank	Total/NA	Water	3010A	
LCS 160-594840/2-A	Lab Control Sample	Total/NA	Water	3010A	

Analysis Batch: 594925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30696-1	S43700.01	Total/NA	Water	6020B	594840
190-30696-2	S43700.02	Total/NA	Water	6020B	594840
190-30696-3	S43700.03	Total/NA	Water	6020B	594840
190-30696-4	S43700.04	Total/NA	Water	6020B	594840
190-30696-5	S43700.05	Total/NA	Water	6020B	594840
190-30696-6	S43700.06	Total/NA	Water	6020B	594840
MB 160-594840/1-A	Method Blank	Total/NA	Water	6020B	594840
LCS 160-594840/2-A	Lab Control Sample	Total/NA	Water	6020B	594840

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Client Sample ID: S43700.01

Lab Sample ID: 190-30696-1

Date Collected: 12/20/22 06:10

Matrix: Water

Date Received: 12/21/22 14:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	757245	JCK	EET SAV	12/29/22 20:26
Total/NA	Prep	3010A			594840	CGB	EET SL	12/27/22 13:43
Total/NA	Analysis	6020B		2	594925	CGB	EET SL	12/28/22 12:03

Client Sample ID: S43700.02

Lab Sample ID: 190-30696-2

Date Collected: 12/20/22 09:40

Matrix: Water

Date Received: 12/21/22 14:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	757245	JCK	EET SAV	12/29/22 20:47
Total/NA	Prep	3010A			594840	CGB	EET SL	12/27/22 13:43
Total/NA	Analysis	6020B		2	594925	CGB	EET SL	12/28/22 12:10

Client Sample ID: S43700.03

Lab Sample ID: 190-30696-3

Date Collected: 12/20/22 10:45

Matrix: Water

Date Received: 12/21/22 14:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	757245	JCK	EET SAV	12/29/22 21:09
Total/NA	Prep	3010A			594840	CGB	EET SL	12/27/22 13:43
Total/NA	Analysis	6020B		2	594925	CGB	EET SL	12/28/22 12:13

Client Sample ID: S43700.04

Lab Sample ID: 190-30696-4

Date Collected: 12/20/22 12:00

Matrix: Water

Date Received: 12/21/22 14:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	757245	JCK	EET SAV	12/29/22 21:30
Total/NA	Prep	3010A			594840	CGB	EET SL	12/27/22 13:43
Total/NA	Analysis	6020B		2	594925	CGB	EET SL	12/28/22 12:27

Client Sample ID: S43700.05

Lab Sample ID: 190-30696-5

Date Collected: 12/20/22 12:50

Matrix: Water

Date Received: 12/21/22 14:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	757245	JCK	EET SAV	12/29/22 21:52
Total/NA	Prep	3010A			594840	CGB	EET SL	12/27/22 13:43
Total/NA	Analysis	6020B		2	594925	CGB	EET SL	12/28/22 12:30

Client Sample ID: S43700.06

Lab Sample ID: 190-30696-6

Date Collected: 12/20/22 13:35

Matrix: Water

Date Received: 12/21/22 14:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	757245	JCK	EET SAV	12/29/22 22:14

Eurofins Michigan

Lab Chronicle

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Client Sample ID: S43700.06

Lab Sample ID: 190-30696-6

Date Collected: 12/20/22 13:35

Matrix: Water

Date Received: 12/21/22 14:11

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Analyst</u>	<u>Lab</u>	<u>Prepared or Analyzed</u>
Total/NA	Prep	3010A			594840	CGB	EET SL	12/27/22 13:43
Total/NA	Analysis	6020B		2	594925	CGB	EET SL	12/28/22 12:34

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Analyst References:

Lab: EET SAV

Batch Type: Analysis

JCK = Joshua Kellar

Lab: EET SL

Batch Type: Prep

CGB = Cory Buffington

Batch Type: Analysis

CGB = Cory Buffington

Accreditation/Certification Summary

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Laboratory: Eurofins Savannah

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	SAVLAB	
Alabama	State	41450	06-30-23
ANAB	Dept. of Defense ELAP	L2463	09-22-24
Arkansas DEQ	State	19-015-0	02-01-23
California	State	2939	06-30-22 *
Connecticut	State	PH-0161	03-31-23
Florida	NELAP	E87052	01-09-23
Georgia	State	E87052	06-30-23
Georgia (DW)	State	803	06-30-23
Guam	State	19-007R	04-17-23
Hawaii	State	<cert No.>	06-30-23
Illinois	NELAP	200022	11-30-23
Indiana	State	C-GA-02	06-30-23
Iowa	State	353	07-01-23
Kentucky (UST)	State	NA	06-30-23
Louisiana	NELAP	30690	06-30-23
Louisiana (All)	NELAP	30690	06-30-23
Louisiana (DW)	State	LA009	12-31-22
Maine	State	GA00006	09-25-24
Maryland	State	250	12-31-23
Massachusetts	State	M-GA006	01-14-23
Michigan	State	9925	06-30-23
Mississippi	State	<cert No.>	06-30-23
Nebraska	State	NE-OS-7-04	06-30-23
New Jersey	NELAP	GA769	06-30-23
New Mexico	State	GA00006	06-30-23
New York	NELAP	10842	04-01-23
North Carolina (DW)	State	13701	07-31-23
North Carolina (WW/SW)	State	269	12-31-22
Pennsylvania	NELAP	68-00474	06-30-23
Puerto Rico	State	GA00006	12-30-22
South Carolina	State	98001	01-17-23
Tennessee	State	TN02961	06-30-23
Texas	NELAP	T1047004185-19-14	11-30-23
Texas	TCEQ Water Supply	T104704185	06-30-23
USDA	US Federal Programs	P330-18-00313	09-03-24
Virginia	NELAP	460161	06-14-23
Wisconsin	State	999819810	08-31-23
Wyoming	State	8TMS-L	06-30-23

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-23
California	Los Angeles County Sanitation Districts	10259	06-30-22 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2886	06-30-23
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-23
HI - RadChem Recognition	State	n/a	06-30-23
Illinois	NELAP	200023	11-30-23
Iowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-23
Kentucky (DW)	State	KY90125	12-31-22
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-22
Louisiana (All)	NELAP	04080	06-30-23
Louisiana (DW)	State	LA011	12-31-22
Maryland	State	310	09-30-23
MI - RadChem Recognition	State	9005	06-30-23
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-23
New Jersey	NELAP	MO002	06-30-23
New York	NELAP	11616	04-01-23
North Dakota	State	R-207	06-30-23
NRC	NRC	24-24817-01	12-31-22
Oklahoma	NELAP	9997	08-31-23
Oregon	NELAP	4157	09-01-23
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-23
Texas	NELAP	T104704193	07-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-24
Washington	State	C592	08-30-23
West Virginia DEP	State	381	12-31-22

Method Summary

Client: Merit Laboratories
Project/Site: S43700

Job ID: 190-30696-1

Method	Method Description	Protocol	Laboratory
8015D	Nonhalogenated Organic Compounds - Direct Injection (GC)	SW846	EET SAV
6020B	Metals (ICP/MS)	SW846	EET SL
3010A	Preparation, Total Metals	SW846	EET SL

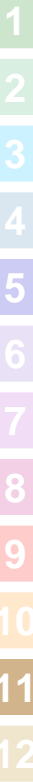
Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566





Environment Testing
TestAmerica

SDS or Known Hazard Information Supplied by Client
 Discrepancies
 Short Hold
 Rush 24 Hr 2-Day 3-Day 5-Day Other:
Client ID: Merit
Work Order #: 30696
Receipt Evaluation Performed by: Initials: TH Date: 12/21/22 Time: 1411

Cooler / Sample Receipt

After hours receipt: complete gray areas. Place cooler in walk-in, place form in Receiving box. Date: _____ Time: _____

Method of Shipment:

Walk-In Client Eurofins TA Field/Courier
Other Client / 3rd Party Courier: _____
Fed Ex Tracking #: _____
UPS Tracking #: _____
Other: _____

Shipping Container Type:

Cooler Box
 None Other: _____

Custody Seals Intact:

Yes No
 NA (not used or required)

Packing Materials:

Plastic Bags Foam
 Bubble Wrap Paper
 Packing Peanuts None
 Other: _____

Cooling Materials:

Ice (Solid) Ice (Melted)
 Blue Ice None
 Other: _____

Bacteriological Samples	Temp Corrected (°C)	Frozen?		Rec'd Within 2 Hrs?		Sample Flagged?	
		Yes	No	Yes	No	Yes	No

Received on same day sampled? Yes No Additional Sheets Required? Yes No

Receipt Temperatures

Thermometer ID	Observed (°C)	Corrected (°C)	Temp Blank	Sample Temp	Acceptable	Cooler ID	Affected Samples
CP313207	2.9	2.9		X	X Y N		
					Y N		
					Y N		

Receipt Questions**	Y	N	NA	"No" answers require additional comment
CoC present and ETA receipt signature, date, and time properly documented?				
Containers and Labels in good condition? (unbroken, not leaking, appropriately filled, labels legible & attached)				
Appropriate containers used and adequate volume provided?				Preserved bottles checked for pH? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Number of sample containers match CoC?				pH strip lot # _____
Samples received within hold?				
Samples submitted for GRO and Volatiles analysis (8260, 624, 524) received without headspace?				
Was a Trip Blank received with VOA samples?				
Were the samples free of any questionable physical conformities? (i.e.; field duplicates or multiple bottles of the same sample do not significantly vary in appearance - color, solid proportions, etc.)				
Were the CoC bottle labels and all other items free of all other discrepancies or issues that would need to be addressed with the Project Manager and/or Client?				
**May not be applicable if samples are not for compliance testing				*Excludes FOG, VOAs, TOC Vials, HEM

Client Contact Record

Contact Via: Phone Email Other: _____ Person Contacted: _____ Date/Time: _____
 Discrepancy allowance agreement is on record in the client project file

Discussion / Resolution

Any additional documentation and clarification from the client must be noted in the narrative and/or scanned into the CoC directory.

Reviewed by Ji He Date: 12/21/22

WI-MI-010_020720

Chain of Custody Record



Client Information (Sub Contract Lab)		Lab PM Schafer, Sue	Carrier Tracking No(s):	COC No. 190-34979-1							
Client Contact Shipping/Receiving		Phone:	State of Origin Michigan	Page Page 1 of 1							
Company TestAmerica Laboratories, Inc.		E-Mail Sue.Schafer@et.eurofins.com	Accreditations Required (See note):	Job # 190-30696-1							
Address: 13715 Rider Trail North,		Due Date Requested: 1/9/2023	Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AshNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)								
City Earth City		TAT Requested (days):	Analysis Requested								
State, Zip MO, 63045		PO #:	Total Number of containers								
Phone: 314-298-8566(Tel) 314-298-8757(Fax)		WO #:	Special Instructions/Note:								
Email:		Project # 19001249	602B/3010A_2% THORIUM ONLY								
Site: S43700		SSOW#:	Field Filtered Sample (Yes or No)								
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=other, BT=Trace, A=Al)	Preservation Code:	Performance MS/MSD (Yes or No)	Field Filtered Sample (Yes or No)	Analysis Requested	Total Number of containers	Special Instructions/Note:
S43700.01 (190-30696-1)	12/20/22	06:10 Eastern	Water	X	X	1					
S43700.02 (190-30696-2)	12/20/22	09:40 Eastern	Water	X	X	1					
S43700.03 (190-30696-3)	12/20/22	10:45 Eastern	Water	X	X	1					
S43700.04 (190-30696-4)	12/20/22	12:00 Eastern	Water	X	X	1					
S43700.05 (190-30696-5)	12/20/22	12:50 Eastern	Water	X	X	1					
S43700.06 (190-30696-6)	12/20/22	13:35 Eastern	Water	X	X	1					

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2
 Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: *J. Hill* Date/Time: 12/21/22 1600
 Relinquished by: _____ Date/Time: _____
 Relinquished by: _____ Date/Time: _____
 Custody Seals Intact: _____ Custody Seal No.: _____
 Δ Yes Δ No
 Received by: _____ Date/Time: _____
 Received by: *[Signature]* Date/Time: DEC 22 2022 1010
 Received by: _____ Date/Time: _____
 Cooler Temperature(s) °C and Other Remarks:



Analytical Laboratory Report

Report ID: S43701.01(01)
Generated on 01/17/2023

Report to
Attention: Kelly Cratsenburg
TRC
1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: 734-412-5424 FAX:
Email: KCratsenburg@trccompanies.com

Report produced by
Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Additional Contacts: Vince Buening

Report Summary
Lab Sample ID(s): S43701.01-S43701.06
Project: Southern Boundary Detroit Axle
Collected Date(s): 12/20/2022
Submitted Date/Time: 12/21/2022 10:20
Sampled by: Javier Jasso
P.O. #: 193431

Table of Contents

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- General Report Notes (Page 2)
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Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
ASTMD7979-19M	ASTM Method D7979 - 19 Modified (Isotopic Dilution)

Parameter Summary

Parameter	Synonym	Cas #
PFBA	Perfluorobutanoic Acid	375-22-4
PFPeA	Perfluoropentanoic Acid	2706-90-3
4:2 FTSA	4:2 Fluorotelomer Sulfonic Acid	757124-72-4
PFHxA	Perfluorohexanoic Acid	307-24-4
PFBS	Perfluorobutane sulfonic Acid	375-73-5
PFHpA	Perfluoroheptanoic Acid	375-85-9
PFPeS	Perfluoropentane Sulfonic Acid	2706-91-4
6:2 FTSA	6:2 Fluorotelomer Sulfonic Acid	27619-97-2
PFOA	Perfluorooctanoic Acid	335-67-1
PFHxS	Perfluorohexane Sulfonic Acid	355-46-4
PFHxS-LN	Perfluorohexane Sulfonic Acid - LN	355-46-4-LN
PFHxS-BR	Perfluorohexane Sulfonic Acid - BR	355-46-4-BR
PFNA	Perfluorononanoic Acid	375-95-1
8:2 FTSA	8:2 Fluorotelomer Sulfonic Acid	39108-34-4
PFHpS	Perfluoroheptane Sulfonic Acid	375-92-8
PFDA	Perfluorodecanoic Acid	335-76-2
N-MeFOSAA	N-methyl perfluorooctanesulfonamidoacetic acid	2355-31-9
EtFOSAA	N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	2991-50-6
PFOS	Perfluorooctane Sulfonic Acid	1763-23-1
PFOS-LN	Perfluorooctane Sulfonic Acid - LN	1763-23-1-LN
PFOS-BR	Perfluorooctane Sulfonic Acid - BR	1763-23-1-BR
PFUnDA	Perfluoroundecanoic Acid	2058-94-8
PFNS	Perfluorononane Sulfonic Acid	68259-12-1
PFDoDA	Perfluorododecanoic Acid	307-55-1
PFDS	Perfluorodecane Sulfonic Acid	335-77-3
PFTTrDA	Perfluorotridecanoic Acid	72629-94-8
FOSA	Perfluorooctane Sulfonamide	754-91-6
PFTeDA	Perfluorotetradecanoic Acid	376-06-7
11Cl-PF3OUdS	11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	763051-92-9
9Cl-PF3ONS	9-chlorohexadecafluoro-3-oxanone1-sulfonic acid	756426-58-1
ADONA	4,8-dioxa-3H-perfluorononanoic acid	919005-14-4
HFPO-DA	Hexafluoropropylene oxide dimer	13252-13-6
PFECBS	Perfluoro-4-ethylcyclohexanesulfonate	67584-42-3
PFBSA	Perfluorobutanesulfonamide	30334-69-1
PFHxSA	Perfluorohexanesulfonamide	41997-13-1



Analytical Laboratory Report

Sample Summary (6 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S43701.01	MW-22-21	Groundwater	12/20/22 06:10
S43701.02	MW-22-20	Groundwater	12/20/22 09:40
S43701.03	MW-22-19	Groundwater	12/20/22 10:45
S43701.04	MW-22-18	Groundwater	12/20/22 12:00
S43701.05	MW-22-16	Groundwater	12/20/22 12:50
S43701.06	MW-22-17	Groundwater	12/20/22 13:35



Analytical Laboratory Report

Lab Sample ID: S43701.01

Sample Tag: MW-22-21

Collected Date/Time: 12/20/2022 06:10

Matrix: Groundwater

COC Reference: 145629

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.19/6.49/9	ASTMD7979-19M	01/11/23 14:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 01/12/23 22:50, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	9.6		ng/L	1.91	375-22-4		
PFPeA*	Not detected	3.8		ng/L	1.91	2706-90-3		
4:2 FTSA*	Not detected	1.9		ng/L	1.91	757124-72-4		
PFHxA*	Not detected	1.9		ng/L	1.91	307-24-4		
PFBS*	4.7	1.9		ng/L	1.91	375-73-5		
PFHpA*	Not detected	1.9		ng/L	1.91	375-85-9		
PFPeS*	Not detected	1.9		ng/L	1.91	2706-91-4		
6:2 FTSA*	Not detected	1.9		ng/L	1.91	27619-97-2		
PFOA*	4.0	1.9		ng/L	1.91	335-67-1		
PFHxS*	24	1.9		ng/L	1.91	355-46-4		
PFHxS-LN*	18	1.9		ng/L	1.91	355-46-4-LN		
PFHxS-BR*	5.8	1.9		ng/L	1.91	355-46-4-BR		
PFNA*	Not detected	1.9		ng/L	1.91	375-95-1		
8:2 FTSA*	Not detected	1.9		ng/L	1.91	39108-34-4		
PFHpS*	Not detected	1.9		ng/L	1.91	375-92-8		
PFDA*	Not detected	1.9		ng/L	1.91	335-76-2		
N-MeFOSAA*	Not detected	1.9		ng/L	1.91	2355-31-9		
EtFOSAA*	Not detected	3.8		ng/L	1.91	2991-50-6		
PFOS*	Not detected	1.9		ng/L	1.91	1763-23-1		
PFOS-LN*	Not detected	1.9		ng/L	1.91	1763-23-1-LN		
PFOS-BR*	Not detected	1.9		ng/L	1.91	1763-23-1-BR		
PFUnDA*	Not detected	1.9		ng/L	1.91	2058-94-8		
PFNS*	Not detected	1.9		ng/L	1.91	68259-12-1		
PFDoDA*	Not detected	1.9		ng/L	1.91	307-55-1		
PFDS*	Not detected	1.9		ng/L	1.91	335-77-3		
PFTTrDA*	Not detected	1.9		ng/L	1.91	72629-94-8		
FOSA*	Not detected	1.9		ng/L	1.91	754-91-6		
PFTeDA*	Not detected	3.8		ng/L	1.91	376-06-7		
11Cl-PF3OUdS*	Not detected	1.9		ng/L	1.91	763051-92-9		
9Cl-PF3ONS*	Not detected	1.9		ng/L	1.91	756426-58-1		
ADONA*	Not detected	1.9		ng/L	1.91	919005-14-4		
HFPO-DA*	Not detected	9.6		ng/L	1.91	13252-13-6		
PFECHS*	Not detected	1.9		ng/L	1.91	67584-42-3		
PFBSA*	Not detected	1.9		ng/L	1.91	30334-69-1		
PFHxSA*	Not detected	1.9		ng/L	1.91	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43701.02

Sample Tag: MW-22-20

Collected Date/Time: 12/20/2022 09:40

Matrix: Groundwater

COC Reference: 145629

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.47/6.53/10	ASTMD7979-19M	01/11/23 14:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 01/12/23 23:10, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	12	10		ng/L	2.02	375-22-4		
PFPeA*	4.0	4.0		ng/L	2.02	2706-90-3		
4:2 FTSA*	Not detected	2.0		ng/L	2.02	757124-72-4		
PFHxA*	4.0	2.0		ng/L	2.02	307-24-4		
PFBS*	6.1	2.0		ng/L	2.02	375-73-5		
PFHpA*	2.9	2.0		ng/L	2.02	375-85-9		
PFPeS*	Not detected	2.0		ng/L	2.02	2706-91-4		
6:2 FTSA*	Not detected	2.0		ng/L	2.02	27619-97-2		
PFOA*	6.0	2.0		ng/L	2.02	335-67-1		
PFHxS*	13	2.0		ng/L	2.02	355-46-4		
PFHxS-LN*	10	2.0		ng/L	2.02	355-46-4-LN		
PFHxS-BR*	2.8	2.0		ng/L	2.02	355-46-4-BR		
PFNA*	Not detected	2.0		ng/L	2.02	375-95-1		
8:2 FTSA*	Not detected	2.0		ng/L	2.02	39108-34-4		
PFHpS*	Not detected	2.0		ng/L	2.02	375-92-8		
PFDA*	Not detected	2.0		ng/L	2.02	335-76-2		
N-MeFOSAA*	Not detected	2.0		ng/L	2.02	2355-31-9		
EtFOSAA*	Not detected	4.0		ng/L	2.02	2991-50-6		
PFOS*	4.5	2.0		ng/L	2.02	1763-23-1		
PFOS-LN*	Not detected	2.0		ng/L	2.02	1763-23-1-LN		
PFOS-BR*	2.8	2.0		ng/L	2.02	1763-23-1-BR		
PFUnDA*	Not detected	2.0		ng/L	2.02	2058-94-8		
PFNS*	Not detected	2.0		ng/L	2.02	68259-12-1		
PFDODA*	Not detected	2.0		ng/L	2.02	307-55-1		
PFDS*	Not detected	2.0		ng/L	2.02	335-77-3		
PFTTrDA*	Not detected	2.0		ng/L	2.02	72629-94-8		
FOSA*	Not detected	2.0		ng/L	2.02	754-91-6		
PFTeDA*	Not detected	4.0		ng/L	2.02	376-06-7		
11Cl-PF3OUdS*	Not detected	2.0		ng/L	2.02	763051-92-9		
9Cl-PF3ONS*	Not detected	2.0		ng/L	2.02	756426-58-1		
ADONA*	Not detected	2.0		ng/L	2.02	919005-14-4		
HFPO-DA*	Not detected	10		ng/L	2.02	13252-13-6		
PFECHS*	Not detected	2.0		ng/L	2.02	67584-42-3		
PFBSA*	Not detected	2.0		ng/L	2.02	30334-69-1		
PFHxSA*	Not detected	2.0		ng/L	2.02	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43701.03

Sample Tag: MW-22-19

Collected Date/Time: 12/20/2022 10:45

Matrix: Groundwater

COC Reference: 145629

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.29/6.51/9	ASTMD7979-19M	01/11/23 14:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 01/12/23 23:29, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	12	9.4		ng/L	1.88	375-22-4		
PFPeA*	6.5	3.8		ng/L	1.88	2706-90-3		
4:2 FTSA*	Not detected	1.9		ng/L	1.88	757124-72-4		
PFHxA*	8.1	1.9		ng/L	1.88	307-24-4		
PFBS*	6.2	1.9		ng/L	1.88	375-73-5		
PFHpA*	7.1	1.9		ng/L	1.88	375-85-9		
PFPeS*	Not detected	1.9		ng/L	1.88	2706-91-4		
6:2 FTSA*	Not detected	1.9		ng/L	1.88	27619-97-2		
PFOA*	19	1.9		ng/L	1.88	335-67-1		
PFHxS*	9.3	1.9		ng/L	1.88	355-46-4		
PFHxS-LN*	7.3	1.9		ng/L	1.88	355-46-4-LN		
PFHxS-BR*	2.0	1.9		ng/L	1.88	355-46-4-BR		
PFNA*	2.2	1.9		ng/L	1.88	375-95-1		
8:2 FTSA*	Not detected	1.9		ng/L	1.88	39108-34-4		
PFHpS*	Not detected	1.9		ng/L	1.88	375-92-8		
PFDA*	Not detected	1.9		ng/L	1.88	335-76-2		
N-MeFOSAA*	Not detected	1.9		ng/L	1.88	2355-31-9		
EtFOSAA*	Not detected	3.8		ng/L	1.88	2991-50-6		
PFOS*	19	1.9		ng/L	1.88	1763-23-1		
PFOS-LN*	9.9	1.9		ng/L	1.88	1763-23-1-LN		
PFOS-BR*	8.5	1.9		ng/L	1.88	1763-23-1-BR		
PFUnDA*	Not detected	1.9		ng/L	1.88	2058-94-8		
PFNS*	Not detected	1.9		ng/L	1.88	68259-12-1		
PFDODA*	Not detected	1.9		ng/L	1.88	307-55-1		
PFDS*	Not detected	1.9		ng/L	1.88	335-77-3		
PFTTrDA*	Not detected	1.9		ng/L	1.88	72629-94-8		
FOSA*	Not detected	1.9		ng/L	1.88	754-91-6		
PFTeDA*	Not detected	3.8		ng/L	1.88	376-06-7		
11Cl-PF3OUdS*	Not detected	1.9		ng/L	1.88	763051-92-9		
9Cl-PF3ONS*	Not detected	1.9		ng/L	1.88	756426-58-1		
ADONA*	Not detected	1.9		ng/L	1.88	919005-14-4		
HFPO-DA*	Not detected	9.4		ng/L	1.88	13252-13-6		
PFECHS*	Not detected	1.9		ng/L	1.88	67584-42-3		
PFBSA*	Not detected	1.9		ng/L	1.88	30334-69-1		
PFHxSA*	Not detected	1.9		ng/L	1.88	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43701.04

Sample Tag: MW-22-18

Collected Date/Time: 12/20/2022 12:00

Matrix: Groundwater

COC Reference: 145629

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.57/6.51/10	ASTMD7979-19M	01/11/23 14:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 01/12/23 23:49, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	10	9.9		ng/L	1.98	375-22-4		
PFPeA*	7.9	4.0		ng/L	1.98	2706-90-3		
4:2 FTSA*	Not detected	2.0		ng/L	1.98	757124-72-4		
PFHxA*	9.2	2.0		ng/L	1.98	307-24-4		
PFBS*	4.8	2.0		ng/L	1.98	375-73-5		
PFHpA*	8.1	2.0		ng/L	1.98	375-85-9		
PFPeS*	Not detected	2.0		ng/L	1.98	2706-91-4		
6:2 FTSA*	Not detected	2.0		ng/L	1.98	27619-97-2		
PFOA*	19	2.0		ng/L	1.98	335-67-1		
PFHxS*	6.2	2.0		ng/L	1.98	355-46-4		
PFHxS-LN*	4.8	2.0		ng/L	1.98	355-46-4-LN		
PFHxS-BR*	Not detected	2.0		ng/L	1.98	355-46-4-BR		
PFNA*	Not detected	2.0		ng/L	1.98	375-95-1		
8:2 FTSA*	Not detected	2.0		ng/L	1.98	39108-34-4		
PFHpS*	Not detected	2.0		ng/L	1.98	375-92-8		
PFDA*	Not detected	2.0		ng/L	1.98	335-76-2		
N-MeFOSAA*	Not detected	2.0		ng/L	1.98	2355-31-9		
EtFOSAA*	Not detected	4.0		ng/L	1.98	2991-50-6		
PFOS*	11	2.0		ng/L	1.98	1763-23-1		
PFOS-LN*	4.7	2.0		ng/L	1.98	1763-23-1-LN		
PFOS-BR*	6.4	2.0		ng/L	1.98	1763-23-1-BR		
PFUnDA*	Not detected	2.0		ng/L	1.98	2058-94-8		
PFNS*	Not detected	2.0		ng/L	1.98	68259-12-1		
PFDoDA*	Not detected	2.0		ng/L	1.98	307-55-1		
PFDS*	Not detected	2.0		ng/L	1.98	335-77-3		
PFTTrDA*	Not detected	2.0		ng/L	1.98	72629-94-8		
FOSA*	Not detected	2.0		ng/L	1.98	754-91-6		
PFTeDA*	Not detected	4.0		ng/L	1.98	376-06-7		
11Cl-PF3OUdS*	Not detected	2.0		ng/L	1.98	763051-92-9		
9Cl-PF3ONS*	Not detected	2.0		ng/L	1.98	756426-58-1		
ADONA*	Not detected	2.0		ng/L	1.98	919005-14-4		
HFPO-DA*	Not detected	9.9		ng/L	1.98	13252-13-6		
PFECHS*	Not detected	2.0		ng/L	1.98	67584-42-3		
PFBSA*	Not detected	2.0		ng/L	1.98	30334-69-1		
PFHxSA*	Not detected	2.0		ng/L	1.98	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43701.05

Sample Tag: MW-22-16

Collected Date/Time: 12/20/2022 12:50

Matrix: Groundwater

COC Reference: 145629

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.58/6.51/10	ASTMD7979-19M	01/11/23 14:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 01/13/23 00:08, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	9.9		ng/L	1.97	375-22-4		
PFPeA*	Not detected	3.9		ng/L	1.97	2706-90-3		
4:2 FTSA*	Not detected	2.0		ng/L	1.97	757124-72-4		
PFHxA*	2.1	2.0		ng/L	1.97	307-24-4		
PFBS*	3.0	2.0		ng/L	1.97	375-73-5		
PFHpA*	Not detected	2.0		ng/L	1.97	375-85-9		
PFPeS*	Not detected	2.0		ng/L	1.97	2706-91-4		
6:2 FTSA*	Not detected	2.0		ng/L	1.97	27619-97-2		
PFOA*	6.8	2.0		ng/L	1.97	335-67-1		
PFHxS*	2.9	2.0		ng/L	1.97	355-46-4		
PFHxS-LN*	2.3	2.0		ng/L	1.97	355-46-4-LN		
PFHxS-BR*	Not detected	2.0		ng/L	1.97	355-46-4-BR		
PFNA*	Not detected	2.0		ng/L	1.97	375-95-1		
8:2 FTSA*	Not detected	2.0		ng/L	1.97	39108-34-4		
PFHpS*	Not detected	2.0		ng/L	1.97	375-92-8		
PFDA*	Not detected	2.0		ng/L	1.97	335-76-2		
N-MeFOSAA*	Not detected	2.0		ng/L	1.97	2355-31-9		
EtFOSAA*	Not detected	3.9		ng/L	1.97	2991-50-6		
PFOS*	Not detected	2.0		ng/L	1.97	1763-23-1		
PFOS-LN*	Not detected	2.0		ng/L	1.97	1763-23-1-LN		
PFOS-BR*	Not detected	2.0		ng/L	1.97	1763-23-1-BR		
PFUnDA*	Not detected	2.0		ng/L	1.97	2058-94-8		
PFNS*	Not detected	2.0		ng/L	1.97	68259-12-1		
PFDODA*	Not detected	2.0		ng/L	1.97	307-55-1		
PFDS*	Not detected	2.0		ng/L	1.97	335-77-3		
PFTTrDA*	Not detected	2.0		ng/L	1.97	72629-94-8		
FOSA*	Not detected	2.0		ng/L	1.97	754-91-6		
PFTeDA*	Not detected	3.9		ng/L	1.97	376-06-7		
11Cl-PF3OUdS*	Not detected	2.0		ng/L	1.97	763051-92-9		
9Cl-PF3ONS*	Not detected	2.0		ng/L	1.97	756426-58-1		
ADONA*	Not detected	2.0		ng/L	1.97	919005-14-4		
HFPO-DA*	Not detected	9.9		ng/L	1.97	13252-13-6		
PFECHS*	Not detected	2.0		ng/L	1.97	67584-42-3		
PFBSA*	Not detected	2.0		ng/L	1.97	30334-69-1		
PFHxSA*	Not detected	2.0		ng/L	1.97	41997-13-1		



Analytical Laboratory Report

Lab Sample ID: S43701.06

Sample Tag: MW-22-17

Collected Date/Time: 12/20/2022 13:35

Matrix: Groundwater

COC Reference: 145629

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.0	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.33/6.52/9	ASTMD7979-19M	01/11/23 14:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 01/13/23 00:28, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	9.4		ng/L	1.87	375-22-4		
PFPeA*	6.5	3.7		ng/L	1.87	2706-90-3		
4:2 FTSA*	Not detected	1.9		ng/L	1.87	757124-72-4		
PFHxA*	5.8	1.9		ng/L	1.87	307-24-4		
PFBS*	3.1	1.9		ng/L	1.87	375-73-5		
PFHpA*	3.3	1.9		ng/L	1.87	375-85-9		
PFPeS*	Not detected	1.9		ng/L	1.87	2706-91-4		
6:2 FTSA*	Not detected	1.9		ng/L	1.87	27619-97-2		
PFOA*	8.6	1.9		ng/L	1.87	335-67-1		
PFHxS*	2.6	1.9		ng/L	1.87	355-46-4		
PFHxS-LN*	1.9	1.9		ng/L	1.87	355-46-4-LN		
PFHxS-BR*	Not detected	1.9		ng/L	1.87	355-46-4-BR		
PFNA*	Not detected	1.9		ng/L	1.87	375-95-1		
8:2 FTSA*	Not detected	1.9		ng/L	1.87	39108-34-4		
PFHpS*	Not detected	1.9		ng/L	1.87	375-92-8		
PFDA*	Not detected	1.9		ng/L	1.87	335-76-2		
N-MeFOSAA*	Not detected	1.9		ng/L	1.87	2355-31-9		
EtFOSAA*	Not detected	3.7		ng/L	1.87	2991-50-6		
PFOS*	Not detected	1.9		ng/L	1.87	1763-23-1		
PFOS-LN*	Not detected	1.9		ng/L	1.87	1763-23-1-LN		
PFOS-BR*	Not detected	1.9		ng/L	1.87	1763-23-1-BR		
PFUnDA*	Not detected	1.9		ng/L	1.87	2058-94-8		
PFNS*	Not detected	1.9		ng/L	1.87	68259-12-1		
PFDoDA*	Not detected	1.9		ng/L	1.87	307-55-1		
PFDS*	Not detected	1.9		ng/L	1.87	335-77-3		
PFTTrDA*	Not detected	1.9		ng/L	1.87	72629-94-8		
FOSA*	Not detected	1.9		ng/L	1.87	754-91-6		
PFTeDA*	Not detected	3.7		ng/L	1.87	376-06-7		
11Cl-PF3OUdS*	Not detected	1.9		ng/L	1.87	763051-92-9		
9Cl-PF3ONS*	Not detected	1.9		ng/L	1.87	756426-58-1		
ADONA*	Not detected	1.9		ng/L	1.87	919005-14-4		
HFPO-DA*	Not detected	9.4		ng/L	1.87	13252-13-6		
PFECHS*	Not detected	1.9		ng/L	1.87	67584-42-3		
PFBSA*	Not detected	1.9		ng/L	1.87	30334-69-1		
PFHxSA*	Not detected	1.9		ng/L	1.87	41997-13-1		

Merit Laboratories Login Checklist

Lab Set ID:S43701

Client:TRC (TRC)

Project: Southern Boundary Detroit Axle

Submitted: 12/21/2022 10:20 Login User: MMC

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place

Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Selection	Description	Note
Sample Receiving		
01.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples are received at 4C +/- 2C Thermometer # IR 4.0
02.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Received on ice/ cooling process begun
03.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples shipped
04.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples left in 24 hr. drop box
05.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Are there custody seals/tape or is the drop box locked
Chain of Custody		
06.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC adequately filled out
07.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC signed and relinquished to the lab
08.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sample tag on bottles match COC
09.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Subcontracting needed? Subcontracted to:
Preservation		
10.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Do sample have correct chemical preservation
11.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Completed pH checks on preserved samples? (no VOAs)
12.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Did any samples need to be preserved in the lab?
Bottle Conditions		
13.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	All bottles intact
14.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Appropriate analytical bottles are used
15.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Merit bottles used
16.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sufficient sample volume received
17.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples require laboratory filtration
18.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples submitted within holding time
19.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Do water VOC or TOX bottles contain headspace

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____



2680 East Lansing Dr., East Lansing, MI 48823
 Phone (517) 332-0167 Fax (517) 332-4034
 www.meritlabs.com

C.O.C. PAGE # 1 OF 1 145629

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME Kelly Cratsen burg
 COMPANY TRC
 ADDRESS 1540 Eisenhower Place
 CITY Ann Arbor STATE MI ZIP CODE 48106
 PHONE NO. _____ FAX NO. _____ P.O. NO. 193431
 E-MAIL ADDRESS kcratsenburg@trccompanies.com QUOTE NO. _____

CONTACT NAME _____ SAME
 COMPANY _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP CODE _____
 PHONE NO. _____ E-MAIL ADDRESS _____

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME Southern Boundary Detroit A16 SAMPLER(S) PLEASE PRINT/SIGN NAME Javier Jasso
 TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____
 DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER TRCAD

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

Containers & Preservatives

MERIT LAB NO. FOR LAB USE ONLY	DATE		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	Analysis							Certifications	Special Instructions		
	YEAR	TIME											VOC + TIC	1,4 Dioxane	SVOC + TIC	metals	PFAS 31	PCBs	Thorium			3 Alcohols	Tot. carbonyl level
43700.01	12/20	0800	MW-22-24	W	17	+	+	+						+	+	+	+	+	+	+			43701.01
.02	"	"	MW-22-20	W	17	+	+	+						+	+	+	+	+	+	+			.02
.03	"	"	MW-22-19	W	17	+	+	+						+	+	+	+	+	+	+			.03
.04	"	"	MW-22-18	W	17	+	+	+						+	+	+	+	+	+	+			.04
.05	"	"	MW-22-14	W	17	+	+	+						+	+	+	+	+	+	+			.05
.06	"	"	MW-22-17	W	17	+	+	+						+	+	+	+	+	+	+			.06

RELINQUISHED BY: SIGNATURE/ORGANIZATION [Signature] TRC DATE 12/20/22 TIME 1600
 RECEIVED BY: SIGNATURE/ORGANIZATION [Signature] TRC DATE 12/20/22 TIME _____
 RELINQUISHED BY: SIGNATURE/ORGANIZATION [Signature] TRC DATE 12/21/22 TIME 0800
 RECEIVED BY: SIGNATURE/ORGANIZATION [Signature] DATE 12/21/22 TIME 0800

RELINQUISHED BY: SIGNATURE/ORGANIZATION [Signature] TRC DATE 12/20/22 TIME 1500
 RECEIVED BY: SIGNATURE/ORGANIZATION [Signature] DATE 12/21/22 TIME 1020
 SEAL NO. _____ SEAL INTACT YES NO INITIALS _____ NOTES: TEMP. ON ARRIVAL 4.0
 SEAL NO. _____ SEAL INTACT YES NO INITIALS _____



Analytical Laboratory Report

Report ID: S43820.01(01)
Generated on 01/23/2023

Report to

Attention: Kelly Cratsenburg
TRC
1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: 734-412-5424 FAX:
Email: KCratsenburg@trccompanies.com

Additional Contacts: Vince Buening

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:

John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S43820.01
Project: Detroit Axle - Southern Boundary
Collected Date(s): 12/27/2022
Submitted Date/Time: 12/27/2022 09:50
Sampled by: Javier Jasso
P.O. #: 193431

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Sample Summary (Page 5)

Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
ASTMD7979-19M	ASTM Method D7979 - 19 Modified (Isotopic Dilution)

Parameter Summary

Parameter	Synonym	Cas #
PFBA	Perfluorobutanoic Acid	375-22-4
PFPeA	Perfluoropentanoic Acid	2706-90-3
4:2 FTSA	4:2 Fluorotelomer Sulfonic Acid	757124-72-4
PFHxA	Perfluorohexanoic Acid	307-24-4
PFBS	Perfluorobutane sulfonic Acid	375-73-5
PFHpA	Perfluoroheptanoic Acid	375-85-9
PFPeS	Perfluoropentane Sulfonic Acid	2706-91-4
6:2 FTSA	6:2 Fluorotelomer Sulfonic Acid	27619-97-2
PFOA	Perfluorooctanoic Acid	335-67-1
PFHxS	Perfluorohexane Sulfonic Acid	355-46-4
PFHxS-LN	Perfluorohexane Sulfonic Acid - LN	355-46-4-LN
PFHxS-BR	Perfluorohexane Sulfonic Acid - BR	355-46-4-BR
PFNA	Perfluorononanoic Acid	375-95-1
8:2 FTSA	8:2 Fluorotelomer Sulfonic Acid	39108-34-4
PFHpS	Perfluoroheptane Sulfonic Acid	375-92-8
PFDA	Perfluorodecanoic Acid	335-76-2
N-MeFOSAA	N-methyl perfluorooctanesulfonamidoacetic acid	2355-31-9
EtFOSAA	N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	2991-50-6
PFOS	Perfluorooctane Sulfonic Acid	1763-23-1
PFOS-LN	Perfluorooctane Sulfonic Acid - LN	1763-23-1-LN
PFOS-BR	Perfluorooctane Sulfonic Acid - BR	1763-23-1-BR
PFUnDA	Perfluoroundecanoic Acid	2058-94-8
PFNS	Perfluorononane Sulfonic Acid	68259-12-1
PFDoDA	Perfluorododecanoic Acid	307-55-1
PFDS	Perfluorodecane Sulfonic Acid	335-77-3
PFTTrDA	Perfluorotridecanoic Acid	72629-94-8
FOSA	Perfluorooctane Sulfonamide	754-91-6
PFTeDA	Perfluorotetradecanoic Acid	376-06-7
11Cl-PF3OUdS	11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	763051-92-9
9Cl-PF3ONS	9-chlorohexadecafluoro-3-oxanone1-sulfonic acid	756426-58-1
ADONA	4,8-dioxa-3H-perfluorononanoic acid	919005-14-4
HFPO-DA	Hexafluoropropylene oxide dimer	13252-13-6
PFECBS	Perfluoro-4-ethylcyclohexanesulfonate	67584-42-3
PFBSA	Perfluorobutanesulfonamide	30334-69-1
PFHxSA	Perfluorohexanesulfonamide	41997-13-1



Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S43820.01	MW-22-22D	Groundwater	12/27/22 07:40



Analytical Laboratory Report

Lab Sample ID: S43820.01

Sample Tag: MW-22-22D

Collected Date/Time: 12/27/2022 07:40

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	4.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.32/6.51/10	ASTMD7979-19M	01/13/23 14:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 01/15/23 20:20, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PFBA*	Not detected	10		ng/L	2.08	375-22-4		
PFPeA*	Not detected	4.2		ng/L	2.08	2706-90-3		
4:2 FTSA*	Not detected	2.1		ng/L	2.08	757124-72-4		
PFHxA*	Not detected	2.1		ng/L	2.08	307-24-4		
PFBS*	Not detected	2.1		ng/L	2.08	375-73-5		
PFHpA*	Not detected	2.1		ng/L	2.08	375-85-9		
PFPeS*	Not detected	2.1		ng/L	2.08	2706-91-4		
6:2 FTSA*	Not detected	2.1		ng/L	2.08	27619-97-2		
PFOA*	Not detected	2.1		ng/L	2.08	335-67-1		
PFHxS*	Not detected	2.1		ng/L	2.08	355-46-4		
PFHxS-LN*	Not detected	2.1		ng/L	2.08	355-46-4-LN		
PFHxS-BR*	Not detected	2.1		ng/L	2.08	355-46-4-BR		
PFNA*	Not detected	2.1		ng/L	2.08	375-95-1		
8:2 FTSA*	Not detected	2.1		ng/L	2.08	39108-34-4		
PFHpS*	Not detected	2.1		ng/L	2.08	375-92-8		
PFDA*	Not detected	2.1		ng/L	2.08	335-76-2		
N-MeFOSAA*	Not detected	2.1		ng/L	2.08	2355-31-9		
EtFOSAA*	Not detected	4.2		ng/L	2.08	2991-50-6		
PFOS*	Not detected	2.1		ng/L	2.08	1763-23-1		
PFOS-LN*	Not detected	2.1		ng/L	2.08	1763-23-1-LN		
PFOS-BR*	Not detected	2.1		ng/L	2.08	1763-23-1-BR		
PFUnDA*	Not detected	2.1		ng/L	2.08	2058-94-8		
PFNS*	Not detected	2.1		ng/L	2.08	68259-12-1		
PFDODA*	Not detected	2.1		ng/L	2.08	307-55-1		
PFDS*	Not detected	2.1		ng/L	2.08	335-77-3		
PFTTrDA*	Not detected	2.1		ng/L	2.08	72629-94-8		
FOSA*	Not detected	2.1		ng/L	2.08	754-91-6		
PFTeDA*	Not detected	4.2		ng/L	2.08	376-06-7		
11Cl-PF3OUdS*	Not detected	2.1		ng/L	2.08	763051-92-9		
9Cl-PF3ONS*	Not detected	2.1		ng/L	2.08	756426-58-1		
ADONA*	Not detected	2.1		ng/L	2.08	919005-14-4		
HFPO-DA*	Not detected	10		ng/L	2.08	13252-13-6		
PFECHS*	Not detected	2.1		ng/L	2.08	67584-42-3		
PFBSA*	Not detected	2.1		ng/L	2.08	30334-69-1		
PFHxSA*	Not detected	2.1		ng/L	2.08	41997-13-1		

Merit Laboratories Login Checklist

Lab Set ID:S43820

Client:TRC (TRC)

Project: Detroit Axle - Southern Boundary

Submitted: 12/27/2022 09:50 Login User: JRM

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place

Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Selection	Description	Note
-----------	-------------	------

Sample Receiving

- | | | |
|-----|--|--|
| 01. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples are received at 4C +/- 2C Thermometer # IR 4.4 |
| 02. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Received on ice/ cooling process begun |
| 03. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples shipped |
| 04. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples left in 24 hr. drop box |
| 05. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Are there custody seals/tape or is the drop box locked |

Chain of Custody

- | | | |
|-----|--|--|
| 06. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC adequately filled out |
| 07. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC signed and relinquished to the lab |
| 08. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sample tag on bottles match COC |
| 09. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Subcontracting needed? Subcontracted to: |

Preservation

- | | | |
|-----|--|---|
| 10. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Do sample have correct chemical preservation |
| 11. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Completed pH checks on preserved samples? (no VOAs) |
| 12. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Did any samples need to be preserved in the lab? |

Bottle Conditions

- | | | |
|-----|--|---|
| 13. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | All bottles intact |
| 14. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Appropriate analytical bottles are used |
| 15. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Merit bottles used |
| 16. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sufficient sample volume received |
| 17. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples require laboratory filtration |
| 18. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples submitted within holding time |
| 19. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Do water VOC or TOX bottles contain headspace |

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____



2680 East Lansing Dr., East Lansing, MI 48823
Phone (517) 332-0167 Fax (517) 332-4034
www.meritlabs.com

C.O.C. PAGE # _____ OF _____

REPORT TO				CHAIN OF CUSTODY RECORD						INVOICE TO			
CONTACT NAME Kelly Cratsenburg				CONTACT NAME						<input type="checkbox"/> SAME			
COMPANY TRC				COMPANY									
ADDRESS 1540 Eisenhower Place				ADDRESS									
CITY Ann Arbor		STATE MI		ZIP CODE 48108		CITY		STATE		ZIP CODE			
PHONE NO.		FAX NO.		P.O. NO. 193431		PHONE NO.		E-MAIL ADDRESS					
E-MAIL ADDRESS kcratsenburg@trccompanies.com				QUOTE NO.									

PROJECT NO./NAME **Detroit Axle - Southern Boundary** SAMPLER(S) - PLEASE PRINT/SIGN NAME **Javier Jasso**

TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER

DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER TRC EDD

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

Containers & Preservatives

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	20 YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	31 PFAS
	DATE	TIME											
43820.01	12/27	07:00	MW-22-22D	GW	3	3							<input checked="" type="checkbox"/>

Certifications
 OHIO VAP Drinking Water
 DoD NPDES

Project Locations
 Detroit New York
 Other _____

Special Instructions

RELINQUISHED BY: DATE **12/27/22** TIME **09:50**

RECEIVED BY: **Johanna Murray** DATE **12/27/22** TIME **09:50**

RELINQUISHED BY: _____ DATE _____ TIME _____

RECEIVED BY: _____ DATE _____ TIME _____

RELINQUISHED BY: _____ DATE _____ TIME _____

RECEIVED BY: _____ DATE _____ TIME _____

SEAL NO. SEAL INTACT YES NO INITIALS _____

SEAL NO. SEAL INTACT YES NO INITIALS _____

NOTES: TEMP. ON ARRIVAL **4.4**



Analytical Laboratory Report

Report ID: S43821.01(01)
Generated on 01/27/2023

Report to

Attention: Kelly Cratsenburg
TRC
1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: 734-412-5424 FAX:
Email: KCratsenburg@trccompanies.com

Additional Contacts: Vince Buening

Report produced by

Merit Laboratories, Inc.
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Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:

John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S43821.01
Project: Detroit Axle - Southern Boundary
Collected Date(s): 12/27/2022
Submitted Date/Time: 12/27/2022 09:50
Sampled by: Javier Jasso
P.O. #: 193431

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Maya Murshak
Technical Director



Analytical Laboratory Report

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Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

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Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

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MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
E200.8	EPA Method 200.8 Revision 5.4
E245.1	EPA Method 245.1 Revision 3.0
E608.3	EPA Method 608.3 December 2016
N/A	Not Applicable
SW3015A	SW 846 Method 3015A Revision 1 February 2007
SW3510C	SW 846 Method 3510C Revision 3 December 1996
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003
SW8260B - SIM	SW 846 Method 8260B Revision 2 December 1996 SIMs
SW8270D	SW 846 Method 8270D Revision 4 February 2007



Analytical Laboratory Report

Sample Summary (1 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S43821.01	MW-22-22D	Groundwater	12/27/22 07:40



Analytical Laboratory Report

Lab Sample ID: S43821.01

Sample Tag: MW-22-22D

Collected Date/Time: 12/27/2022 07:40

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	4.4	IR
3	40ml Glass	None	Yes	4.4	IR
2	125ml Plastic	HNO3	Yes	4.4	IR
4	1L Amber	None	Yes	4.4	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	12/28/22 14:06	CTV	
pH check for VOCs*	<2	N/A	12/28/22 11:30	BML	
Metal Digestion	Completed	SW3015A	12/27/22 10:10	CCM	
BNA Extraction	Completed	SW3510C	01/03/23 13:00	JWR	
Extraction, PCB*	Completed	E608.3	01/03/23 13:00	JWR	

Metals

Method: E200.8, Run Date: 12/29/22 12:01, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Boron	1.55	0.04		mg/L	5	7440-42-8		

Method: E200.8, Run Date: 12/27/22 14:08, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Sodium	1,040	10.0		mg/L	100	7440-23-5		

Method: E200.8, Run Date: 12/27/22 12:01, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.067	0.010		mg/L	2	7429-90-5		
Antimony*	0.001	0.001		mg/L	2	7440-36-0		
Arsenic	0.005	0.002		mg/L	2	7440-38-2		
Barium	0.735	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.37	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.135	0.005		mg/L	2	7439-96-5		
Molybdenum	0.053	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	0.007	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	4.67	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	0.008	0.005		mg/L	2	7440-66-6		



Analytical Laboratory Report

Lab Sample ID: S43821.01 (continued)

Sample Tag: MW-22-22D

Method: E200.8, Run Date: 12/27/22 13:58, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	177	0.50		mg/L	2	7440-70-2		
Magnesium	72.3	0.50		mg/L	2	7439-95-4		
Potassium	12.1	0.50		mg/L	2	7440-09-7		

Method: E245.1, Run Date: 12/28/22 17:34, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - PCBs/Pesticides

PCB, Method: E608.3, Run Date: 01/03/23 14:24, Analyst: ELR

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
PCB-1016	Not detected	0.1		ug/L	1	12674-11-2		
PCB-1221	Not detected	0.1		ug/L	1	11104-28-2		
PCB-1232	Not detected	0.1		ug/L	1	11141-16-5		
PCB-1242	Not detected	0.1		ug/L	1	53469-21-9		
PCB-1248	Not detected	0.1		ug/L	1	12672-29-6		
PCB-1254	Not detected	0.1		ug/L	1	11097-69-1		
PCB-1260	Not detected	0.1		ug/L	1	11096-82-5		
PCB, Total*	Not detected	0.1		ug/L	1	1336-36-3		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 01/04/23 19:11, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		



Analytical Laboratory Report

Lab Sample ID: S43821.01 (continued)

Sample Tag: MW-22-22D

Method: SW8270D, Run Date: 01/04/23 19:11, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 01/04/23 08:37, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW8260B - SIM, Run Date: 01/06/23 13:25, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	2		ug/L	1	123-91-1	X	

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/28/22 05:42, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		

X-Elevated reporting limit due to matrix interference



Analytical Laboratory Report

Lab Sample ID: S43821.01 (continued)

Sample Tag: MW-22-22D

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/28/22 05:42, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	7	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	3	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		



Analytical Laboratory Report

Lab Sample ID: S43821.01 (continued)

Sample Tag: MW-22-22D

Volatile Organics, Method: SW5030C/8260C, Run Date: 12/28/22 05:42, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

TICs Volatiles, Method: SW5030C/8260C, Run Date: 12/28/22 05:42, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Completed			ug/L	1			
Propane*	Found			ug/L	1			
Isobutane*	Found			ug/L	1			
Butane*	Found			ug/L	1			
Pentane*	Found			ug/L	1			
methyl-Cyclopentane*	Found			ug/L	1			
1-Pentene*	Found			ug/L	1			

Other / Misc.

Method: , Run Date: 12/31/22 22:04, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

Method: , Run Date: 01/09/23 18:26, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Misc. Special Project*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.

Merit Laboratories Login Checklist

Lab Set ID:S43821

Client:TRC (TRC)

Project: Detroit Axle - Southern Boundary

Submitted: 12/27/2022 09:50 Login User: JRM

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place

Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Selection	Description	Note
-----------	-------------	------

Sample Receiving

- | | | |
|-----|--|--|
| 01. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples are received at 4C +/- 2C Thermometer # IR 4.4 |
| 02. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Received on ice/ cooling process begun |
| 03. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples shipped |
| 04. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples left in 24 hr. drop box |
| 05. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Are there custody seals/tape or is the drop box locked |

Chain of Custody

- | | | |
|-----|--|--|
| 06. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC adequately filled out |
| 07. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC signed and relinquished to the lab |
| 08. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sample tag on bottles match COC |
| 09. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Subcontracting needed? Subcontracted to: |

Preservation

- | | | |
|-----|--|---|
| 10. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Do sample have correct chemical preservation |
| 11. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Completed pH checks on preserved samples? (no VOAs) |
| 12. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Did any samples need to be preserved in the lab? |

Bottle Conditions

- | | | |
|-----|--|---|
| 13. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | All bottles intact |
| 14. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Appropriate analytical bottles are used |
| 15. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Merit bottles used |
| 16. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sufficient sample volume received |
| 17. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples require laboratory filtration |
| 18. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples submitted within holding time |
| 19. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Do water VOC or TOX bottles contain headspace |

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____

Merit Laboratories Bottle Preservation Check

Lab Set ID: S43821 Submitted: 12/27/2022 09:50

Client: TRC (TRC)

Project: Detroit Axle - Southern Boundary

Initial Preservation Check: 12/27/2022 10:03 JRM

Preservation Recheck (E200.8): N/A

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Sample ID	Bottle / Preservation	pH (Orig)	Add ml	pH (New)	Notes
S43821.01	125ml Plastic HNO3	<2			
S43821.01	125ml Plastic HNO3	<2			

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Lab Results
Merit Laboratories
2680 E Lansing Drive
East Lansing, Michigan 48823

Generated 1/27/2023 2:03:32 PM

JOB DESCRIPTION

Merit Laboratories

JOB NUMBER

190-30713-1

Eurofins Michigan

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



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Authorized for release by
Sue Schafer, Project Manager II
Sue.Schafer@et.eurofinsus.com
(810)229-2763



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Sample Summary

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30713-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
190-30713-1	S43821.01	Water	12/27/22 07:40	12/29/22 08:00

1

2

3

4

5

6

7

8

9

10

11

12

Case Narrative

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30713-1

Job ID: 190-30713-1

Laboratory: Eurofins Michigan

Narrative

Job Narrative
190-30713-1

Receipt

The sample was received on 12/29/2022 8:00 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.1°C

GC Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

Method 6020B: preparation batch 160-595854 Due to limited sample volume, an LCS/LCSD was prepped instead of a MS/MSD.S43821.01 (190-30713-1)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.



Client Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30713-1

Client Sample ID: S43821.01

Lab Sample ID: 190-30713-1

Date Collected: 12/27/22 07:40

Matrix: Water

Date Received: 12/29/22 08:00

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<3.7		3.7	mg/L			12/31/22 22:04	1
Methanol	<3.7		3.7	mg/L			12/31/22 22:04	1
n-Butanol	<3.7		3.7	mg/L			12/31/22 22:04	1

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		01/06/23 10:33	01/09/23 18:26	2

QC Sample Results

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30713-1

Method: 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Lab Sample ID: MB 680-757529/16
Matrix: Water
Analysis Batch: 757529

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<3.7		3.7	mg/L			12/31/22 18:03	1
Methanol	<3.7		3.7	mg/L			12/31/22 18:03	1
n-Butanol	<3.7		3.7	mg/L			12/31/22 18:03	1

Lab Sample ID: LCS 680-757529/12
Matrix: Water
Analysis Batch: 757529

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethanol	20.0	18.2		mg/L		91	38 - 156
Isobutanol	20.0	18.1		mg/L		91	26 - 186
Isopropyl alcohol	20.0	18.5		mg/L		93	70 - 130
Methanol	20.0	14.9		mg/L		75	43 - 143
n-Butanol	20.0	18.3		mg/L		91	70 - 130

Lab Sample ID: LCSD 680-757529/13
Matrix: Water
Analysis Batch: 757529

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ethanol	20.0	18.5		mg/L		92	38 - 156	1	50
Isobutanol	20.0	18.6		mg/L		93	26 - 186	3	50
Isopropyl alcohol	20.0	18.8		mg/L		94	70 - 130	2	50
Methanol	20.0	15.3		mg/L		77	43 - 143	3	50
n-Butanol	20.0	18.6		mg/L		93	70 - 130	2	30

Lab Sample ID: 190-30713-1 MS
Matrix: Water
Analysis Batch: 757529

Client Sample ID: S43821.01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethanol	<3.7		20.0	19.2		mg/L		96	38 - 156
Isobutanol	<3.7		20.0	19.2		mg/L		96	26 - 186
Isopropyl alcohol	<3.7		20.0	19.9		mg/L		99	70 - 130
Methanol	<3.7		20.0	20.5		mg/L		102	43 - 143
n-Butanol	<3.7		20.0	19.8		mg/L		99	70 - 130

Lab Sample ID: 190-30713-1 MSD
Matrix: Water
Analysis Batch: 757529

Client Sample ID: S43821.01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ethanol	<3.7		20.0	16.5		mg/L		83	38 - 156	15	50
Isobutanol	<3.7		20.0	18.5		mg/L		92	26 - 186	4	50
Isopropyl alcohol	<3.7		20.0	18.5		mg/L		92	70 - 130	7	50
Methanol	<3.7		20.0	19.6		mg/L		98	43 - 143	4	50
n-Butanol	<3.7		20.0	18.4		mg/L		92	70 - 130	7	30

QC Sample Results

Client: Merit Laboratories
 Project/Site: Merit Laboratories

Job ID: 190-30713-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 160-595854/1-A
Matrix: Water
Analysis Batch: 596233

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 595854

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	<2.0		2.0	ug/L		01/06/23 10:33	01/09/23 17:55	2

Lab Sample ID: LCS 160-595854/2-A
Matrix: Water
Analysis Batch: 596233

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 595854

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Thorium	995	995		ug/L		100	80 - 120

Lab Sample ID: LCSD 160-595854/3-A
Matrix: Water
Analysis Batch: 596233

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 595854

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Thorium	995	994		ug/L		100	80 - 120	0	20

Definitions/Glossary

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30713-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Association Summary

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30713-1

GC Semi VOA

Analysis Batch: 757529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30713-1	S43821.01	Total/NA	Water	8015D	
MB 680-757529/16	Method Blank	Total/NA	Water	8015D	
LCS 680-757529/12	Lab Control Sample	Total/NA	Water	8015D	
LCSD 680-757529/13	Lab Control Sample Dup	Total/NA	Water	8015D	
190-30713-1 MS	S43821.01	Total/NA	Water	8015D	
190-30713-1 MSD	S43821.01	Total/NA	Water	8015D	

Metals

Prep Batch: 595854

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30713-1	S43821.01	Total/NA	Water	3010A	
MB 160-595854/1-A	Method Blank	Total/NA	Water	3010A	
LCS 160-595854/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 160-595854/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	

Analysis Batch: 596233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-30713-1	S43821.01	Total/NA	Water	6020B	595854
MB 160-595854/1-A	Method Blank	Total/NA	Water	6020B	595854
LCS 160-595854/2-A	Lab Control Sample	Total/NA	Water	6020B	595854
LCSD 160-595854/3-A	Lab Control Sample Dup	Total/NA	Water	6020B	595854

Lab Chronicle

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30713-1

Client Sample ID: S43821.01

Lab Sample ID: 190-30713-1

Date Collected: 12/27/22 07:40

Matrix: Water

Date Received: 12/29/22 08:00

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Analyst</u>	<u>Lab</u>	<u>Prepared or Analyzed</u>
Total/NA	Analysis	8015D		1	757529	JCK	EET SAV	12/31/22 22:04
Total/NA	Prep	3010A			595854	LKP	EET SL	01/06/23 10:33
Total/NA	Analysis	6020B		2	596233	CGB	EET SL	01/09/23 18:26

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Analyst References:

Lab: EET SAV

Batch Type: Analysis

JCK = Joshua Kellar

Lab: EET SL

Batch Type: Prep

LKP = Laura Pemberton

Batch Type: Analysis

CGB = Cory Buffington

Accreditation/Certification Summary

Client: Merit Laboratories
 Project/Site: Merit Laboratories

Job ID: 190-30713-1

Laboratory: Eurofins Savannah

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	SAVLAB	
Alabama	State	41450	06-30-23
ANAB	Dept. of Defense ELAP	L2463	09-22-24
Arkansas DEQ	State	19-015-0	02-01-23
California	State	2939	06-30-22 *
Connecticut	State	PH-0161	03-31-23
Florida	NELAP	E87052	01-09-23
Georgia	State	E87052	06-30-23
Georgia (DW)	State	803	06-30-23
Guam	State	19-007R	04-17-23
Hawaii	State	<cert No.>	06-30-23
Illinois	NELAP	200022	11-30-23
Indiana	State	C-GA-02	06-30-23
Iowa	State	353	07-01-23
Kentucky (UST)	State	NA	06-30-23
Louisiana	NELAP	30690	06-30-23
Louisiana (All)	NELAP	30690	06-30-23
Louisiana (DW)	State	LA009	12-31-22
Maine	State	GA00006	09-25-24
Maryland	State	250	12-31-23
Massachusetts	State	M-GA006	01-14-23
Michigan	State	9925	06-30-23
Mississippi	State	<cert No.>	06-30-23
Nebraska	State	NE-OS-7-04	06-30-23
New Jersey	NELAP	GA769	06-30-23
New Mexico	State	GA00006	06-30-23
New York	NELAP	10842	04-01-23
North Carolina (DW)	State	13701	07-31-23
North Carolina (WW/SW)	State	269	12-31-22
Pennsylvania	NELAP	68-00474	06-30-23
Puerto Rico	State	GA00006	01-01-24
South Carolina	State	98001	01-17-23
Tennessee	State	TN02961	06-30-23
Texas	NELAP	T1047004185-19-14	11-30-23
Texas	TCEQ Water Supply	T104704185	06-30-23
USDA	US Federal Programs	P330-18-00313	09-03-24
Virginia	NELAP	460161	06-14-23
Wisconsin	State	999819810	08-31-23
Wyoming	State	8TMS-L	06-30-23

Laboratory: Eurofins St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-23
California	Los Angeles County Sanitation Districts	10259	06-30-22 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: Merit Laboratories
 Project/Site: Merit Laboratories

Job ID: 190-30713-1

Laboratory: Eurofins St. Louis (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2886	06-30-23
Connecticut	State	PH-0241	03-31-23
Florida	NELAP	E87689	06-30-23
HI - RadChem Recognition	State	n/a	06-30-23
Illinois	NELAP	200023	11-30-23
Iowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-23
Kentucky (DW)	State	KY90125	12-31-22 *
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-23
Louisiana (All)	NELAP	04080	06-30-23
Louisiana (DW)	State	LA011	12-31-23
Maryland	State	310	09-30-23
MI - RadChem Recognition	State	9005	06-30-23
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-23
New Jersey	NELAP	MO002	06-30-23
New York	NELAP	11616	04-01-23
North Dakota	State	R-207	06-30-23
Oklahoma	NELAP	9997	08-31-23
Oregon	NELAP	4157	09-01-23
Pennsylvania	NELAP	68-00540	02-28-23
South Carolina	State	85002001	06-30-23
Texas	NELAP	T104704193	07-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-17-00028	03-11-23
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-24
Washington	State	C592	08-30-23
West Virginia DEP	State	381	10-31-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Merit Laboratories
Project/Site: Merit Laboratories

Job ID: 190-30713-1

Method	Method Description	Protocol	Laboratory
8015D	Nonhalogenated Organic Compounds - Direct Injection (GC)	SW846	EET SAV
6020B	Metals (ICP/MS)	SW846	EET SL
3010A	Preparation, Total Metals	SW846	EET SL

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

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2680 East Lansing Dr., East Lansing, MI 48823
 Phone (517) 332-0167 Fax (517) 332-4034
 www.meritlabs.com

C.O.C. PAGE # 1 OF 1

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME Project Management Team		CONTACT NAME Julie Teague	
COMPANY Merit Laboratories		COMPANY Merit Laboratories	
ADDRESS 2680 East Lansing Drive		ADDRESS 2680 East Lansing Drive	
CITY East Lansing	STATE MI	CITY East Lansing	STATE MI
PHONE NO. 517-332-0167	FAX NO. 517-332-0167	PHONE NO. 517-332-0167	ZIP CODE 48823
E-MAIL ADDRESS results@meritlabs.com		E-MAIL ADDRESS juliet@meritlabs.com	

PROJECT NO./NAME S43821	SAMPLER(S) - PLEASE PRINT/SIGN NAME					
TURNAROUND TIME REQUIRED <input type="checkbox"/> 1 DAY <input type="checkbox"/> 2 DAYS <input type="checkbox"/> 3 DAYS <input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> OTHER						
DELIVERABLES REQUIRED <input type="checkbox"/> STD <input checked="" type="checkbox"/> LEVEL II <input type="checkbox"/> LEVEL III <input type="checkbox"/> LEVEL IV <input type="checkbox"/> EDD <input type="checkbox"/> OTHER						
MATRIX CODE	GW=GROUNDWATER SL=SLUDGE	WW=WASTEWATER DW=DRINKING WATER	S=SOIL O=OIL	L=LIQUID WP=WIPE	A=AIR	SD=SOLID W=WASTE
MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	TIME 0740	IDENTIFICATION-DESCRIPTION S43821.01	SAMPLE TAG		
	12/27/22			# OF BOTTLES 4		
				# Containers & Preservatives 1		
				OTHER		
				Methanol		
				Alcohols		
				Thorium		
				Certifications		
				OHIO VAP <input type="checkbox"/> Drinking Water <input type="checkbox"/>		
				DoD <input type="checkbox"/> NPDES <input type="checkbox"/>		
				Project Locations		
				Detroit <input type="checkbox"/> New York <input type="checkbox"/>		
				Other <input type="checkbox"/>		
				Special Instructions		
				*Methanol RL 3,700ppb		
				*Ethanol, N-Butanol		
				Subcontracted to		
				Eurofins		



REL INQUIRED BY SIGNATURE/Organization	DATE 12/28/22	TIME 10:00	REL INQUIRED BY SIGNATURE/Organization	DATE 12/28/22	TIME 11:15
RECEIVED BY SIGNATURE/Organization	DATE 12-28-22	TIME 10:00	RECEIVED BY SIGNATURE/Organization	DATE 12-28-22	TIME 11:50
REL INQUIRED BY SIGNATURE/Organization	DATE 12/28/22	TIME 11:50	REL INQUIRED BY SIGNATURE/Organization	DATE 12/28/22	TIME 11:50
RECEIVED BY SIGNATURE/Organization	DATE 12/28/22	TIME 11:50	RECEIVED BY SIGNATURE/Organization	DATE 12/28/22	TIME 11:50
SEAL NO.	SEAL NO.	SEAL NO.	SEAL NO.	SEAL NO.	SEAL NO.
SEAL INTACT YES <input type="checkbox"/> NO <input type="checkbox"/>	SEAL INTACT YES <input type="checkbox"/> NO <input type="checkbox"/>	SEAL INTACT YES <input type="checkbox"/> NO <input type="checkbox"/>	SEAL INTACT YES <input type="checkbox"/> NO <input type="checkbox"/>	SEAL INTACT YES <input type="checkbox"/> NO <input type="checkbox"/>	SEAL INTACT YES <input type="checkbox"/> NO <input type="checkbox"/>
INITIALS	INITIALS	INITIALS	INITIALS	INITIALS	INITIALS
NOTES	NOTES	NOTES	NOTES	NOTES	NOTES
TEMP ON ARRIVAL	TEMP ON ARRIVAL	TEMP ON ARRIVAL	TEMP ON ARRIVAL	TEMP ON ARRIVAL	TEMP ON ARRIVAL

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE



Eurofins - Canton Sample Receipt Form/Narrative
Barberton Facility

Login # : 190-3013

Client Merit Site Name _____ Cooler unpacked by: Nancy Ryzar
Cooler Received on 12-29-22 Opened on 12-29-22
FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

Eurofins Cooler # 1A ~~Foam Box~~ Client Cooler Box Other _____
Packing material used: Bubble Wrap Foam Plastic Bag None Other _____
COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt See Multiple Cooler Form
IR GUN # IR-13 (CF -0.2 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
IR GUN # IR-16 (CF -0.1 °C) Observed Cooler Temp. 0.2 °C Corrected Cooler Temp. 0.1 °C
IR GUN # IR-17 (CF -0.3 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
-Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
-Were tamper/custody seals intact and uncompromised? Yes No NA

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? Yes No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)? Yes No
10. Were correct bottle(s) used for the test(s) indicated? Yes No
11. Sufficient quantity received to perform indicated analyses? Yes No
12. Are these work share samples and all listed on the COC? Yes No

If yes, Questions 13-17 have been checked at the originating laboratory.

13. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC291590
14. Were VOAs on the COC? Yes No
15. Were air bubbles >6 mm in any VOA vials? Yes ← Larger than this. Yes No NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
17. Was a LL Hg or Me Hg trip blank present? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other
Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES additional next page Samples processed by:

19. SAMPLE CONDITION
Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION
Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____
VOA Sample Preservation - Date/Time VOAs Frozen: _____

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

Temperature readings: _____

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u>		<u>Preservative</u>	
			<u>pH</u>	<u>Temp</u>	<u>Added (mls)</u>	<u>Lot #</u>
S43821.01	190-30713-A-1	Voa Vial 40ml - unpreserved	_____	_____	_____	_____
S43821.01	190-30713-B-1	Voa Vial 40ml - unpreserved	_____	_____	_____	_____
S43821.01	190-30713-C-1	Voa Vial 40ml - unpreserved	_____	_____	_____	_____
S43821.01	190-30713-D-1	Plastic 125mL - Nitric Acid	<2	_____	_____	_____



Analytical Laboratory Report

Report ID: S46579.01(01)
Generated on 04/03/2023

Report to
Attention: Kelly Cratsenburg
TRC
1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: 734-412-5424 FAX:
Email: KCratsenburg@trccompanies.com

Additional Contacts: Vince Buening

Report produced by
Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S46579.01-S46579.12
Project: Detroit Axle Southern Area
Collected Date(s): 03/22/2023
Submitted Date/Time: 03/23/2023 11:20
Sampled by: Unknown
P.O. #: 198396

Table of Contents

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- Method Summary (Page 4)
- Sample Summary (Page 5)

Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
E200.8	EPA Method 200.8 Revision 5.4
E245.1	EPA Method 245.1 Revision 3.0
N/A	Not Applicable
SW3015A	SW 846 Method 3015A Revision 1 February 2007
SW3510C	SW 846 Method 3510C Revision 3 December 1996
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003
SW8260B - SIM	SW 846 Method 8260B Revision 2 December 1996 SIMs
SW8270D	SW 846 Method 8270D Revision 4 February 2007



Analytical Laboratory Report

Sample Summary (12 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S46579.01	MW-103	Groundwater	03/22/23 04:52
S46579.02	Dup #01	Groundwater	03/22/23 00:01
S46579.03	MW-101	Groundwater	03/22/23 05:53
S46579.04	MW-22-09	Groundwater	03/22/23 07:17
S46579.05	MW-22-21	Groundwater	03/22/23 08:25
S46579.06	MW-22-08	Groundwater	03/22/23 09:19
S46579.07	MW-22-07	Groundwater	03/22/23 10:13
S46579.08	MW-22-10	Groundwater	03/22/23 11:14
S46579.09	MW-22-12	Groundwater	03/22/23 12:17
S46579.10	MW-22-11	Groundwater	03/22/23 13:25
S46579.11	Dup #02	Groundwater	03/22/23 00:01
S46579.12	MW-22-13	Groundwater	03/22/23 14:14



Analytical Laboratory Report

Lab Sample ID: S46579.01

Sample Tag: MW-103

Collected Date/Time: 03/22/2023 04:52

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	3.2	IR
3	40ml Glass	None	Yes	3.2	IR
1	125ml Plastic	HNO3	Yes	3.2	IR
3	1L Amber	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	03/27/23 12:25	CTV	
pH check for VOCs*	<2	N/A	03/29/23 11:00	ACK	
Metal Digestion	Completed	SW3015A	03/27/23 10:10	CCM	
BNA Extraction	Completed	SW3510C	03/27/23 13:00	JWR	

Metals

Method: E200.8, Run Date: 03/27/23 11:48, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.040	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		
Barium	0.034	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Boron	0.13	0.04		mg/L	2	7440-42-8		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.05	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.053	0.005		mg/L	2	7439-96-5		
Molybdenum	0.027	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.139	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		

Method: E200.8, Run Date: 03/27/23 15:35, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	42.8	0.50		mg/L	2	7440-70-2		
Magnesium	7.47	0.50		mg/L	2	7439-95-4		
Potassium	54.1	0.50		mg/L	2	7440-09-7		
Sodium	52.7	0.50		mg/L	2	7440-23-5		



Analytical Laboratory Report

Lab Sample ID: S46579.01 (continued)

Sample Tag: MW-103

Method: E245.1, Run Date: 03/27/23 13:37, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 03/28/23 19:12, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		



Analytical Laboratory Report

Lab Sample ID: S46579.01 (continued)

Sample Tag: MW-103

Method: SW8270D, Run Date: 03/28/23 19:12, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 03/31/23 22:42, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 03/28/23 15:10, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 03/29/23 19:45, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/28/23 15:10, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		



Analytical Laboratory Report

Lab Sample ID: S46579.01 (continued)

Sample Tag: MW-103

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/28/23 15:10, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	1	1		ug/L	1	87-68-3	B	500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 03/27/23 23:38, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

B-Compound also found in associated method blank

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S46579.02

Sample Tag: Dup #01

Collected Date/Time: 03/22/2023 00:01

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	3.2	IR
3	40ml Glass	None	Yes	3.2	IR
1	125ml Plastic	HNO3	Yes	3.2	IR
3	1L Amber	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	03/27/23 12:25	CTV	
pH check for VOCs*	<2	N/A	03/29/23 11:00	ACK	
Metal Digestion	Completed	SW3015A	03/27/23 10:10	CCM	
BNA Extraction	Completed	SW3510C	03/27/23 13:00	JWR	

Metals

Method: E200.8, Run Date: 03/27/23 11:51, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.050	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		
Barium	0.027	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Boron	0.07	0.04		mg/L	2	7440-42-8		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.04	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	Not detected	0.005		mg/L	2	7439-96-5		
Molybdenum	Not detected	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.160	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		

Method: E200.8, Run Date: 03/27/23 15:37, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	74.7	0.50		mg/L	2	7440-70-2		
Magnesium	11.5	0.50		mg/L	2	7439-95-4		
Potassium	3.12	0.50		mg/L	2	7440-09-7		
Sodium	97.1	0.50		mg/L	2	7440-23-5		



Analytical Laboratory Report

Lab Sample ID: S46579.02 (continued)

Sample Tag: Dup #01

Method: E245.1, Run Date: 03/27/23 13:40, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 03/28/23 19:43, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		



Analytical Laboratory Report

Lab Sample ID: S46579.02 (continued)

Sample Tag: Dup #01

Method: SW8270D, Run Date: 03/28/23 19:43, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 03/31/23 23:07, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 03/28/23 15:33, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 03/29/23 20:07, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/28/23 15:33, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		



Analytical Laboratory Report

Lab Sample ID: S46579.02 (continued)

Sample Tag: Dup #01

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/28/23 15:33, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 03/28/23 00:00, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S46579.03

Sample Tag: MW-101

Collected Date/Time: 03/22/2023 05:53

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	3.2	IR
3	40ml Glass	None	Yes	3.2	IR
1	125ml Plastic	HNO3	Yes	3.2	IR
3	1L Amber	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	03/27/23 12:25	CTV	
pH check for VOCs*	<2	N/A	03/29/23 11:00	ACK	
Metal Digestion	Completed	SW3015A	03/27/23 10:10	CCM	
BNA Extraction	Completed	SW3510C	03/27/23 13:00	JWR	

Metals

Method: E200.8, Run Date: 03/27/23 11:55, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.055	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		
Barium	0.027	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Boron	0.07	0.04		mg/L	2	7440-42-8		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.04	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	Not detected	0.005		mg/L	2	7439-96-5		
Molybdenum	Not detected	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.161	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		

Method: E200.8, Run Date: 03/27/23 15:39, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	73.9	0.50		mg/L	2	7440-70-2		
Magnesium	11.7	0.50		mg/L	2	7439-95-4		
Potassium	3.18	0.50		mg/L	2	7440-09-7		
Sodium	100	0.50		mg/L	2	7440-23-5		



Analytical Laboratory Report

Lab Sample ID: S46579.03 (continued)

Sample Tag: MW-101

Method: E245.1, Run Date: 03/27/23 13:57, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 03/28/23 20:13, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		



Analytical Laboratory Report

Lab Sample ID: S46579.03 (continued)

Sample Tag: MW-101

Method: SW8270D, Run Date: 03/28/23 20:13, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 03/31/23 23:31, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 03/28/23 15:57, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 03/29/23 20:29, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/28/23 15:57, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		



Analytical Laboratory Report

Lab Sample ID: S46579.03 (continued)

Sample Tag: MW-101

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/28/23 15:57, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 03/28/23 00:22, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S46579.04

Sample Tag: MW-22-09

Collected Date/Time: 03/22/2023 07:17

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	3.2	IR
3	40ml Glass	None	Yes	3.2	IR
1	125ml Plastic	HNO3	Yes	3.2	IR
3	1L Amber	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	03/27/23 12:25	CTV	
pH check for VOCs*	<2	N/A	03/29/23 11:00	ACK	
Metal Digestion	Completed	SW3015A	03/27/23 10:10	CCM	
BNA Extraction	Completed	SW3510C	03/27/23 13:00	JWR	

Metals

Method: E200.8, Run Date: 03/27/23 11:59, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.026	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		
Barium	0.079	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Boron	0.09	0.04		mg/L	2	7440-42-8		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.04	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.084	0.005		mg/L	2	7439-96-5		
Molybdenum	Not detected	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.327	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		

Method: E200.8, Run Date: 03/27/23 15:41, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	103	0.50		mg/L	2	7440-70-2		
Magnesium	17.4	0.50		mg/L	2	7439-95-4		
Potassium	6.22	0.50		mg/L	2	7440-09-7		
Sodium	195	0.50		mg/L	2	7440-23-5		



Analytical Laboratory Report

Lab Sample ID: S46579.04 (continued)

Sample Tag: MW-22-09

Method: E245.1, Run Date: 03/27/23 14:00, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 03/28/23 20:44, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		



Analytical Laboratory Report

Lab Sample ID: S46579.04 (continued)

Sample Tag: MW-22-09

Method: SW8270D, Run Date: 03/28/23 20:44, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 03/31/23 23:55, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 03/28/23 16:20, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 03/29/23 20:51, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/28/23 16:20, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		



Analytical Laboratory Report

Lab Sample ID: S46579.04 (continued)

Sample Tag: MW-22-09

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/28/23 16:20, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 03/28/23 00:44, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S46579.05

Sample Tag: MW-22-21

Collected Date/Time: 03/22/2023 08:25

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	3.2	IR
3	40ml Glass	None	Yes	3.2	IR
1	125ml Plastic	HNO3	Yes	3.2	IR
3	1L Amber	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	03/28/23 12:32	CTV	
pH check for VOCs*	<2	N/A	03/29/23 11:00	ACK	
Metal Digestion	Completed	SW3015A	03/27/23 10:10	CCM	
BNA Extraction	Completed	SW3510C	03/27/23 13:00	JWR	

Metals

Method: E200.8, Run Date: 03/27/23 12:02, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.013	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		
Barium	0.086	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Boron	0.08	0.04		mg/L	2	7440-42-8		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.02	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.099	0.005		mg/L	2	7439-96-5		
Molybdenum	Not detected	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.313	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		

Method: E200.8, Run Date: 03/27/23 15:42, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	87.6	0.50		mg/L	2	7440-70-2		
Magnesium	15.4	0.50		mg/L	2	7439-95-4		
Potassium	3.57	0.50		mg/L	2	7440-09-7		
Sodium	121	0.50		mg/L	2	7440-23-5		



Analytical Laboratory Report

Lab Sample ID: S46579.05 (continued)

Sample Tag: MW-22-21

Method: E245.1, Run Date: 03/28/23 13:48, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 03/28/23 21:14, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		



Analytical Laboratory Report

Lab Sample ID: S46579.05 (continued)

Sample Tag: MW-22-21

Method: SW8270D, Run Date: 03/28/23 21:14, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 04/01/23 00:19, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 03/28/23 16:44, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 03/29/23 21:13, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/28/23 16:44, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		



Analytical Laboratory Report

Lab Sample ID: S46579.05 (continued)

Sample Tag: MW-22-21

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/28/23 16:44, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 03/28/23 01:06, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S46579.06

Sample Tag: MW-22-08

Collected Date/Time: 03/22/2023 09:19

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	3.2	IR
3	40ml Glass	None	Yes	3.2	IR
1	125ml Plastic	HNO3	Yes	3.2	IR
3	1L Amber	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	03/28/23 12:32	CTV	
pH check for VOCs*	<2	N/A	03/29/23 11:00	ACK	
Metal Digestion	Completed	SW3015A	03/27/23 10:10	CCM	
BNA Extraction	Completed	SW3510C	03/27/23 13:00	JWR	

Metals

Method: E200.8, Run Date: 03/27/23 12:06, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.012	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		
Barium	0.033	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Boron	0.11	0.04		mg/L	2	7440-42-8		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	Not detected	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.040	0.005		mg/L	2	7439-96-5		
Molybdenum	0.015	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.160	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		

Method: E200.8, Run Date: 03/27/23 15:44, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	54.9	0.50		mg/L	2	7440-70-2		
Magnesium	7.66	0.50		mg/L	2	7439-95-4		
Potassium	4.57	0.50		mg/L	2	7440-09-7		
Sodium	176	0.50		mg/L	2	7440-23-5		



Analytical Laboratory Report

Lab Sample ID: S46579.06 (continued)

Sample Tag: MW-22-08

Method: E245.1, Run Date: 03/28/23 13:51, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 03/28/23 21:44, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		



Analytical Laboratory Report

Lab Sample ID: S46579.06 (continued)

Sample Tag: MW-22-08

Method: SW8270D, Run Date: 03/28/23 21:44, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 04/01/23 00:43, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 03/28/23 17:08, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 03/29/23 21:35, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/28/23 17:08, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		



Analytical Laboratory Report

Lab Sample ID: S46579.06 (continued)

Sample Tag: MW-22-08

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/28/23 17:08, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	3	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 03/28/23 01:28, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S46579.07

Sample Tag: MW-22-07

Collected Date/Time: 03/22/2023 10:13

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	3.2	IR
3	40ml Glass	None	Yes	3.2	IR
1	125ml Plastic	HNO3	Yes	3.2	IR
3	1L Amber	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	03/28/23 12:32	CTV	
pH check for VOCs*	<2	N/A	03/29/23 11:00	ACK	
Metal Digestion	Completed	SW3015A	03/27/23 10:10	CCM	
BNA Extraction	Completed	SW3510C	03/27/23 13:00	JWR	

Metals

Method: E200.8, Run Date: 03/27/23 12:09, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.013	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		
Barium	0.047	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Boron	0.07	0.04		mg/L	2	7440-42-8		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.03	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.095	0.005		mg/L	2	7439-96-5		
Molybdenum	Not detected	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.184	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	0.003	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		

Method: E200.8, Run Date: 03/27/23 15:45, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	74.2	0.50		mg/L	2	7440-70-2		
Magnesium	12.0	0.50		mg/L	2	7439-95-4		
Potassium	3.48	0.50		mg/L	2	7440-09-7		
Sodium	108	0.50		mg/L	2	7440-23-5		



Analytical Laboratory Report

Lab Sample ID: S46579.07 (continued)

Sample Tag: MW-22-07

Method: E245.1, Run Date: 03/28/23 14:01, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 03/28/23 22:15, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		



Analytical Laboratory Report

Lab Sample ID: S46579.07 (continued)

Sample Tag: MW-22-07

Method: SW8270D, Run Date: 03/28/23 22:15, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 04/01/23 01:07, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 03/28/23 17:31, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 03/29/23 21:57, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/28/23 17:31, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		



Analytical Laboratory Report

Lab Sample ID: S46579.07 (continued)

Sample Tag: MW-22-07

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/28/23 17:31, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 03/28/23 01:50, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S46579.08

Sample Tag: MW-22-10

Collected Date/Time: 03/22/2023 11:14

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	3.2	IR
3	40ml Glass	None	Yes	3.2	IR
1	125ml Plastic	HNO3	Yes	3.2	IR
3	1L Amber	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	03/28/23 12:32	CTV	
pH check for VOCs*	<2	N/A	03/29/23 11:00	ACK	
Metal Digestion	Completed	SW3015A	03/27/23 10:10	CCM	
BNA Extraction	Completed	SW3510C	03/27/23 13:00	JWR	

Metals

Method: E200.8, Run Date: 03/27/23 12:13, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	Not detected	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		
Barium	0.102	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Boron	0.06	0.04		mg/L	2	7440-42-8		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.06	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.075	0.005		mg/L	2	7439-96-5		
Molybdenum	Not detected	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.378	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		

Method: E200.8, Run Date: 03/27/23 15:47, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	87.3	0.50		mg/L	2	7440-70-2		
Magnesium	14.7	0.50		mg/L	2	7439-95-4		
Potassium	4.00	0.50		mg/L	2	7440-09-7		
Sodium	154	0.50		mg/L	2	7440-23-5		



Analytical Laboratory Report

Lab Sample ID: S46579.08 (continued)

Sample Tag: MW-22-10

Method: E245.1, Run Date: 03/28/23 14:04, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 03/28/23 22:45, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		



Analytical Laboratory Report

Lab Sample ID: S46579.08 (continued)

Sample Tag: MW-22-10

Method: SW8270D, Run Date: 03/28/23 22:45, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 04/01/23 01:31, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 03/28/23 17:54, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 03/29/23 22:19, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/28/23 17:54, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		



Analytical Laboratory Report

Lab Sample ID: S46579.08 (continued)

Sample Tag: MW-22-10

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/28/23 17:54, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 03/28/23 02:12, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S46579.09

Sample Tag: MW-22-12

Collected Date/Time: 03/22/2023 12:17

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	3.2	IR
3	40ml Glass	None	Yes	3.2	IR
1	125ml Plastic	HNO3	Yes	3.2	IR
3	1L Amber	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	03/28/23 12:32	CTV	
pH check for VOCs*	<2	N/A	03/29/23 11:00	ACK	
Metal Digestion	Completed	SW3015A	03/27/23 10:10	CCM	
BNA Extraction	Completed	SW3510C	03/27/23 13:00	JWR	

Metals

Method: E200.8, Run Date: 03/27/23 12:35, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	Not detected	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	0.008	0.002		mg/L	2	7440-38-2		
Barium	0.125	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Boron	0.05	0.04		mg/L	2	7440-42-8		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.71	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.337	0.005		mg/L	2	7439-96-5		
Molybdenum	Not detected	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.362	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		

Method: E200.8, Run Date: 03/27/23 15:54, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	91.8	0.50		mg/L	2	7440-70-2		
Magnesium	17.1	0.50		mg/L	2	7439-95-4		
Potassium	3.63	0.50		mg/L	2	7440-09-7		
Sodium	115	0.50		mg/L	2	7440-23-5		



Analytical Laboratory Report

Lab Sample ID: S46579.09 (continued)

Sample Tag: MW-22-12

Method: E245.1, Run Date: 03/28/23 14:08, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 03/28/23 23:15, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		

Lab Sample ID: S46579.09 (continued)

Sample Tag: MW-22-12

Method: SW8270D, Run Date: 03/28/23 23:15, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 04/01/23 01:55, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 03/28/23 18:18, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 03/29/23 22:40, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/28/23 18:18, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		



Analytical Laboratory Report

Lab Sample ID: S46579.09 (continued)

Sample Tag: MW-22-12

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/28/23 18:18, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 03/28/23 20:17, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S46579.10

Sample Tag: MW-22-11

Collected Date/Time: 03/22/2023 13:25

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	3.2	IR
3	40ml Glass	None	Yes	3.2	IR
1	125ml Plastic	HNO3	Yes	3.2	IR
3	1L Amber	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	03/28/23 12:32	CTV	
pH check for VOCs*	<2	N/A	03/29/23 11:00	ACK	
Metal Digestion	Completed	SW3015A	03/27/23 10:10	CCM	
BNA Extraction	Completed	SW3510C	03/27/23 13:00	JWR	

Metals

Method: E200.8, Run Date: 03/27/23 12:16, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	Not detected	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		
Barium	0.063	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Boron	0.05	0.04		mg/L	2	7440-42-8		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	Not detected	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.121	0.005		mg/L	2	7439-96-5		
Molybdenum	Not detected	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.218	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		

Method: E200.8, Run Date: 03/27/23 15:48, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	69.4	0.50		mg/L	2	7440-70-2		
Magnesium	13.7	0.50		mg/L	2	7439-95-4		
Potassium	3.85	0.50		mg/L	2	7440-09-7		
Sodium	73.6	0.50		mg/L	2	7440-23-5		



Analytical Laboratory Report

Lab Sample ID: S46579.10 (continued)

Sample Tag: MW-22-11

Method: E245.1, Run Date: 03/28/23 14:11, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 03/28/23 23:46, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		



Analytical Laboratory Report

Lab Sample ID: S46579.10 (continued)

Sample Tag: MW-22-11

Method: SW8270D, Run Date: 03/28/23 23:46, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 04/01/23 02:20, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW5030C/8260C, Run Date: 03/29/23 01:56, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	1			

Method: SW8260B - SIM, Run Date: 03/29/23 23:02, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/29/23 01:56, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		



Analytical Laboratory Report

Lab Sample ID: S46579.10 (continued)

Sample Tag: MW-22-11

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/29/23 01:56, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

Other / Misc.

Method: , Run Date: 03/28/23 20:39, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S46579.11

Sample Tag: Dup #02

Collected Date/Time: 03/22/2023 00:01

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	3.2	IR
3	40ml Glass	None	Yes	3.2	IR
1	125ml Plastic	HNO3	Yes	3.2	IR
3	1L Amber	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	03/28/23 12:32	CTV	
pH check for VOCs*	<2	N/A	03/29/23 11:00	ACK	
Metal Digestion	Completed	SW3015A	03/27/23 10:10	CCM	
BNA Extraction	Completed	SW3510C	03/27/23 13:00	JWR	

Metals

Method: E200.8, Run Date: 03/27/23 12:38, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.017	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		
Barium	0.095	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Boron	0.49	0.04		mg/L	2	7440-42-8		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.11	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.215	0.005		mg/L	2	7439-96-5		
Molybdenum	0.011	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.740	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		

Method: E200.8, Run Date: 03/27/23 15:56, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	173	0.50		mg/L	2	7440-70-2		
Magnesium	35.9	0.50		mg/L	2	7439-95-4		
Potassium	29.9	0.50		mg/L	2	7440-09-7		
Sodium	90.2	0.50		mg/L	2	7440-23-5		



Analytical Laboratory Report

Lab Sample ID: S46579.11 (continued)

Sample Tag: Dup #02

Method: E245.1, Run Date: 03/28/23 14:14, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 03/29/23 00:16, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		



Analytical Laboratory Report

Lab Sample ID: S46579.11 (continued)

Sample Tag: Dup #02

Method: SW8270D, Run Date: 03/29/23 00:16, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 04/01/23 02:44, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW8260B - SIM, Run Date: 03/29/23 23:24, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/29/23 02:16, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		



Analytical Laboratory Report

Lab Sample ID: S46579.11 (continued)

Sample Tag: Dup #02

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/29/23 02:16, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

TICs Volatiles, Method: SW5030C/8260C, Run Date: 03/29/23 02:16, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Completed			ug/L	1			
Ethane, 1-chloro-1-fluoro-*	Found			ug/L	1			
Dichlorofluoromethane*	Found			ug/L	1			
Chlorofluoromethane*	Found			ug/L	1			

Other / Misc.

Method: , Run Date: 03/28/23 21:01, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S46579.12

Sample Tag: MW-22-13

Collected Date/Time: 03/22/2023 14:14

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	3.2	IR
3	40ml Glass	None	Yes	3.2	IR
1	125ml Plastic	HNO3	Yes	3.2	IR
3	1L Amber	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	03/28/23 12:32	CTV	
pH check for VOCs*	<2	N/A	03/29/23 11:00	ACK	
Metal Digestion	Completed	SW3015A	03/27/23 10:10	CCM	
BNA Extraction	Completed	SW3510C	03/27/23 13:00	JWR	

Metals

Method: E200.8, Run Date: 03/27/23 12:42, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Aluminum	0.020	0.010		mg/L	2	7429-90-5		
Antimony*	Not detected	0.001		mg/L	2	7440-36-0		
Arsenic	Not detected	0.002		mg/L	2	7440-38-2		
Barium	0.094	0.005		mg/L	2	7440-39-3		
Beryllium	Not detected	0.001		mg/L	2	7440-41-7		
Boron	0.50	0.04		mg/L	2	7440-42-8		
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9		
Chromium	Not detected	0.005		mg/L	2	7440-47-3		
Cobalt	Not detected	0.005		mg/L	2	7440-48-4		
Copper	Not detected	0.005		mg/L	2	7440-50-8		
Iron	0.12	0.02		mg/L	2	7439-89-6		
Lead	Not detected	0.003		mg/L	2	7439-92-1		
Manganese	0.212	0.005		mg/L	2	7439-96-5		
Molybdenum	0.011	0.005		mg/L	2	7439-98-7		
Nickel	Not detected	0.005		mg/L	2	7440-02-0		
Selenium	Not detected	0.005		mg/L	2	7782-49-2		
Silver	Not detected	0.0002		mg/L	2	7440-22-4		
Strontium	0.722	0.005		mg/L	2	7440-24-6		
Thallium	Not detected	0.002		mg/L	2	7440-28-0		
Tin	Not detected	0.02		mg/L	2	7440-31-5		
Titanium	Not detected	0.005		mg/L	2	7440-32-6		
Vanadium	Not detected	0.002		mg/L	2	7440-62-2		
Zinc	Not detected	0.005		mg/L	2	7440-66-6		

Method: E200.8, Run Date: 03/27/23 15:58, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Calcium*	176	0.50		mg/L	2	7440-70-2		
Magnesium	37.8	0.50		mg/L	2	7439-95-4		
Potassium	30.2	0.50		mg/L	2	7440-09-7		
Sodium	92.4	0.50		mg/L	2	7440-23-5		



Analytical Laboratory Report

Lab Sample ID: S46579.12 (continued)

Sample Tag: MW-22-13

Method: E245.1, Run Date: 03/28/23 14:17, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Mercury	Not detected	0.0002		mg/L	1	7439-97-6		

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 03/29/23 00:46, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	None Found			ug/L	2			
Acenaphthene	Not detected	5		ug/L	2	83-32-9		
Acenaphthylene	Not detected	5		ug/L	2	208-96-8		
Anthracene	Not detected	5		ug/L	2	120-12-7		
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3		
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2		
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9		
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2		
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8		
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1		
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4		
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1		
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7		
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3		
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7		
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8		
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7		
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7		
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8		
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3		
Chrysene	Not detected	1		ug/L	2	218-01-9		
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3		
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2		
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1		
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2		
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2		
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9		
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3		
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1		
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5		
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2		130
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2		
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0		
Fluoranthene	Not detected	1		ug/L	2	206-44-0		
Fluorene	Not detected	5		ug/L	2	86-73-7		
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1		130
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3		500
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4		
Hexachloroethane	Not detected	5		ug/L	2	67-72-1		3,000
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5		
Isophorone	Not detected	5		ug/L	2	78-59-1		
Naphthalene	Not detected	5		ug/L	2	91-20-3		
Nitrobenzene	Not detected	5		ug/L	2	98-95-3		2,000
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5		
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7		

Lab Sample ID: S46579.12 (continued)

Sample Tag: MW-22-13

Method: SW8270D, Run Date: 03/29/23 00:46, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6		
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7		
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5		100,000
Phenanthrene	Not detected	2		ug/L	2	85-01-8		
Phenol	Not detected	5		ug/L	2	108-95-2		
Pyrene	Not detected	5		ug/L	2	129-00-0		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1		
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2		2,000
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9		
Benzidine	Not detected	1		ug/L	2	92-87-5		

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 04/01/23 03:08, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3		

Method: SW8260B - SIM, Run Date: 03/29/23 23:46, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8		
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1		

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/29/23 02:35, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Acetone	Not detected	50		ug/L	1	67-64-1		
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4		
Acrylonitrile	Not detected	2		ug/L	1	107-13-1		
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3		200,000
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8		
Chloromethane	Not detected	5		ug/L	1	74-87-3		
Vinyl chloride	Not detected	1		ug/L	1	75-01-4		200
Bromomethane	Not detected	5		ug/L	1	74-83-9		
Chloroethane	Not detected	5		ug/L	1	75-00-3		
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4		
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4		700
Methylene chloride	Not detected	5		ug/L	1	75-09-2		
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5		
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3		
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2		
Chloroform	Not detected	1		ug/L	1	67-66-3		6,000
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6		
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1		
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5		500
Benzene	Not detected	1		ug/L	1	71-43-2		500
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2		500
Trichloroethene	Not detected	1		ug/L	1	79-01-6		500
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5		
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4		
Dibromomethane	Not detected	5		ug/L	1	74-95-3		
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5		
Toluene	Not detected	1		ug/L	1	108-88-3		



Analytical Laboratory Report

Lab Sample ID: S46579.12 (continued)

Sample Tag: MW-22-13

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/29/23 02:35, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6		
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5		
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4		700
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1		
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4		
Chlorobenzene	Not detected	1		ug/L	1	108-90-7		100,000
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6		
Ethylbenzene	Not detected	1		ug/L	1	100-41-4		
p,m-Xylene*	Not detected	2		ug/L	1			
o-Xylene	Not detected	1		ug/L	1	95-47-6		
Styrene	Not detected	1		ug/L	1	100-42-5		
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8		
Bromoform	Not detected	1		ug/L	1	75-25-2		
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5		
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4		
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1		
Bromobenzene	Not detected	1		ug/L	1	108-86-1		
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8		
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6		
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6		
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8		
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6		
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1		
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7		7,500
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1		
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8		
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8		
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1		
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6		
Naphthalene	Not detected	5		ug/L	1	91-20-3		
Acrolein	Not detected	1		ug/L	1	107-02-8		
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8		
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4		
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9		
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6		
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7		
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3		500
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1		

TICs Volatiles, Method: SW5030C/8260C, Run Date: 03/29/23 02:35, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
TICs*	Completed			ug/L	1			
Ethane, 1-chloro-1-fluoro-*	Found			ug/L	1			
Dichlorofluoromethane*	Found			ug/L	1			
Chlorofluoromethane*	Found			ug/L	1			

Other / Misc.

Method: , Run Date: 03/28/23 21:23, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags	Limits
Alcohols*	Completed				1		O	

O-Analysis performed by outside laboratory. See attached report.

Merit Laboratories Login Checklist

Lab Set ID:S46579

Client:TRC (TRC)

Project: Detroit Axle Southern Area

Submitted:03/23/2023 11:20 Login User: MMC

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place

Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Selection	Description	Note
-----------	-------------	------

Sample Receiving

- | | | |
|-----|--|--|
| 01. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples are received at 4C +/- 2C Thermometer # IR 3.2 |
| 02. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Received on ice/ cooling process begun |
| 03. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples shipped |
| 04. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples left in 24 hr. drop box |
| 05. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Are there custody seals/tape or is the drop box locked |

Chain of Custody

- | | | |
|-----|--|---|
| 06. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC adequately filled out |
| 07. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC signed and relinquished to the lab |
| 08. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sample tag on bottles match COC |
| 09. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Subcontracting needed? Subcontracted to: Eurofins |

Preservation

- | | | |
|-----|--|---|
| 10. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Do sample have correct chemical preservation |
| 11. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Completed pH checks on preserved samples? (no VOAs) |
| 12. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Did any samples need to be preserved in the lab? |

Bottle Conditions

- | | | |
|-----|--|---|
| 13. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | All bottles intact |
| 14. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Appropriate analytical bottles are used |
| 15. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Merit bottles used |
| 16. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sufficient sample volume received |
| 17. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples require laboratory filtration |
| 18. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples submitted within holding time |
| 19. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Do water VOC or TOX bottles contain headspace |

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____

Merit Laboratories Bottle Preservation Check

Lab Set ID: S46579 Submitted: 03/23/2023 11:20

Client: TRC (TRC)

Project: Detroit Axle Southern Area

Initial Preservation Check: 03/23/2023 13:30 MMC

Preservation Recheck (E200.8): N/A

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Sample ID	Bottle / Preservation	pH (Orig)	Add ml	pH (New)	Notes
S46579.01	125ml Plastic HNO3	<2			
S46579.02	125ml Plastic HNO3	<2			
S46579.03	125ml Plastic HNO3	<2			
S46579.04	125ml Plastic HNO3	<2			
S46579.05	125ml Plastic HNO3	<2			
S46579.06	125ml Plastic HNO3	<2			
S46579.07	125ml Plastic HNO3	<2			
S46579.08	125ml Plastic HNO3	<2			
S46579.09	125ml Plastic HNO3	<2			
S46579.10	125ml Plastic HNO3	<2			
S46579.11	125ml Plastic HNO3	<2			
S46579.12	125ml Plastic HNO3	<2			



2680 East Lansing Dr., East Lansing, MI 48823
 Phone (517) 332-0167 Fax (517) 332-4034
 www.meritlabs.com

C.O.C. PAGE # 1 OF 1

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME Kelly Cratsenburg
 COMPANY TRC
 ADDRESS 1540 Eisenhower Place
 CITY Ann Arbor STATE MI ZIP CODE 48108
 PHONE NO. _____ FAX NO. _____ P.O. NO. 1983 96
 E-MAIL ADDRESS kcratsenburg@trccompanies.com QUOTE NO. 230317-03

CONTACT NAME _____ SAME
 COMPANY _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP CODE _____
 PHONE NO. _____ E-MAIL ADDRESS _____

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME Detroit Axle Southern Area SAMPLER(S) - PLEASE PRINT/SIGN NAME _____
 TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____
 DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER TRC EDD

MATRIX GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 CODE: SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

Containers & Preservatives

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	DATE		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	VOC-SIMS & TICS, 1,4 Dioxane	SVOC + TICS	METALS*	3 Alcohols						Certifications		Project Locations		Special Instructions		
	DATE	TIME																				<input type="checkbox"/> OHIO VAP	<input type="checkbox"/> Drinking Water	<input type="checkbox"/> DoD	<input type="checkbox"/> NPDES		<input type="checkbox"/> Detroit	<input type="checkbox"/> New York
46579.01	3/23	0457	MW-103	W	12									+	+	+	+											*Southern Area metals list
.02	"	"	Dup #01	W	0									+	+	+	+											
.03	"	0553	MW-101	W	15									+	+	+	+											
.04	"	0717	MW-22-09	W	0									+	+	+	+											
.05	"	0825	MW 22-21	W	12									+	+	+	+											
.06	"	0919	MW-22-08	W	10									+	+	+	+											
.07	"	1013	MW-22-07	W	10									+	+	+	+											
.08	"	1114	MW-22-10	W	10									+	+	+	+											
.09	"	1217	MW-22-12	W	10									+	+	+	+											
.10	"	1335	MW 22-11	W	10									+	+	+	+											
.11	"	"	Dup #02	W	10									+	+	+	+											
.12	"	1414	MW-22-13	W	10									+	+	+	+											

RELINQUISHED BY: _____ DATE 3/23/23 TIME 1630
 RECEIVED BY: TRC DATE 3/22/23 TIME 1630
 RELINQUISHED BY: TRC DATE 3/22 TIME 800
 RECEIVED BY: ICM M DATE 3/22 TIME 800

RELINQUISHED BY: _____ DATE 3/23/23 TIME 1630
 RECEIVED BY: M. [Signature] DATE 3/23 TIME 1120
 SEAL NO. _____ SEAL INTACT YES NO INITIALS _____
 SEAL NO. _____ SEAL INTACT YES NO INITIALS _____
 NOTES: TEMP. ON ARRIVAL 3.2

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Lab Results
Merit Laboratories
2680 E Lansing Drive
East Lansing, Michigan 48823

Generated 3/29/2023 9:17:47 AM

JOB DESCRIPTION

S46579

JOB NUMBER

190-31348-1

Eurofins Michigan

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

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Authorization



Generated
3/29/2023 9:17:47 AM

Authorized for release by
Sue Schafer, Project Manager II
Sue.Schafer@et.eurofinsus.com
(810)229-2763



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Sample Summary

Client: Merit Laboratories
Project/Site: S46579

Job ID: 190-31348-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
190-31348-1	S46579.1	Water	03/22/23 04:52	03/24/23 12:15
190-31348-2	S46579.2	Water	03/22/23 00:01	03/24/23 12:15
190-31348-3	S46579.3	Water	03/22/23 05:53	03/24/23 12:15
190-31348-4	S46579.4	Water	03/22/23 07:17	03/24/23 12:15
190-31348-5	S46579.5	Water	03/22/23 08:25	03/24/23 12:15
190-31348-6	S46579.6	Water	03/22/23 09:19	03/24/23 12:15
190-31348-7	S46579.7	Water	03/22/23 10:13	03/24/23 12:15
190-31348-8	S46579.8	Water	03/22/23 11:14	03/24/23 12:15
190-31348-9	S46579.9	Water	03/22/23 12:17	03/24/23 12:15
190-31348-10	S46579.10	Water	03/22/23 13:25	03/24/23 12:15
190-31348-11	S46579.11	Water	03/22/23 00:01	03/24/23 12:15
190-31348-12	S46579.12	Water	03/22/23 14:14	03/24/23 12:15

- 1
- 2
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- 5
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- 7
- 8
- 9
- 10
- 11
- 12

Case Narrative

Client: Merit Laboratories
Project/Site: S46579

Job ID: 190-31348-1

Job ID: 190-31348-1

Laboratory: Eurofins Michigan

Narrative

**Job Narrative
190-31348-1**

Receipt

The samples were received on 3/24/2023 12:15 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.3°C

GC Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Client Sample Results

Client: Merit Laboratories
Project/Site: S46579

Job ID: 190-31348-1

Client Sample ID: S46579.1

Lab Sample ID: 190-31348-1

Date Collected: 03/22/23 04:52

Matrix: Water

Date Received: 03/24/23 12:15

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			03/27/23 23:38	1
Ethanol	<5.0		5.0	mg/L			03/27/23 23:38	1
n-Butanol	<5.0		5.0	mg/L			03/27/23 23:38	1

Client Sample ID: S46579.2

Lab Sample ID: 190-31348-2

Date Collected: 03/22/23 00:01

Matrix: Water

Date Received: 03/24/23 12:15

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			03/28/23 00:00	1
Ethanol	<5.0		5.0	mg/L			03/28/23 00:00	1
n-Butanol	<5.0		5.0	mg/L			03/28/23 00:00	1

Client Sample ID: S46579.3

Lab Sample ID: 190-31348-3

Date Collected: 03/22/23 05:53

Matrix: Water

Date Received: 03/24/23 12:15

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			03/28/23 00:22	1
Ethanol	<5.0		5.0	mg/L			03/28/23 00:22	1
n-Butanol	<5.0		5.0	mg/L			03/28/23 00:22	1

Client Sample ID: S46579.4

Lab Sample ID: 190-31348-4

Date Collected: 03/22/23 07:17

Matrix: Water

Date Received: 03/24/23 12:15

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			03/28/23 00:44	1
Ethanol	<5.0		5.0	mg/L			03/28/23 00:44	1
n-Butanol	<5.0		5.0	mg/L			03/28/23 00:44	1

Client Sample ID: S46579.5

Lab Sample ID: 190-31348-5

Date Collected: 03/22/23 08:25

Matrix: Water

Date Received: 03/24/23 12:15

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			03/28/23 01:06	1
Ethanol	<5.0		5.0	mg/L			03/28/23 01:06	1
n-Butanol	<5.0		5.0	mg/L			03/28/23 01:06	1

Client Sample ID: S46579.6

Lab Sample ID: 190-31348-6

Date Collected: 03/22/23 09:19

Matrix: Water

Date Received: 03/24/23 12:15

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			03/28/23 01:28	1
Ethanol	<5.0		5.0	mg/L			03/28/23 01:28	1

Eurofins Michigan

Client Sample Results

Client: Merit Laboratories
Project/Site: S46579

Job ID: 190-31348-1

Client Sample ID: S46579.6

Lab Sample ID: 190-31348-6

Date Collected: 03/22/23 09:19

Matrix: Water

Date Received: 03/24/23 12:15

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butanol	<5.0		5.0	mg/L			03/28/23 01:28	1

Client Sample ID: S46579.7

Lab Sample ID: 190-31348-7

Date Collected: 03/22/23 10:13

Matrix: Water

Date Received: 03/24/23 12:15

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			03/28/23 01:50	1
Ethanol	<5.0		5.0	mg/L			03/28/23 01:50	1
n-Butanol	<5.0		5.0	mg/L			03/28/23 01:50	1

Client Sample ID: S46579.8

Lab Sample ID: 190-31348-8

Date Collected: 03/22/23 11:14

Matrix: Water

Date Received: 03/24/23 12:15

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			03/28/23 02:12	1
Ethanol	<5.0		5.0	mg/L			03/28/23 02:12	1
n-Butanol	<5.0		5.0	mg/L			03/28/23 02:12	1

Client Sample ID: S46579.9

Lab Sample ID: 190-31348-9

Date Collected: 03/22/23 12:17

Matrix: Water

Date Received: 03/24/23 12:15

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			03/28/23 20:17	1
Ethanol	<5.0		5.0	mg/L			03/28/23 20:17	1
n-Butanol	<5.0		5.0	mg/L			03/28/23 20:17	1

Client Sample ID: S46579.10

Lab Sample ID: 190-31348-10

Date Collected: 03/22/23 13:25

Matrix: Water

Date Received: 03/24/23 12:15

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			03/28/23 20:39	1
Ethanol	<5.0		5.0	mg/L			03/28/23 20:39	1
n-Butanol	<5.0		5.0	mg/L			03/28/23 20:39	1

Client Sample ID: S46579.11

Lab Sample ID: 190-31348-11

Date Collected: 03/22/23 00:01

Matrix: Water

Date Received: 03/24/23 12:15

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			03/28/23 21:01	1
Ethanol	<5.0		5.0	mg/L			03/28/23 21:01	1
n-Butanol	<5.0		5.0	mg/L			03/28/23 21:01	1

Eurofins Michigan

Client Sample Results

Client: Merit Laboratories
Project/Site: S46579

Job ID: 190-31348-1

Client Sample ID: S46579.12

Lab Sample ID: 190-31348-12

Date Collected: 03/22/23 14:14

Matrix: Water

Date Received: 03/24/23 12:15

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			03/28/23 21:23	1
Ethanol	<5.0		5.0	mg/L			03/28/23 21:23	1
n-Butanol	<5.0		5.0	mg/L			03/28/23 21:23	1

QC Sample Results

Client: Merit Laboratories
Project/Site: S46579

Job ID: 190-31348-1

Method: 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Lab Sample ID: MB 680-769880/13
Matrix: Water
Analysis Batch: 769880

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Methanol	<3.7		3.7	mg/L			03/27/23 19:11	1
Ethanol	<5.0		5.0	mg/L			03/27/23 19:11	1
n-Butanol	<5.0		5.0	mg/L			03/27/23 19:11	1

Lab Sample ID: LCS 680-769880/6
Matrix: Water
Analysis Batch: 769880

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Methanol	20.0	17.4		mg/L		87	43 - 143		
Ethanol	20.0	20.9		mg/L		105	38 - 156		
n-Butanol	20.0	20.8		mg/L		104	70 - 130		

Lab Sample ID: LCSD 680-769880/7
Matrix: Water
Analysis Batch: 769880

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Methanol	20.0	17.4		mg/L		87	43 - 143	0	50
Ethanol	20.0	21.2		mg/L		106	38 - 156	1	50
n-Butanol	20.0	21.0		mg/L		105	70 - 130	1	30

Lab Sample ID: MB 680-770127/10
Matrix: Water
Analysis Batch: 770127

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Methanol	<3.7		3.7	mg/L			03/28/23 19:55	1
Ethanol	<5.0		5.0	mg/L			03/28/23 19:55	1
n-Butanol	<5.0		5.0	mg/L			03/28/23 19:55	1

Lab Sample ID: LCS 680-770127/6
Matrix: Water
Analysis Batch: 770127

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Methanol	20.0	18.1		mg/L		90	43 - 143		
Ethanol	20.0	21.8		mg/L		109	38 - 156		
n-Butanol	20.0	21.5		mg/L		107	70 - 130		

Lab Sample ID: LCSD 680-770127/7
Matrix: Water
Analysis Batch: 770127

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Methanol	20.0	18.4		mg/L		92	43 - 143	2	50
Ethanol	20.0	22.2		mg/L		111	38 - 156	2	50
n-Butanol	20.0	21.8		mg/L		109	70 - 130	1	30

QC Sample Results

Client: Merit Laboratories
Project/Site: S46579

Job ID: 190-31348-1

Method: 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC) (Continued)

Lab Sample ID: 190-31348-12 MS

Matrix: Water

Analysis Batch: 770127

Client Sample ID: S46579.12

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	
Methanol	<3.7		20.0	18.1		mg/L		91	43 - 143	
Ethanol	<5.0		20.0	21.3		mg/L		106	38 - 156	
n-Butanol	<5.0		20.0	21.8		mg/L		109	70 - 130	

Lab Sample ID: 190-31348-12 MSD

Matrix: Water

Analysis Batch: 770127

Client Sample ID: S46579.12

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits		RPD	Limit
Methanol	<3.7		20.0	17.9		mg/L		89	43 - 143		2	50
Ethanol	<5.0		20.0	20.9		mg/L		105	38 - 156		2	50
n-Butanol	<5.0		20.0	21.7		mg/L		108	70 - 130		0	30

Definitions/Glossary

Client: Merit Laboratories
Project/Site: S46579

Job ID: 190-31348-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Association Summary

Client: Merit Laboratories
Project/Site: S46579

Job ID: 190-31348-1

GC Semi VOA

Analysis Batch: 769880

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-31348-1	S46579.1	Total/NA	Water	8015D	
190-31348-2	S46579.2	Total/NA	Water	8015D	
190-31348-3	S46579.3	Total/NA	Water	8015D	
190-31348-4	S46579.4	Total/NA	Water	8015D	
190-31348-5	S46579.5	Total/NA	Water	8015D	
190-31348-6	S46579.6	Total/NA	Water	8015D	
190-31348-7	S46579.7	Total/NA	Water	8015D	
190-31348-8	S46579.8	Total/NA	Water	8015D	
MB 680-769880/13	Method Blank	Total/NA	Water	8015D	
LCS 680-769880/6	Lab Control Sample	Total/NA	Water	8015D	
LCSD 680-769880/7	Lab Control Sample Dup	Total/NA	Water	8015D	

Analysis Batch: 770127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-31348-9	S46579.9	Total/NA	Water	8015D	
190-31348-10	S46579.10	Total/NA	Water	8015D	
190-31348-11	S46579.11	Total/NA	Water	8015D	
190-31348-12	S46579.12	Total/NA	Water	8015D	
MB 680-770127/10	Method Blank	Total/NA	Water	8015D	
LCS 680-770127/6	Lab Control Sample	Total/NA	Water	8015D	
LCSD 680-770127/7	Lab Control Sample Dup	Total/NA	Water	8015D	
190-31348-12 MS	S46579.12	Total/NA	Water	8015D	
190-31348-12 MSD	S46579.12	Total/NA	Water	8015D	

Lab Chronicle

Client: Merit Laboratories
Project/Site: S46579

Job ID: 190-31348-1

Client Sample ID: S46579.1

Lab Sample ID: 190-31348-1

Date Collected: 03/22/23 04:52

Matrix: Water

Date Received: 03/24/23 12:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	769880	JCK	EET SAV	03/27/23 23:38

Client Sample ID: S46579.2

Lab Sample ID: 190-31348-2

Date Collected: 03/22/23 00:01

Matrix: Water

Date Received: 03/24/23 12:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	769880	JCK	EET SAV	03/28/23 00:00

Client Sample ID: S46579.3

Lab Sample ID: 190-31348-3

Date Collected: 03/22/23 05:53

Matrix: Water

Date Received: 03/24/23 12:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	769880	JCK	EET SAV	03/28/23 00:22

Client Sample ID: S46579.4

Lab Sample ID: 190-31348-4

Date Collected: 03/22/23 07:17

Matrix: Water

Date Received: 03/24/23 12:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	769880	JCK	EET SAV	03/28/23 00:44

Client Sample ID: S46579.5

Lab Sample ID: 190-31348-5

Date Collected: 03/22/23 08:25

Matrix: Water

Date Received: 03/24/23 12:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	769880	JCK	EET SAV	03/28/23 01:06

Client Sample ID: S46579.6

Lab Sample ID: 190-31348-6

Date Collected: 03/22/23 09:19

Matrix: Water

Date Received: 03/24/23 12:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	769880	JCK	EET SAV	03/28/23 01:28

Client Sample ID: S46579.7

Lab Sample ID: 190-31348-7

Date Collected: 03/22/23 10:13

Matrix: Water

Date Received: 03/24/23 12:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	769880	JCK	EET SAV	03/28/23 01:50

Lab Chronicle

Client: Merit Laboratories
Project/Site: S46579

Job ID: 190-31348-1

Client Sample ID: S46579.8

Lab Sample ID: 190-31348-8

Date Collected: 03/22/23 11:14

Matrix: Water

Date Received: 03/24/23 12:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	769880	JCK	EET SAV	03/28/23 02:12

Client Sample ID: S46579.9

Lab Sample ID: 190-31348-9

Date Collected: 03/22/23 12:17

Matrix: Water

Date Received: 03/24/23 12:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	770127	JCK	EET SAV	03/28/23 20:17

Client Sample ID: S46579.10

Lab Sample ID: 190-31348-10

Date Collected: 03/22/23 13:25

Matrix: Water

Date Received: 03/24/23 12:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	770127	JCK	EET SAV	03/28/23 20:39

Client Sample ID: S46579.11

Lab Sample ID: 190-31348-11

Date Collected: 03/22/23 00:01

Matrix: Water

Date Received: 03/24/23 12:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	770127	JCK	EET SAV	03/28/23 21:01

Client Sample ID: S46579.12

Lab Sample ID: 190-31348-12

Date Collected: 03/22/23 14:14

Matrix: Water

Date Received: 03/24/23 12:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	770127	JCK	EET SAV	03/28/23 21:23

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Analyst References:

Lab: EET SAV

Batch Type: Analysis

JCK = Joshua Kellar

Accreditation/Certification Summary

Client: Merit Laboratories
 Project/Site: S46579

Job ID: 190-31348-1

Laboratory: Eurofins Savannah

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	SAVLAB	
Alabama	State	41450	06-30-23
ANAB	Dept. of Defense ELAP	L2463	09-22-24
Arkansas DEQ	State	19-015-0	02-01-24
California	State	2939	06-30-23
Connecticut	State	PH-0161	03-31-23
Florida	NELAP	E87052	06-30-23
Georgia	State	E87052	06-30-23
Georgia (DW)	State	803	06-30-23
Guam	State	19-007R	04-17-23
Hawaii	State	<cert No.>	06-30-23
Illinois	NELAP	200022	11-30-23
Indiana	State	C-GA-02	06-30-23
Iowa	State	353	07-01-23
Kentucky (UST)	State	NA	06-30-23
Louisiana	NELAP	30690	06-30-23
Louisiana (All)	NELAP	30690	06-30-23
Louisiana (DW)	State	LA009	12-31-23
Maine	State	GA00006	09-25-24
Maryland	State	250	12-31-23
Massachusetts	State	M-GA006	06-30-23
Michigan	State	9925	06-30-23
Mississippi	State	<cert No.>	06-30-23
Nebraska	State	NE-OS-7-04	06-30-23
New Jersey	NELAP	GA769	06-30-23
New Mexico	State	GA00006	06-30-23
New York	NELAP	10842	04-01-23
North Carolina (DW)	State	13701	07-31-23
North Carolina (WW/SW)	State	269	12-31-23
Pennsylvania	NELAP	68-00474	06-30-23
Puerto Rico	State	GA00006	01-01-24
South Carolina	State	98001	06-30-23
Tennessee	State	TN02961	06-30-23
Texas	NELAP	T1047004185-19-14	11-30-23
Texas	TCEQ Water Supply	T104704185	06-30-23
USDA	US Federal Programs	P330-18-00313	09-03-24
Virginia	NELAP	460161	06-14-23
Wisconsin	State	999819810	08-31-23
Wyoming	State	8TMS-L	06-30-23

Method Summary

Client: Merit Laboratories
Project/Site: S46579

Job ID: 190-31348-1

Method	Method Description	Protocol	Laboratory
8015D	Nonhalogenated Organic Compounds - Direct Injection (GC)	SW846	EET SAV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858





Environment Testing
TestAmerica

- SDS or Known Hazard Information Supplied by Client
- Discrepancies
- Short Hold
- Rush 24 Hr 2-Day 3-Day 5-Day Other:

Client ID: Merit
Work Order #: 31348

Cooler / Sample Receipt

After hours receipt: complete gray areas. Place cooler in walk-in, place form in Receiving box. Date: _____ Time: _____

Receipt Evaluation Performed by: Initials: TH Date: 3/24/23 Time: 1215

Method of Shipment:

Walk-In Client Eurofins TA Field/Courier
 Other Client / 3rd Party Courier: _____
 Fed Ex Tracking #: _____
 UPS Tracking #: _____
 Other: _____

Shipping Container Type:

- Cooler Box
- None Other: _____

Custody Seals Intact:

- Yes No
- NA (not used or required)

Packing Materials:

- Plastic Bags Foam
- Bubble Wrap Paper
- Packing Peanuts None
- Other: _____

Cooling Materials:

- Ice (Solid) Ice (Melted)
- Blue Ice None
- Other: _____

Bacteriological Samples	Temp Corrected (°C)		Frozen?		Rec'd Within 2 Hrs?		Sample Flagged?	
	Yes	No	Yes	No	Yes	No	Yes	No

Received on same day sampled? Yes No Additional Sheets Required? Yes No

Receipt Temperatures

Thermometer ID	Observed (°C)	Corrected (°C)	Temp Blank	Sample Temp	Acceptable	Cooler ID	Affected Samples
<u>CP313207</u>	<u>5.3</u>	<u>5.3</u>		<u>X</u>	<u>X</u> Y <u>N</u>		
					Y N		
					Y N		

Receipt Questions**	Y	N	NA	"No" answers require additional comment
CoC present and ETA receipt signature, date, and time properly documented?	<input checked="" type="checkbox"/>			
Containers and Labels in good condition? (unbroken, not leaking, appropriately filled, labels legible & attached)	<input checked="" type="checkbox"/>			
Appropriate containers used and adequate volume provided?	<input checked="" type="checkbox"/>			Preserved bottles checked for pH? Yes No pH strip lot # _____
Number of sample containers match CoC?	<input checked="" type="checkbox"/>			
Samples received within hold?	<input checked="" type="checkbox"/>			
Samples submitted for GRO and Volatiles analysis (8260, 624, 524) received without headspace?	<input checked="" type="checkbox"/>			
Was a Trip Blank received with VOA samples?			<input checked="" type="checkbox"/>	
Were the samples free of any questionable physical conformities? (i.e.; field duplicates or multiple bottles of the same sample do not significantly vary in appearance - color, solid proportions, etc.)	<input checked="" type="checkbox"/>			
Were the CoC bottle labels and all other items free of all other discrepancies or issues that would need to be addressed with the Project Manager and/or Client?	<input checked="" type="checkbox"/>			
**May not be applicable if samples are not for compliance testing				*Excludes FOG, VOAs, TOC Vials, HEM

Client Contact Record

Contact Via: Phone Email Other: _____ Person Contacted: _____ Date/Time: _____
 Discrepancy allowance agreement is on record in the client project file

Discussion / Resolution

Any additional documentation and clarification from the client must be noted in the narrative and/or scanned into the CoC directory.
 Reviewed by [Signature] Date: 3/24/23

WI-MI-010_020720

Chain of Custody Record

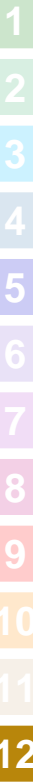
Client Information (Sub Contract Lab)		Sampler: Schaefer, Sue		Lab PM: Schaefer, Sue		COC No: 190-35743.1		Camera Tracking No(s):	
Client Contact: Shipping/Receiving		Phone:		E-Mail: Sue.Schaefer@et.eurofins.com		Page: Page 1 of 2		State of Origin: Michigan	
Company: Eurofins Environment Testing Southeast		Address: 5102 LaRoche Avenue		Due Date Requested: 4/6/2023		Job #: 190-31348-1		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2SSO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma L - EDTA Other:	
City: Savannah		State, Zip: GA, 31404		TAT Requested (days):		Analysis Requested		Total Number of Containers	
Phone: 912-354-7858(Tel) 912-352-0165(Fax)		Email:		PO #:		8015D PAH/ALCOHOLS w/METHANOL spec limit		Perform MS/MSD (Yes or No)	
Project Name: S46579		Site: 19001249		WO #:		Field Filtered Sample (Yes or No)		Special Instructions/Note:	
SSOW#:		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (Water, Solid, On-water/Oil, LFT-Tissue, A-MT)	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (Water, Solid, On-water/Oil, LFT-Tissue, A-MT)	
S46579 1 (190-31348-1)	3/22/23	04:52 Eastern	Water			X			
S46579 2 (190-31348-2)	3/22/23	00:01 Eastern	Water			X			
S46579 3 (190-31348-3)	3/22/23	05:53 Eastern	Water			X			
S46579 4 (190-31348-4)	3/22/23	07:17 Eastern	Water			X			
S46579 5 (190-31348-5)	3/22/23	08:25 Eastern	Water			X			
S46579 6 (190-31348-6)	3/22/23	09:19 Eastern	Water			X			
S46579 7 (190-31348-7)	3/22/23	10:13 Eastern	Water			X			
S46579 8 (190-31348-8)	3/22/23	11:14 Eastern	Water			X			
S46579 9 (190-31348-9)	3/22/23	12:17 Eastern	Water			X			

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody if the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification		Special Instructions/QC Requirements:	
Unconfirmed	Return To Client <input type="checkbox"/>	Disposal By Lab <input type="checkbox"/>	Archive For _____ Months
Deliverable Requested I, II, III, IV, Other (specify)	Primary Deliverable Rank: 2		
Empty Kit Relinquished by	Date:	Method of Shipment:	
Relinquished by <i>Le. Ace</i>	3/24/23 1700	Company: <i>Company</i>	
Relinquished by	Date/Time:	Date/Time: 3/25/23 9:40	
Relinquished by	Date/Time:	Date/Time: <i>24/23</i>	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Cooler Temperature(s) °C and Other Remarks:		



Client Information (Sub Contract Lab)		Lab PM: Schafer, Sue		Carrier Tracking No(s):		COC No: 190-35743.2	
Shipping/Receiving		E-Mail: Sue.Schafer@eurofins.com		State of Origin: Michigan		Page: Page 2 of 2	
Company: Eurofins Environment Testing Southeast		Accreditations Required (See note):		Job #: 190-31348-1		Preservation Codes:	
Address: 5102 LaRoche Avenue,		Due Date Requested: 4/6/2023		Analysis Requested		M - Hexane N - None O - AsNaO2 P - Na2OAS Q - NaZSO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)	
City: Savannah		TAT Requested (days):		8015D_DAV/ALCOHOLS w/METHANOL spec limit		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
State: GA, 31404		PO #:		Perform MS/MSD (Yes or No)		Total Number of Containers	
Phone: 912-354-7858(Tel) 912-352-0165(Fax)		WO #:		Field Filtered Sample (Yes or No)		3	
Email:		Project #: 19001249		Preservation Code:		Special Instructions/Note:	
Site: S46579		SSOW#:		Matrix (W=water, S=solid, O=water/Oil, B=THANOL, A=Air)		3	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)	
S46579 10 (190-31348-10)		3/22/23		13:25 Eastern		Water	
S46579 11 (190-31348-11)		3/22/23		00:01 Eastern		Water	
S46579 12 (190-31348-12)		3/22/23		14:14 Eastern		Water	
Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately if all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Special Instructions/QC Requirements:	
Possible Hazard Identification		Unconfirmed		Primary Deliverable Rank: 2		Empty Kit Relinquished by	
Date/Time: 3/24/23 17:00		Date/Time:		Date/Time:		Date/Time:	
Relinquished by: <i>[Signature]</i>		Company: Company		Relinquished by: <i>[Signature]</i>		Company: Company	
Relinquished by:		Company: Company		Relinquished by:		Company: Company	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.		Cooler Temperature(s) °C and Other Remarks: 2.5/2.5		Ver 06/08/2021	





Analytical Laboratory Report

Report ID: S46580.01(01)
Generated on 04/19/2023

Report to
Attention: Kelly Cratsenburg
TRC
1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: 734-412-5424 FAX:
Email: KCratsenburg@trccompanies.com

Additional Contacts: Vince Buening

Report produced by
Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary
Lab Sample ID(s): S46580.01-S46580.12
Project: Detroit Axle Southern Area
Collected Date(s): 03/22/2023
Submitted Date/Time: 03/23/2023 11:20
Sampled by: Unknown
P.O. #: 198396

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Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
ASTMD7979-19M	ASTM Method D7979 - 19 Modified (Isotopic Dilution)

Parameter Summary

Parameter	Synonym	Cas #
PFBA	Perfluorobutanoic Acid	375-22-4
PFPeA	Perfluoropentanoic Acid	2706-90-3
4:2 FTSA	4:2 Fluorotelomer Sulfonic Acid	757124-72-4
PFHxA	Perfluorohexanoic Acid	307-24-4
PFBS	Perfluorobutane sulfonic Acid	375-73-5
PFHpA	Perfluoroheptanoic Acid	375-85-9
PFPeS	Perfluoropentane Sulfonic Acid	2706-91-4
6:2 FTSA	6:2 Fluorotelomer Sulfonic Acid	27619-97-2
PFOA	Perfluorooctanoic Acid	335-67-1
PFHxS	Perfluorohexane Sulfonic Acid	355-46-4
PFHxS-LN	Perfluorohexane Sulfonic Acid - LN	355-46-4-LN
PFHxS-BR	Perfluorohexane Sulfonic Acid - BR	355-46-4-BR
PFNA	Perfluorononanoic Acid	375-95-1
8:2 FTSA	8:2 Fluorotelomer Sulfonic Acid	39108-34-4
PFHpS	Perfluoroheptane Sulfonic Acid	375-92-8
PFDA	Perfluorodecanoic Acid	335-76-2
N-MeFOSAA	N-methyl perfluorooctanesulfonamidoacetic acid	2355-31-9
EtFOSAA	N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	2991-50-6
PFOS	Perfluorooctane Sulfonic Acid	1763-23-1
PFOS-LN	Perfluorooctane Sulfonic Acid - LN	1763-23-1-LN
PFOS-BR	Perfluorooctane Sulfonic Acid - BR	1763-23-1-BR
PFUnDA	Perfluoroundecanoic Acid	2058-94-8
PFNS	Perfluorononane Sulfonic Acid	68259-12-1
PFDoDA	Perfluorododecanoic Acid	307-55-1
PFDS	Perfluorodecane Sulfonic Acid	335-77-3
PFTTrDA	Perfluorotridecanoic Acid	72629-94-8
FOSA	Perfluorooctane Sulfonamide	754-91-6
PFTeDA	Perfluorotetradecanoic Acid	376-06-7
11Cl-PF3OUdS	11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	763051-92-9
9Cl-PF3ONS	9-chlorohexadecafluoro-3-oxanone1-sulfonic acid	756426-58-1
ADONA	4,8-dioxa-3H-perfluorononanoic acid	919005-14-4
HFPO-DA	Hexafluoropropylene oxide dimer	13252-13-6
PFECBS	Perfluoro-4-ethylcyclohexanesulfonate	67584-42-3
PFBSA	Perfluorobutanesulfonamide	30334-69-1
PFHxSA	Perfluorohexanesulfonamide	41997-13-1



Analytical Laboratory Report

Sample Summary (12 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S46580.01	MW-103	Groundwater	03/22/23 04:52
S46580.02	Dup #01	Groundwater	03/22/23 00:01
S46580.03	MW-101	Groundwater	03/22/23 05:53
S46580.04	MW-22-09	Groundwater	03/22/23 07:17
S46580.05	MW-22-21	Groundwater	03/22/23 08:25
S46580.06	MW-22-08	Groundwater	03/22/23 09:19
S46580.07	MW-22-07	Groundwater	03/22/23 10:13
S46580.08	MW-22-10	Groundwater	03/22/23 11:14
S46580.09	MW-22-12	Groundwater	03/22/23 12:17
S46580.10	MW-22-11	Groundwater	03/22/23 13:25
S46580.11	Dup #02	Groundwater	03/22/23 00:01
S46580.12	MW-22-13	Groundwater	03/22/23 14:14



Analytical Laboratory Report

Lab Sample ID: S46580.01

Sample Tag: MW-103

Collected Date/Time: 03/22/2023 04:52

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.52/6.49/10	ASTMD7979-19M	04/12/23 08:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 04/12/23 21:48, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	10.0		ng/L	1.99	375-22-4	
PFPeA*	Not detected	4.0		ng/L	1.99	2706-90-3	
4:2 FTSA*	Not detected	2.0		ng/L	1.99	757124-72-4	
PFHxA*	3.1	2.0		ng/L	1.99	307-24-4	
PFBS*	4.8	2.0		ng/L	1.99	375-73-5	
PFHpA*	2.9	2.0		ng/L	1.99	375-85-9	
PFPeS*	2.1	2.0		ng/L	1.99	2706-91-4	
6:2 FTSA*	Not detected	2.0		ng/L	1.99	27619-97-2	
PFOA*	9.9	2.0		ng/L	1.99	335-67-1	
PFHxS*	7.9	2.0		ng/L	1.99	355-46-4	
PFHxS-LN*	6.5	2.0		ng/L	1.99	355-46-4-LN	
PFHxS-BR*	Not detected	2.0		ng/L	1.99	355-46-4-BR	
PFNA*	Not detected	2.0		ng/L	1.99	375-95-1	
8:2 FTSA*	Not detected	2.0		ng/L	1.99	39108-34-4	
PFHpS*	Not detected	2.0		ng/L	1.99	375-92-8	
PFDA*	Not detected	2.0		ng/L	1.99	335-76-2	
N-MeFOSAA*	Not detected	2.0		ng/L	1.99	2355-31-9	
EtFOSAA*	Not detected	4.0		ng/L	1.99	2991-50-6	
PFOS*	13	2.0		ng/L	1.99	1763-23-1	
PFOS-LN*	5.5	2.0		ng/L	1.99	1763-23-1-LN	
PFOS-BR*	6.7	2.0		ng/L	1.99	1763-23-1-BR	
PFUnDA*	Not detected	2.0		ng/L	1.99	2058-94-8	
PFNS*	Not detected	2.0		ng/L	1.99	68259-12-1	
PFDODA*	Not detected	2.0		ng/L	1.99	307-55-1	
PFDS*	Not detected	2.0		ng/L	1.99	335-77-3	
PFTTrDA*	Not detected	2.0		ng/L	1.99	72629-94-8	
FOSA*	Not detected	2.0		ng/L	1.99	754-91-6	
PFTeDA*	Not detected	4.0		ng/L	1.99	376-06-7	
11Cl-PF3OUdS*	Not detected	2.0		ng/L	1.99	763051-92-9	
9Cl-PF3ONS*	Not detected	2.0		ng/L	1.99	756426-58-1	
ADONA*	Not detected	2.0		ng/L	1.99	919005-14-4	
HFPO-DA*	Not detected	2.0		ng/L	1.99	13252-13-6	
PFECHS*	Not detected	2.0		ng/L	1.99	67584-42-3	
PFBSA*	Not detected	2.0		ng/L	1.99	30334-69-1	
PFHxSA*	Not detected	2.0		ng/L	1.99	41997-13-1	



Analytical Laboratory Report

Lab Sample ID: S46580.02

Sample Tag: Dup #01

Collected Date/Time: 03/22/2023 00:01

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.36/6.45/10	ASTMD7979-19M	04/12/23 08:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 04/12/23 22:07, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	10		ng/L	2.04	375-22-4	
PFPeA*	Not detected	4.1		ng/L	2.04	2706-90-3	
4:2 FTSA*	Not detected	2.0		ng/L	2.04	757124-72-4	
PFHxA*	Not detected	2.0		ng/L	2.04	307-24-4	
PFBS*	4.2	2.0		ng/L	2.04	375-73-5	
PFHpA*	Not detected	2.0		ng/L	2.04	375-85-9	
PFPeS*	Not detected	2.0		ng/L	2.04	2706-91-4	
6:2 FTSA*	Not detected	2.0		ng/L	2.04	27619-97-2	
PFOA*	2.5	2.0		ng/L	2.04	335-67-1	
PFHxS*	3.5	2.0		ng/L	2.04	355-46-4	
PFHxS-LN*	3.0	2.0		ng/L	2.04	355-46-4-LN	
PFHxS-BR*	Not detected	2.0		ng/L	2.04	355-46-4-BR	
PFNA*	Not detected	2.0		ng/L	2.04	375-95-1	
8:2 FTSA*	Not detected	2.0		ng/L	2.04	39108-34-4	
PFHpS*	Not detected	2.0		ng/L	2.04	375-92-8	
PFDA*	Not detected	2.0		ng/L	2.04	335-76-2	
N-MeFOSAA*	Not detected	2.0		ng/L	2.04	2355-31-9	
EtFOSAA*	Not detected	4.1		ng/L	2.04	2991-50-6	
PFOS*	3.6	2.0		ng/L	2.04	1763-23-1	
PFOS-LN*	2.0	2.0		ng/L	2.04	1763-23-1-LN	
PFOS-BR*	Not detected	2.0		ng/L	2.04	1763-23-1-BR	
PFUnDA*	Not detected	2.0		ng/L	2.04	2058-94-8	
PFNS*	Not detected	2.0		ng/L	2.04	68259-12-1	
PFDODA*	Not detected	2.0		ng/L	2.04	307-55-1	
PFDS*	Not detected	2.0		ng/L	2.04	335-77-3	
PFTTrDA*	Not detected	2.0		ng/L	2.04	72629-94-8	
FOSA*	Not detected	2.0		ng/L	2.04	754-91-6	
PFTeDA*	Not detected	4.1		ng/L	2.04	376-06-7	
11Cl-PF3OUdS*	Not detected	2.0		ng/L	2.04	763051-92-9	
9Cl-PF3ONS*	Not detected	2.0		ng/L	2.04	756426-58-1	
ADONA*	Not detected	2.0		ng/L	2.04	919005-14-4	
HFPO-DA*	Not detected	2.0		ng/L	2.04	13252-13-6	
PFECHS*	Not detected	2.0		ng/L	2.04	67584-42-3	
PFBSA*	Not detected	2.0		ng/L	2.04	30334-69-1	
PFHxSA*	Not detected	2.0		ng/L	2.04	41997-13-1	



Analytical Laboratory Report

Lab Sample ID: S46580.03

Sample Tag: MW-101

Collected Date/Time: 03/22/2023 05:53

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.30/6.44/10	ASTMD7979-19M	04/12/23 08:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 04/12/23 22:27, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	10		ng/L	2.06	375-22-4	
PFPeA*	Not detected	4.1		ng/L	2.06	2706-90-3	
4:2 FTSA*	Not detected	2.1		ng/L	2.06	757124-72-4	
PFHxA*	Not detected	2.1		ng/L	2.06	307-24-4	
PFBS*	3.9	2.1		ng/L	2.06	375-73-5	
PFHpA*	Not detected	2.1		ng/L	2.06	375-85-9	
PFPeS*	Not detected	2.1		ng/L	2.06	2706-91-4	
6:2 FTSA*	Not detected	2.1		ng/L	2.06	27619-97-2	
PFOA*	2.1	2.1		ng/L	2.06	335-67-1	
PFHxS*	3.3	2.1		ng/L	2.06	355-46-4	
PFHxS-LN*	2.8	2.1		ng/L	2.06	355-46-4-LN	
PFHxS-BR*	Not detected	2.1		ng/L	2.06	355-46-4-BR	
PFNA*	Not detected	2.1		ng/L	2.06	375-95-1	
8:2 FTSA*	Not detected	2.1		ng/L	2.06	39108-34-4	
PFHpS*	Not detected	2.1		ng/L	2.06	375-92-8	
PFDA*	Not detected	2.1		ng/L	2.06	335-76-2	
N-MeFOSAA*	Not detected	2.1		ng/L	2.06	2355-31-9	
EtFOSAA*	Not detected	4.1		ng/L	2.06	2991-50-6	
PFOS*	Not detected	2.1		ng/L	2.06	1763-23-1	
PFOS-LN*	Not detected	2.1		ng/L	2.06	1763-23-1-LN	
PFOS-BR*	Not detected	2.1		ng/L	2.06	1763-23-1-BR	
PFUnDA*	Not detected	2.1		ng/L	2.06	2058-94-8	
PFNS*	Not detected	2.1		ng/L	2.06	68259-12-1	
PFDODA*	Not detected	2.1		ng/L	2.06	307-55-1	
PFDS*	Not detected	2.1		ng/L	2.06	335-77-3	
PFTTrDA*	Not detected	2.1		ng/L	2.06	72629-94-8	
FOSA*	Not detected	2.1		ng/L	2.06	754-91-6	
PFTeDA*	Not detected	4.1		ng/L	2.06	376-06-7	
11Cl-PF3OUdS*	Not detected	2.1		ng/L	2.06	763051-92-9	
9Cl-PF3ONS*	Not detected	2.1		ng/L	2.06	756426-58-1	
ADONA*	Not detected	2.1		ng/L	2.06	919005-14-4	
HFPO-DA*	Not detected	2.1		ng/L	2.06	13252-13-6	
PFECHS*	Not detected	2.1		ng/L	2.06	67584-42-3	
PFBSA*	Not detected	2.1		ng/L	2.06	30334-69-1	
PFHxSA*	Not detected	2.1		ng/L	2.06	41997-13-1	



Analytical Laboratory Report

Lab Sample ID: S46580.04

Sample Tag: MW-22-09

Collected Date/Time: 03/22/2023 07:17

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.75/6.46/10	ASTMD7979-19M	04/12/23 08:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 04/12/23 22:46, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	9.5		ng/L	1.89	375-22-4	
PFPeA*	Not detected	3.8		ng/L	1.89	2706-90-3	
4:2 FTSA*	Not detected	1.9		ng/L	1.89	757124-72-4	
PFHxA*	Not detected	1.9		ng/L	1.89	307-24-4	
PFBS*	5.7	1.9		ng/L	1.89	375-73-5	
PFHpA*	Not detected	1.9		ng/L	1.89	375-85-9	
PFPeS*	Not detected	1.9		ng/L	1.89	2706-91-4	
6:2 FTSA*	Not detected	1.9		ng/L	1.89	27619-97-2	
PFOA*	4.2	1.9		ng/L	1.89	335-67-1	
PFHxS*	8.3	1.9		ng/L	1.89	355-46-4	
PFHxS-LN*	6.4	1.9		ng/L	1.89	355-46-4-LN	
PFHxS-BR*	2.4	1.9		ng/L	1.89	355-46-4-BR	
PFNA*	Not detected	1.9		ng/L	1.89	375-95-1	
8:2 FTSA*	Not detected	1.9		ng/L	1.89	39108-34-4	
PFHpS*	Not detected	1.9		ng/L	1.89	375-92-8	
PFDA*	Not detected	1.9		ng/L	1.89	335-76-2	
N-MeFOSAA*	Not detected	1.9		ng/L	1.89	2355-31-9	
EtFOSAA*	Not detected	3.8		ng/L	1.89	2991-50-6	
PFOS*	Not detected	1.9		ng/L	1.89	1763-23-1	
PFOS-LN*	Not detected	1.9		ng/L	1.89	1763-23-1-LN	
PFOS-BR*	Not detected	1.9		ng/L	1.89	1763-23-1-BR	
PFUnDA*	Not detected	1.9		ng/L	1.89	2058-94-8	
PFNS*	Not detected	1.9		ng/L	1.89	68259-12-1	
PFDODA*	Not detected	1.9		ng/L	1.89	307-55-1	
PFDS*	Not detected	1.9		ng/L	1.89	335-77-3	
PFTTrDA*	Not detected	1.9		ng/L	1.89	72629-94-8	
FOSA*	Not detected	1.9		ng/L	1.89	754-91-6	
PFTeDA*	Not detected	3.8		ng/L	1.89	376-06-7	
11Cl-PF3OUdS*	Not detected	1.9		ng/L	1.89	763051-92-9	
9Cl-PF3ONS*	Not detected	1.9		ng/L	1.89	756426-58-1	
ADONA*	Not detected	1.9		ng/L	1.89	919005-14-4	
HFPO-DA*	Not detected	1.9		ng/L	1.89	13252-13-6	
PFECHS*	Not detected	1.9		ng/L	1.89	67584-42-3	
PFBSA*	Not detected	1.9		ng/L	1.89	30334-69-1	
PFHxSA*	Not detected	1.9		ng/L	1.89	41997-13-1	



Analytical Laboratory Report

Lab Sample ID: S46580.05

Sample Tag: MW-22-21

Collected Date/Time: 03/22/2023 08:25

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.29/6.46/10	ASTMD7979-19M	04/12/23 08:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 04/12/23 23:06, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	10		ng/L	2.07	375-22-4	
PFPeA*	Not detected	4.1		ng/L	2.07	2706-90-3	
4:2 FTSA*	Not detected	2.1		ng/L	2.07	757124-72-4	
PFHxA*	Not detected	2.1		ng/L	2.07	307-24-4	
PFBS*	4.3	2.1		ng/L	2.07	375-73-5	
PFHpA*	Not detected	2.1		ng/L	2.07	375-85-9	
PFPeS*	Not detected	2.1		ng/L	2.07	2706-91-4	
6:2 FTSA*	Not detected	2.1		ng/L	2.07	27619-97-2	
PFOA*	3.8	2.1		ng/L	2.07	335-67-1	
PFHxS*	23	2.1		ng/L	2.07	355-46-4	
PFHxS-LN*	18	2.1		ng/L	2.07	355-46-4-LN	
PFHxS-BR*	5.2	2.1		ng/L	2.07	355-46-4-BR	
PFNA*	Not detected	2.1		ng/L	2.07	375-95-1	
8:2 FTSA*	Not detected	2.1		ng/L	2.07	39108-34-4	
PFHpS*	Not detected	2.1		ng/L	2.07	375-92-8	
PFDA*	Not detected	2.1		ng/L	2.07	335-76-2	
N-MeFOSAA*	Not detected	2.1		ng/L	2.07	2355-31-9	
EtFOSAA*	Not detected	4.1		ng/L	2.07	2991-50-6	
PFOS*	Not detected	2.1		ng/L	2.07	1763-23-1	
PFOS-LN*	Not detected	2.1		ng/L	2.07	1763-23-1-LN	
PFOS-BR*	Not detected	2.1		ng/L	2.07	1763-23-1-BR	
PFUnDA*	Not detected	2.1		ng/L	2.07	2058-94-8	
PFNS*	Not detected	2.1		ng/L	2.07	68259-12-1	
PFDODA*	Not detected	2.1		ng/L	2.07	307-55-1	
PFDS*	Not detected	2.1		ng/L	2.07	335-77-3	
PFTTrDA*	Not detected	2.1		ng/L	2.07	72629-94-8	
FOSA*	Not detected	2.1		ng/L	2.07	754-91-6	
PFTeDA*	Not detected	4.1		ng/L	2.07	376-06-7	
11Cl-PF3OUdS*	Not detected	2.1		ng/L	2.07	763051-92-9	
9Cl-PF3ONS*	Not detected	2.1		ng/L	2.07	756426-58-1	
ADONA*	Not detected	2.1		ng/L	2.07	919005-14-4	
HFPO-DA*	Not detected	2.1		ng/L	2.07	13252-13-6	
PFECHS*	Not detected	2.1		ng/L	2.07	67584-42-3	
PFBSA*	Not detected	2.1		ng/L	2.07	30334-69-1	
PFHxSA*	Not detected	2.1		ng/L	2.07	41997-13-1	



Analytical Laboratory Report

Lab Sample ID: S46580.06

Sample Tag: MW-22-08

Collected Date/Time: 03/22/2023 09:19

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.57/6.48/10	ASTMD7979-19M	04/12/23 08:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 04/12/23 23:25, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	9.8		ng/L	1.96	375-22-4	
PFPeA*	4.1	3.9		ng/L	1.96	2706-90-3	
4:2 FTSA*	Not detected	2.0		ng/L	1.96	757124-72-4	
PFHxA*	3.4	2.0		ng/L	1.96	307-24-4	
PFBS*	5.7	2.0		ng/L	1.96	375-73-5	
PFHpA*	2.7	2.0		ng/L	1.96	375-85-9	
PFPeS*	Not detected	2.0		ng/L	1.96	2706-91-4	
6:2 FTSA*	Not detected	2.0		ng/L	1.96	27619-97-2	
PFOA*	4.8	2.0		ng/L	1.96	335-67-1	
PFHxS*	7.5	2.0		ng/L	1.96	355-46-4	
PFHxS-LN*	6.1	2.0		ng/L	1.96	355-46-4-LN	
PFHxS-BR*	Not detected	2.0		ng/L	1.96	355-46-4-BR	
PFNA*	Not detected	2.0		ng/L	1.96	375-95-1	
8:2 FTSA*	Not detected	2.0		ng/L	1.96	39108-34-4	
PFHpS*	Not detected	2.0		ng/L	1.96	375-92-8	
PFDA*	Not detected	2.0		ng/L	1.96	335-76-2	
N-MeFOSAA*	Not detected	2.0		ng/L	1.96	2355-31-9	
EtFOSAA*	Not detected	3.9		ng/L	1.96	2991-50-6	
PFOS*	5.6	2.0		ng/L	1.96	1763-23-1	
PFOS-LN*	2.9	2.0		ng/L	1.96	1763-23-1-LN	
PFOS-BR*	3.0	2.0		ng/L	1.96	1763-23-1-BR	
PFUnDA*	Not detected	2.0		ng/L	1.96	2058-94-8	
PFNS*	Not detected	2.0		ng/L	1.96	68259-12-1	
PFDODA*	Not detected	2.0		ng/L	1.96	307-55-1	
PFDS*	Not detected	2.0		ng/L	1.96	335-77-3	
PFTTrDA*	Not detected	2.0		ng/L	1.96	72629-94-8	
FOSA*	Not detected	2.0		ng/L	1.96	754-91-6	
PFTeDA*	Not detected	3.9		ng/L	1.96	376-06-7	
11Cl-PF3OUdS*	Not detected	2.0		ng/L	1.96	763051-92-9	
9Cl-PF3ONS*	Not detected	2.0		ng/L	1.96	756426-58-1	
ADONA*	Not detected	2.0		ng/L	1.96	919005-14-4	
HFPO-DA*	Not detected	2.0		ng/L	1.96	13252-13-6	
PFECHS*	Not detected	2.0		ng/L	1.96	67584-42-3	
PFBSA*	Not detected	2.0		ng/L	1.96	30334-69-1	
PFHxSA*	Not detected	2.0		ng/L	1.96	41997-13-1	



Analytical Laboratory Report

Lab Sample ID: S46580.07

Sample Tag: MW-22-07

Collected Date/Time: 03/22/2023 10:13

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.46/6.41/10	ASTMD7979-19M	04/13/23 15:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 04/13/23 21:23, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	13	9.9		ng/L	1.98	375-22-4	
PFPeA*	Not detected	4.0		ng/L	1.98	2706-90-3	
4:2 FTSA*	Not detected	2.0		ng/L	1.98	757124-72-4	
PFHxA*	2.7	2.0		ng/L	1.98	307-24-4	
PFBS*	4.9	2.0		ng/L	1.98	375-73-5	
PFHpA*	Not detected	2.0		ng/L	1.98	375-85-9	
PFPeS*	Not detected	2.0		ng/L	1.98	2706-91-4	
6:2 FTSA*	Not detected	2.0		ng/L	1.98	27619-97-2	
PFOA*	5.5	2.0		ng/L	1.98	335-67-1	
PFHxS*	3.4	2.0		ng/L	1.98	355-46-4	
PFHxS-LN*	2.5	2.0		ng/L	1.98	355-46-4-LN	
PFHxS-BR*	Not detected	2.0		ng/L	1.98	355-46-4-BR	
PFNA*	Not detected	2.0		ng/L	1.98	375-95-1	
8:2 FTSA*	Not detected	2.0		ng/L	1.98	39108-34-4	
PFHpS*	Not detected	2.0		ng/L	1.98	375-92-8	
PFDA*	Not detected	2.0		ng/L	1.98	335-76-2	
N-MeFOSAA*	Not detected	2.0		ng/L	1.98	2355-31-9	
EtFOSAA*	Not detected	4.0		ng/L	1.98	2991-50-6	
PFOS*	Not detected	2.0		ng/L	1.98	1763-23-1	
PFOS-LN*	Not detected	2.0		ng/L	1.98	1763-23-1-LN	
PFOS-BR*	Not detected	2.0		ng/L	1.98	1763-23-1-BR	
PFUnDA*	Not detected	2.0		ng/L	1.98	2058-94-8	
PFNS*	Not detected	2.0		ng/L	1.98	68259-12-1	
PFDoDA*	Not detected	2.0		ng/L	1.98	307-55-1	
PFDS*	Not detected	2.0		ng/L	1.98	335-77-3	
PFTTrDA*	Not detected	2.0		ng/L	1.98	72629-94-8	
FOSA*	Not detected	2.0		ng/L	1.98	754-91-6	
PFTeDA*	Not detected	4.0		ng/L	1.98	376-06-7	
11Cl-PF3OUdS*	Not detected	2.0		ng/L	1.98	763051-92-9	
9Cl-PF3ONS*	Not detected	2.0		ng/L	1.98	756426-58-1	
ADONA*	Not detected	2.0		ng/L	1.98	919005-14-4	
HFPO-DA*	Not detected	2.0		ng/L	1.98	13252-13-6	
PFECHS*	Not detected	2.0		ng/L	1.98	67584-42-3	
PFBSA*	Not detected	2.0		ng/L	1.98	30334-69-1	
PFHxSA*	Not detected	2.0		ng/L	1.98	41997-13-1	



Analytical Laboratory Report

Lab Sample ID: S46580.08

Sample Tag: MW-22-10

Collected Date/Time: 03/22/2023 11:14

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.51/6.48/10	ASTMD7979-19M	04/13/23 15:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 04/13/23 21:42, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	10.0		ng/L	1.99	375-22-4	
PFPeA*	Not detected	4.0		ng/L	1.99	2706-90-3	
4:2 FTSA*	Not detected	2.0		ng/L	1.99	757124-72-4	
PFHxA*	3.5	2.0		ng/L	1.99	307-24-4	
PFBS*	4.0	2.0		ng/L	1.99	375-73-5	
PFHpA*	Not detected	2.0		ng/L	1.99	375-85-9	
PFPeS*	Not detected	2.0		ng/L	1.99	2706-91-4	
6:2 FTSA*	Not detected	2.0		ng/L	1.99	27619-97-2	
PFOA*	4.5	2.0		ng/L	1.99	335-67-1	
PFHxS*	Not detected	2.0		ng/L	1.99	355-46-4	
PFHxS-LN*	Not detected	2.0		ng/L	1.99	355-46-4-LN	
PFHxS-BR*	Not detected	2.0		ng/L	1.99	355-46-4-BR	
PFNA*	Not detected	2.0		ng/L	1.99	375-95-1	
8:2 FTSA*	Not detected	2.0		ng/L	1.99	39108-34-4	
PFHpS*	Not detected	2.0		ng/L	1.99	375-92-8	
PFDA*	Not detected	2.0		ng/L	1.99	335-76-2	
N-MeFOSAA*	Not detected	2.0		ng/L	1.99	2355-31-9	
EtFOSAA*	Not detected	4.0		ng/L	1.99	2991-50-6	
PFOS*	Not detected	2.0		ng/L	1.99	1763-23-1	
PFOS-LN*	Not detected	2.0		ng/L	1.99	1763-23-1-LN	
PFOS-BR*	Not detected	2.0		ng/L	1.99	1763-23-1-BR	
PFUnDA*	Not detected	2.0		ng/L	1.99	2058-94-8	
PFNS*	Not detected	2.0		ng/L	1.99	68259-12-1	
PFDODA*	Not detected	2.0		ng/L	1.99	307-55-1	
PFDS*	Not detected	2.0		ng/L	1.99	335-77-3	
PFTTrDA*	Not detected	2.0		ng/L	1.99	72629-94-8	
FOSA*	Not detected	2.0		ng/L	1.99	754-91-6	
PFTeDA*	Not detected	4.0		ng/L	1.99	376-06-7	
11Cl-PF3OUdS*	Not detected	2.0		ng/L	1.99	763051-92-9	
9Cl-PF3ONS*	Not detected	2.0		ng/L	1.99	756426-58-1	
ADONA*	Not detected	2.0		ng/L	1.99	919005-14-4	
HFPO-DA*	Not detected	2.0		ng/L	1.99	13252-13-6	
PFECHS*	Not detected	2.0		ng/L	1.99	67584-42-3	
PFBSA*	Not detected	2.0		ng/L	1.99	30334-69-1	
PFHxSA*	Not detected	2.0		ng/L	1.99	41997-13-1	



Analytical Laboratory Report

Lab Sample ID: S46580.09

Sample Tag: MW-22-12

Collected Date/Time: 03/22/2023 12:17

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.67/6.47/10	ASTMD7979-19M	04/13/23 15:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 04/13/23 22:02, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	9.6		ng/L	1.92	375-22-4	
PFPeA*	Not detected	3.8		ng/L	1.92	2706-90-3	
4:2 FTSA*	Not detected	1.9		ng/L	1.92	757124-72-4	
PFHxA*	Not detected	1.9		ng/L	1.92	307-24-4	
PFBS*	4.1	1.9		ng/L	1.92	375-73-5	
PFHpA*	Not detected	1.9		ng/L	1.92	375-85-9	
PFPeS*	Not detected	1.9		ng/L	1.92	2706-91-4	
6:2 FTSA*	Not detected	1.9		ng/L	1.92	27619-97-2	
PFOA*	3.8	1.9		ng/L	1.92	335-67-1	
PFHxS*	4.4	1.9		ng/L	1.92	355-46-4	
PFHxS-LN*	3.4	1.9		ng/L	1.92	355-46-4-LN	
PFHxS-BR*	Not detected	1.9		ng/L	1.92	355-46-4-BR	
PFNA*	Not detected	1.9		ng/L	1.92	375-95-1	
8:2 FTSA*	Not detected	1.9		ng/L	1.92	39108-34-4	
PFHpS*	Not detected	1.9		ng/L	1.92	375-92-8	
PFDA*	Not detected	1.9		ng/L	1.92	335-76-2	
N-MeFOSAA*	Not detected	1.9		ng/L	1.92	2355-31-9	
EtFOSAA*	Not detected	3.8		ng/L	1.92	2991-50-6	
PFOS*	Not detected	1.9		ng/L	1.92	1763-23-1	
PFOS-LN*	Not detected	1.9		ng/L	1.92	1763-23-1-LN	
PFOS-BR*	Not detected	1.9		ng/L	1.92	1763-23-1-BR	
PFUnDA*	Not detected	1.9		ng/L	1.92	2058-94-8	
PFNS*	Not detected	1.9		ng/L	1.92	68259-12-1	
PFDODA*	Not detected	1.9		ng/L	1.92	307-55-1	
PFDS*	Not detected	1.9		ng/L	1.92	335-77-3	
PFTTrDA*	Not detected	1.9		ng/L	1.92	72629-94-8	
FOSA*	Not detected	1.9		ng/L	1.92	754-91-6	
PFTeDA*	Not detected	3.8		ng/L	1.92	376-06-7	
11Cl-PF3OUdS*	Not detected	1.9		ng/L	1.92	763051-92-9	
9Cl-PF3ONS*	Not detected	1.9		ng/L	1.92	756426-58-1	
ADONA*	Not detected	1.9		ng/L	1.92	919005-14-4	
HFPO-DA*	Not detected	1.9		ng/L	1.92	13252-13-6	
PFECHS*	Not detected	1.9		ng/L	1.92	67584-42-3	
PFBSA*	Not detected	1.9		ng/L	1.92	30334-69-1	
PFHxSA*	Not detected	1.9		ng/L	1.92	41997-13-1	



Analytical Laboratory Report

Lab Sample ID: S46580.10

Sample Tag: MW-22-11

Collected Date/Time: 03/22/2023 13:25

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.35/6.48/10	ASTMD7979-19M	04/13/23 15:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 04/13/23 22:21, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	10		ng/L	2.05	375-22-4	
PFPeA*	Not detected	4.1		ng/L	2.05	2706-90-3	
4:2 FTSA*	Not detected	2.1		ng/L	2.05	757124-72-4	
PFHxA*	Not detected	2.1		ng/L	2.05	307-24-4	
PFBS*	3.2	2.1		ng/L	2.05	375-73-5	
PFHpA*	Not detected	2.1		ng/L	2.05	375-85-9	
PFPeS*	Not detected	2.1		ng/L	2.05	2706-91-4	
6:2 FTSA*	Not detected	2.1		ng/L	2.05	27619-97-2	
PFOA*	7.0	2.1		ng/L	2.05	335-67-1	
PFHxS*	6.3	2.1		ng/L	2.05	355-46-4	
PFHxS-LN*	5.0	2.1		ng/L	2.05	355-46-4-LN	
PFHxS-BR*	Not detected	2.1		ng/L	2.05	355-46-4-BR	
PFNA*	Not detected	2.1		ng/L	2.05	375-95-1	
8:2 FTSA*	Not detected	2.1		ng/L	2.05	39108-34-4	
PFHpS*	Not detected	2.1		ng/L	2.05	375-92-8	
PFDA*	Not detected	2.1		ng/L	2.05	335-76-2	
N-MeFOSAA*	Not detected	2.1		ng/L	2.05	2355-31-9	
EtFOSAA*	Not detected	4.1		ng/L	2.05	2991-50-6	
PFOS*	Not detected	2.1		ng/L	2.05	1763-23-1	
PFOS-LN*	Not detected	2.1		ng/L	2.05	1763-23-1-LN	
PFOS-BR*	Not detected	2.1		ng/L	2.05	1763-23-1-BR	
PFUnDA*	Not detected	2.1		ng/L	2.05	2058-94-8	
PFNS*	Not detected	2.1		ng/L	2.05	68259-12-1	
PFDODA*	Not detected	2.1		ng/L	2.05	307-55-1	
PFDS*	Not detected	2.1		ng/L	2.05	335-77-3	
PFTTrDA*	Not detected	2.1		ng/L	2.05	72629-94-8	
FOSA*	Not detected	2.1		ng/L	2.05	754-91-6	
PFTeDA*	Not detected	4.1		ng/L	2.05	376-06-7	
11Cl-PF3OUdS*	Not detected	2.1		ng/L	2.05	763051-92-9	
9Cl-PF3ONS*	Not detected	2.1		ng/L	2.05	756426-58-1	
ADONA*	Not detected	2.1		ng/L	2.05	919005-14-4	
HFPO-DA*	Not detected	2.1		ng/L	2.05	13252-13-6	
PFECHS*	Not detected	2.1		ng/L	2.05	67584-42-3	
PFBSA*	Not detected	2.1		ng/L	2.05	30334-69-1	
PFHxSA*	Not detected	2.1		ng/L	2.05	41997-13-1	



Analytical Laboratory Report

Lab Sample ID: S46580.11

Sample Tag: Dup #02

Collected Date/Time: 03/22/2023 00:01

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.60/6.49/10	ASTMD7979-19M	04/13/23 15:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 04/13/23 23:00, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	9.8		ng/L	1.96	375-22-4	
PFPeA*	14	3.9		ng/L	1.96	2706-90-3	
4:2 FTSA*	Not detected	2.0		ng/L	1.96	757124-72-4	
PFHxA*	14	2.0		ng/L	1.96	307-24-4	
PFBS*	3.8	2.0		ng/L	1.96	375-73-5	
PFHpA*	8.8	2.0		ng/L	1.96	375-85-9	
PFPeS*	Not detected	2.0		ng/L	1.96	2706-91-4	
6:2 FTSA*	Not detected	2.0		ng/L	1.96	27619-97-2	
PFOA*	28	2.0		ng/L	1.96	335-67-1	
PFHxS*	8.6	2.0		ng/L	1.96	355-46-4	
PFHxS-LN*	6.9	2.0		ng/L	1.96	355-46-4-LN	
PFHxS-BR*	Not detected	2.0		ng/L	1.96	355-46-4-BR	
PFNA*	2.7	2.0		ng/L	1.96	375-95-1	
8:2 FTSA*	Not detected	2.0		ng/L	1.96	39108-34-4	
PFHpS*	Not detected	2.0		ng/L	1.96	375-92-8	
PFDA*	2.3	2.0		ng/L	1.96	335-76-2	
N-MeFOSAA*	Not detected	2.0		ng/L	1.96	2355-31-9	
EtFOSAA*	Not detected	3.9		ng/L	1.96	2991-50-6	
PFOS*	22	2.0		ng/L	1.96	1763-23-1	
PFOS-LN*	12	2.0		ng/L	1.96	1763-23-1-LN	
PFOS-BR*	10	2.0		ng/L	1.96	1763-23-1-BR	
PFUnDA*	Not detected	2.0		ng/L	1.96	2058-94-8	
PFNS*	Not detected	2.0		ng/L	1.96	68259-12-1	
PFDoDA*	Not detected	2.0		ng/L	1.96	307-55-1	
PFDS*	Not detected	2.0		ng/L	1.96	335-77-3	
PFTTrDA*	Not detected	2.0		ng/L	1.96	72629-94-8	
FOSA*	Not detected	2.0		ng/L	1.96	754-91-6	
PFTeDA*	Not detected	3.9		ng/L	1.96	376-06-7	
11Cl-PF3OUdS*	Not detected	2.0		ng/L	1.96	763051-92-9	
9Cl-PF3ONS*	Not detected	2.0		ng/L	1.96	756426-58-1	
ADONA*	Not detected	2.0		ng/L	1.96	919005-14-4	
HFPO-DA*	Not detected	2.0		ng/L	1.96	13252-13-6	
PFECHS*	Not detected	2.0		ng/L	1.96	67584-42-3	
PFBSA*	Not detected	2.0		ng/L	1.96	30334-69-1	
PFHxSA*	Not detected	2.0		ng/L	1.96	41997-13-1	



Analytical Laboratory Report

Lab Sample ID: S46580.12

Sample Tag: MW-22-13

Collected Date/Time: 03/22/2023 14:14

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	3.2	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.51/6.46/10	ASTMD7979-19M	04/13/23 15:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 04/13/23 23:20, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	10	9.9		ng/L	1.98	375-22-4	
PFPeA*	15	4.0		ng/L	1.98	2706-90-3	
4:2 FTSA*	Not detected	2.0		ng/L	1.98	757124-72-4	
PFHxA*	14	2.0		ng/L	1.98	307-24-4	
PFBS*	4.2	2.0		ng/L	1.98	375-73-5	
PFHpA*	11	2.0		ng/L	1.98	375-85-9	
PFPeS*	Not detected	2.0		ng/L	1.98	2706-91-4	
6:2 FTSA*	Not detected	2.0		ng/L	1.98	27619-97-2	
PFOA*	30	2.0		ng/L	1.98	335-67-1	
PFHxS*	7.8	2.0		ng/L	1.98	355-46-4	
PFHxS-LN*	6.3	2.0		ng/L	1.98	355-46-4-LN	
PFHxS-BR*	Not detected	2.0		ng/L	1.98	355-46-4-BR	
PFNA*	3.1	2.0		ng/L	1.98	375-95-1	
8:2 FTSA*	Not detected	2.0		ng/L	1.98	39108-34-4	
PFHpS*	Not detected	2.0		ng/L	1.98	375-92-8	
PFDA*	2.7	2.0		ng/L	1.98	335-76-2	
N-MeFOSAA*	Not detected	2.0		ng/L	1.98	2355-31-9	
EtFOSAA*	Not detected	4.0		ng/L	1.98	2991-50-6	
PFOS*	23	2.0		ng/L	1.98	1763-23-1	
PFOS-LN*	12	2.0		ng/L	1.98	1763-23-1-LN	
PFOS-BR*	11	2.0		ng/L	1.98	1763-23-1-BR	
PFUnDA*	Not detected	2.0		ng/L	1.98	2058-94-8	
PFNS*	Not detected	2.0		ng/L	1.98	68259-12-1	
PFDoDA*	Not detected	2.0		ng/L	1.98	307-55-1	
PFDS*	Not detected	2.0		ng/L	1.98	335-77-3	
PFTTrDA*	Not detected	2.0		ng/L	1.98	72629-94-8	
FOSA*	Not detected	2.0		ng/L	1.98	754-91-6	
PFTeDA*	Not detected	4.0		ng/L	1.98	376-06-7	
11Cl-PF3OUdS*	Not detected	2.0		ng/L	1.98	763051-92-9	
9Cl-PF3ONS*	Not detected	2.0		ng/L	1.98	756426-58-1	
ADONA*	Not detected	2.0		ng/L	1.98	919005-14-4	
HFPO-DA*	Not detected	2.0		ng/L	1.98	13252-13-6	
PFECHS*	Not detected	2.0		ng/L	1.98	67584-42-3	
PFBSA*	Not detected	2.0		ng/L	1.98	30334-69-1	
PFHxSA*	Not detected	2.0		ng/L	1.98	41997-13-1	

Merit Laboratories Login Checklist

Lab Set ID:S46580

Client:TRC (TRC)

Project: Detroit Axle Southern Area

Submitted:03/23/2023 11:20 Login User: MMC

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place

Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Selection	Description	Note
-----------	-------------	------

Sample Receiving

- | | | |
|-----|--|--|
| 01. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples are received at 4C +/- 2C Thermometer # IR 3.2 |
| 02. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Received on ice/ cooling process begun |
| 03. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples shipped |
| 04. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples left in 24 hr. drop box |
| 05. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Are there custody seals/tape or is the drop box locked |

Chain of Custody

- | | | |
|-----|--|--|
| 06. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC adequately filled out |
| 07. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | COC signed and relinquished to the lab |
| 08. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sample tag on bottles match COC |
| 09. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Subcontracting needed? Subcontracted to: |

Preservation

- | | | |
|-----|--|---|
| 10. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Do sample have correct chemical preservation |
| 11. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Completed pH checks on preserved samples? (no VOAs) |
| 12. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Did any samples need to be preserved in the lab? |

Bottle Conditions

- | | | |
|-----|--|---|
| 13. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | All bottles intact |
| 14. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Appropriate analytical bottles are used |
| 15. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Merit bottles used |
| 16. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Sufficient sample volume received |
| 17. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A | Samples require laboratory filtration |
| 18. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A | Samples submitted within holding time |
| 19. | <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A | Do water VOC or TOX bottles contain headspace |

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____



Analytical Laboratory Report

Report ID: S46699.01(01)
Generated on 04/24/2023

Report to

Attention: Kelly Cratsenburg
TRC
1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: 734-412-5424 FAX:
Email: KCratsenburg@trccompanies.com

Additional Contacts: Vince Buening

Report produced by

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Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S46699.01-S46699.14
Project: Detroit Axle Southern Area
Collected Date(s): 03/23/2023
Submitted Date/Time: 03/27/2023 11:00
Sampled by: Unknown
P.O. #: 198396

Table of Contents

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Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
ASTMD7979-19M	ASTM Method D7979 - 19 Modified (Isotopic Dilution)

Parameter Summary

Parameter	Synonym	Cas #
PFBA	Perfluorobutanoic Acid	375-22-4
PFPeA	Perfluoropentanoic Acid	2706-90-3
4:2 FTSA	4:2 Fluorotelomer Sulfonic Acid	757124-72-4
PFHxA	Perfluorohexanoic Acid	307-24-4
PFBS	Perfluorobutane sulfonic Acid	375-73-5
PFHpA	Perfluoroheptanoic Acid	375-85-9
PFPeS	Perfluoropentane Sulfonic Acid	2706-91-4
6:2 FTSA	6:2 Fluorotelomer Sulfonic Acid	27619-97-2
PFOA	Perfluorooctanoic Acid	335-67-1
PFHxS	Perfluorohexane Sulfonic Acid	355-46-4
PFHxS-LN	Perfluorohexane Sulfonic Acid - LN	355-46-4-LN
PFHxS-BR	Perfluorohexane Sulfonic Acid - BR	355-46-4-BR
PFNA	Perfluorononanoic Acid	375-95-1
8:2 FTSA	8:2 Fluorotelomer Sulfonic Acid	39108-34-4
PFHpS	Perfluoroheptane Sulfonic Acid	375-92-8
PFDA	Perfluorodecanoic Acid	335-76-2
N-MeFOSAA	N-methyl perfluorooctanesulfonamidoacetic acid	2355-31-9
EtFOSAA	N-Ethyl Perfluorooctane Sulfonamidoacetic Acid	2991-50-6
PFOS	Perfluorooctane Sulfonic Acid	1763-23-1
PFOS-LN	Perfluorooctane Sulfonic Acid - LN	1763-23-1-LN
PFOS-BR	Perfluorooctane Sulfonic Acid - BR	1763-23-1-BR
PFUnDA	Perfluoroundecanoic Acid	2058-94-8
PFNS	Perfluorononane Sulfonic Acid	68259-12-1
PFDoDA	Perfluorododecanoic Acid	307-55-1
PFDS	Perfluorodecane Sulfonic Acid	335-77-3
PFTTrDA	Perfluorotridecanoic Acid	72629-94-8
FOSA	Perfluorooctane Sulfonamide	754-91-6
PFTeDA	Perfluorotetradecanoic Acid	376-06-7
11Cl-PF3OUdS	11-chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	763051-92-9
9Cl-PF3ONS	9-chlorohexadecafluoro-3-oxanone1-sulfonic acid	756426-58-1
ADONA	4,8-dioxa-3H-perfluorononanoic acid	919005-14-4
HFPO-DA	Hexafluoropropylene oxide dimer	13252-13-6
PFECBS	Perfluoro-4-ethylcyclohexanesulfonate	67584-42-3
PFBSA	Perfluorobutanesulfonamide	30334-69-1
PFHxSA	Perfluorohexanesulfonamide	41997-13-1



Analytical Laboratory Report

Sample Summary (14 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S46699.01	MW 22-17	Groundwater	03/23/23 04:48
S46699.02	Dup #03	Groundwater	03/23/23 00:01
S46699.03	MW-22-16	Groundwater	03/23/23 05:35
S46699.04	MW-22-15	Groundwater	03/23/23 06:52
S46699.05	MW-129	Groundwater	03/23/23 08:01
S46699.06	MW-22-18	Groundwater	03/23/23 09:08
S46699.07	MW-128	Groundwater	03/23/23 10:00
S46699.08	MW-22-19	Groundwater	03/23/23 10:56
S46699.09	MW-22-20	Groundwater	03/23/23 11:48
S46699.10	MW-22-22D	Groundwater	03/23/23 12:50
S46699.11	MW-22-14	Groundwater	03/23/23 13:50
S46699.12	F.B.	Water	03/23/23 14:13
S46699.13	E.B.	Water	03/23/23 14:15
S46699.14	Field Blank	Water	03/23/23 00:01



Analytical Laboratory Report

Lab Sample ID: S46699.01

Sample Tag: MW 22-17

Collected Date/Time: 03/23/2023 04:48

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.32/6.43/10	ASTMD7979-19M	04/13/23 15:00	PTW	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 04/14/23 03:53, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	10		ng/L	2.04	375-22-4	
PFPeA*	5.3	4.1		ng/L	2.04	2706-90-3	
4:2 FTSA*	Not detected	2.0		ng/L	2.04	757124-72-4	
PFHxA*	7.4	2.0		ng/L	2.04	307-24-4	
PFBS*	3.2	2.0		ng/L	2.04	375-73-5	
PFHpA*	5.6	2.0		ng/L	2.04	375-85-9	
PFPeS*	Not detected	2.0		ng/L	2.04	2706-91-4	
6:2 FTSA*	Not detected	2.0		ng/L	2.04	27619-97-2	
PFOA*	7.5	2.0		ng/L	2.04	335-67-1	
PFHxS*	2.4	2.0		ng/L	2.04	355-46-4	
PFHxS-LN*	Not detected	2.0		ng/L	2.04	355-46-4-LN	
PFHxS-BR*	Not detected	2.0		ng/L	2.04	355-46-4-BR	
PFNA*	Not detected	2.0		ng/L	2.04	375-95-1	
8:2 FTSA*	Not detected	2.0		ng/L	2.04	39108-34-4	
PFHpS*	Not detected	2.0		ng/L	2.04	375-92-8	
PFDA*	Not detected	2.0		ng/L	2.04	335-76-2	
N-MeFOSAA*	Not detected	2.0		ng/L	2.04	2355-31-9	
EtFOSAA*	Not detected	4.1		ng/L	2.04	2991-50-6	
PFOS*	Not detected	2.0		ng/L	2.04	1763-23-1	
PFOS-LN*	Not detected	2.0		ng/L	2.04	1763-23-1-LN	
PFOS-BR*	Not detected	2.0		ng/L	2.04	1763-23-1-BR	
PFUnDA*	Not detected	2.0		ng/L	2.04	2058-94-8	
PFNS*	Not detected	2.0		ng/L	2.04	68259-12-1	
PFDoDA*	Not detected	2.0		ng/L	2.04	307-55-1	
PFDS*	Not detected	2.0		ng/L	2.04	335-77-3	
PFTTrDA*	Not detected	2.0		ng/L	2.04	72629-94-8	
FOSA*	Not detected	2.0		ng/L	2.04	754-91-6	
PFTeDA*	Not detected	4.1		ng/L	2.04	376-06-7	
11Cl-PF3OUdS*	Not detected	2.0		ng/L	2.04	763051-92-9	
9Cl-PF3ONS*	Not detected	2.0		ng/L	2.04	756426-58-1	
ADONA*	Not detected	2.0		ng/L	2.04	919005-14-4	
HFPO-DA*	Not detected	2.0		ng/L	2.04	13252-13-6	
PFECHS*	Not detected	2.0		ng/L	2.04	67584-42-3	
PFBSA*	Not detected	2.0		ng/L	2.04	30334-69-1	
PFHxSA*	Not detected	2.0		ng/L	2.04	41997-13-1	



Analytical Laboratory Report

Lab Sample ID: S46699.02

Sample Tag: Dup #03

Collected Date/Time: 03/23/2023 00:01

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.37/6.45/10	ASTMD7979-19M	04/14/23 14:00	AB	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 04/14/23 21:39, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	10		ng/L	2.03	375-22-4	
PFPeA*	6.2	4.1		ng/L	2.03	2706-90-3	
4:2 FTSA*	Not detected	2.0		ng/L	2.03	757124-72-4	
PFHxA*	4.3	2.0		ng/L	2.03	307-24-4	
PFBS*	2.6	2.0		ng/L	2.03	375-73-5	
PFHpA*	2.3	2.0		ng/L	2.03	375-85-9	
PFPeS*	Not detected	2.0		ng/L	2.03	2706-91-4	
6:2 FTSA*	Not detected	2.0		ng/L	2.03	27619-97-2	
PFOA*	7.3	2.0		ng/L	2.03	335-67-1	
PFHxS*	2.7	2.0		ng/L	2.03	355-46-4	
PFHxS-LN*	Not detected	2.0		ng/L	2.03	355-46-4-LN	
PFHxS-BR*	Not detected	2.0		ng/L	2.03	355-46-4-BR	
PFNA*	Not detected	2.0		ng/L	2.03	375-95-1	
8:2 FTSA*	Not detected	2.0		ng/L	2.03	39108-34-4	
PFHpS*	Not detected	2.0		ng/L	2.03	375-92-8	
PFDA*	Not detected	2.0		ng/L	2.03	335-76-2	
N-MeFOSAA*	Not detected	2.0		ng/L	2.03	2355-31-9	
EtFOSAA*	Not detected	4.1		ng/L	2.03	2991-50-6	
PFOS*	Not detected	2.0		ng/L	2.03	1763-23-1	
PFOS-LN*	Not detected	2.0		ng/L	2.03	1763-23-1-LN	
PFOS-BR*	Not detected	2.0		ng/L	2.03	1763-23-1-BR	
PFUnDA*	Not detected	2.0		ng/L	2.03	2058-94-8	
PFNS*	Not detected	2.0		ng/L	2.03	68259-12-1	
PFDoDA*	Not detected	2.0		ng/L	2.03	307-55-1	
PFDS*	Not detected	2.0		ng/L	2.03	335-77-3	
PFTTrDA*	Not detected	2.0		ng/L	2.03	72629-94-8	
FOSA*	Not detected	2.0		ng/L	2.03	754-91-6	
PFTeDA*	Not detected	4.1		ng/L	2.03	376-06-7	
11Cl-PF3OUdS*	Not detected	2.0		ng/L	2.03	763051-92-9	
9Cl-PF3ONS*	Not detected	2.0		ng/L	2.03	756426-58-1	
ADONA*	Not detected	2.0		ng/L	2.03	919005-14-4	
HFPO-DA*	Not detected	2.0		ng/L	2.03	13252-13-6	
PFECHS*	Not detected	2.0		ng/L	2.03	67584-42-3	
PFBSA*	Not detected	2.0		ng/L	2.03	30334-69-1	
PFHxSA*	Not detected	2.0		ng/L	2.03	41997-13-1	



Analytical Laboratory Report

Lab Sample ID: S46699.03

Sample Tag: MW-22-16

Collected Date/Time: 03/23/2023 05:35

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.72/6.43/10	ASTMD7979-19M	04/14/23 14:00	AB	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 04/14/23 21:58, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	9.5		ng/L	1.89	375-22-4	
PFPeA*	6.0	3.8		ng/L	1.89	2706-90-3	
4:2 FTSA*	Not detected	1.9		ng/L	1.89	757124-72-4	
PFHxA*	4.2	1.9		ng/L	1.89	307-24-4	
PFBS*	2.8	1.9		ng/L	1.89	375-73-5	
PFHpA*	2.2	1.9		ng/L	1.89	375-85-9	
PFPeS*	Not detected	1.9		ng/L	1.89	2706-91-4	
6:2 FTSA*	Not detected	1.9		ng/L	1.89	27619-97-2	
PFOA*	8.2	1.9		ng/L	1.89	335-67-1	
PFHxS*	2.5	1.9		ng/L	1.89	355-46-4	
PFHxS-LN*	2.2	1.9		ng/L	1.89	355-46-4-LN	
PFHxS-BR*	Not detected	1.9		ng/L	1.89	355-46-4-BR	
PFNA*	Not detected	1.9		ng/L	1.89	375-95-1	
8:2 FTSA*	Not detected	1.9		ng/L	1.89	39108-34-4	
PFHpS*	Not detected	1.9		ng/L	1.89	375-92-8	
PFDA*	Not detected	1.9		ng/L	1.89	335-76-2	
N-MeFOSAA*	Not detected	1.9		ng/L	1.89	2355-31-9	
EtFOSAA*	Not detected	3.8		ng/L	1.89	2991-50-6	
PFOS*	Not detected	1.9		ng/L	1.89	1763-23-1	
PFOS-LN*	Not detected	1.9		ng/L	1.89	1763-23-1-LN	
PFOS-BR*	Not detected	1.9		ng/L	1.89	1763-23-1-BR	
PFUnDA*	Not detected	1.9		ng/L	1.89	2058-94-8	
PFNS*	Not detected	1.9		ng/L	1.89	68259-12-1	
PFDODA*	Not detected	1.9		ng/L	1.89	307-55-1	
PFDS*	Not detected	1.9		ng/L	1.89	335-77-3	
PFTTrDA*	Not detected	1.9		ng/L	1.89	72629-94-8	
FOSA*	Not detected	1.9		ng/L	1.89	754-91-6	
PFTeDA*	Not detected	3.8		ng/L	1.89	376-06-7	
11Cl-PF3OUdS*	Not detected	1.9		ng/L	1.89	763051-92-9	
9Cl-PF3ONS*	Not detected	1.9		ng/L	1.89	756426-58-1	
ADONA*	Not detected	1.9		ng/L	1.89	919005-14-4	
HFPO-DA*	Not detected	1.9		ng/L	1.89	13252-13-6	
PFECHS*	Not detected	1.9		ng/L	1.89	67584-42-3	
PFBSA*	Not detected	1.9		ng/L	1.89	30334-69-1	
PFHxSA*	Not detected	1.9		ng/L	1.89	41997-13-1	



Analytical Laboratory Report

Lab Sample ID: S46699.04

Sample Tag: MW-22-15

Collected Date/Time: 03/23/2023 06:52

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.47/6.44/10	ASTMD7979-19M	04/14/23 14:00	AB	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 04/14/23 22:18, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	10.0		ng/L	1.99	375-22-4	
PFPeA*	5.8	4.0		ng/L	1.99	2706-90-3	
4:2 FTSA*	Not detected	2.0		ng/L	1.99	757124-72-4	
PFHxA*	6.0	2.0		ng/L	1.99	307-24-4	
PFBS*	3.5	2.0		ng/L	1.99	375-73-5	
PFHpA*	5.6	2.0		ng/L	1.99	375-85-9	
PFPeS*	Not detected	2.0		ng/L	1.99	2706-91-4	
6:2 FTSA*	Not detected	2.0		ng/L	1.99	27619-97-2	
PFOA*	22	2.0		ng/L	1.99	335-67-1	
PFHxS*	5.1	2.0		ng/L	1.99	355-46-4	
PFHxS-LN*	4.3	2.0		ng/L	1.99	355-46-4-LN	
PFHxS-BR*	Not detected	2.0		ng/L	1.99	355-46-4-BR	
PFNA*	Not detected	2.0		ng/L	1.99	375-95-1	
8:2 FTSA*	Not detected	2.0		ng/L	1.99	39108-34-4	
PFHpS*	Not detected	2.0		ng/L	1.99	375-92-8	
PFDA*	Not detected	2.0		ng/L	1.99	335-76-2	
N-MeFOSAA*	Not detected	2.0		ng/L	1.99	2355-31-9	
EtFOSAA*	Not detected	4.0		ng/L	1.99	2991-50-6	
PFOS*	6.0	2.0		ng/L	1.99	1763-23-1	
PFOS-LN*	2.3	2.0		ng/L	1.99	1763-23-1-LN	
PFOS-BR*	3.4	2.0		ng/L	1.99	1763-23-1-BR	
PFUnDA*	Not detected	2.0		ng/L	1.99	2058-94-8	
PFNS*	Not detected	2.0		ng/L	1.99	68259-12-1	
PFDoDA*	Not detected	2.0		ng/L	1.99	307-55-1	
PFDS*	Not detected	2.0		ng/L	1.99	335-77-3	
PFTTrDA*	Not detected	2.0		ng/L	1.99	72629-94-8	
FOSA*	Not detected	2.0		ng/L	1.99	754-91-6	
PFTeDA*	Not detected	4.0		ng/L	1.99	376-06-7	
11Cl-PF3OUdS*	Not detected	2.0		ng/L	1.99	763051-92-9	
9Cl-PF3ONS*	Not detected	2.0		ng/L	1.99	756426-58-1	
ADONA*	Not detected	2.0		ng/L	1.99	919005-14-4	
HFPO-DA*	Not detected	2.0		ng/L	1.99	13252-13-6	
PFECHS*	Not detected	2.0		ng/L	1.99	67584-42-3	
PFBSA*	Not detected	2.0		ng/L	1.99	30334-69-1	
PFHxSA*	Not detected	2.0		ng/L	1.99	41997-13-1	



Analytical Laboratory Report

Lab Sample ID: S46699.05

Sample Tag: MW-129

Collected Date/Time: 03/23/2023 08:01

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.66/6.44/10	ASTMD7979-19M	04/14/23 14:00	AB	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 04/14/23 22:37, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	15	9.6		ng/L	1.92	375-22-4	
PFPeA*	29	3.8		ng/L	1.92	2706-90-3	
4:2 FTSA*	Not detected	1.9		ng/L	1.92	757124-72-4	
PFHxA*	25	1.9		ng/L	1.92	307-24-4	
PFBS*	4.0	1.9		ng/L	1.92	375-73-5	
PFHpA*	18	1.9		ng/L	1.92	375-85-9	
PFPeS*	Not detected	1.9		ng/L	1.92	2706-91-4	
6:2 FTSA*	Not detected	1.9		ng/L	1.92	27619-97-2	
PFOA*	57	1.9		ng/L	1.92	335-67-1	
PFHxS*	7.1	1.9		ng/L	1.92	355-46-4	
PFHxS-LN*	5.9	1.9		ng/L	1.92	355-46-4-LN	
PFHxS-BR*	Not detected	1.9		ng/L	1.92	355-46-4-BR	
PFNA*	3.6	1.9		ng/L	1.92	375-95-1	
8:2 FTSA*	Not detected	1.9		ng/L	1.92	39108-34-4	
PFHpS*	Not detected	1.9		ng/L	1.92	375-92-8	
PFDA*	5.7	1.9		ng/L	1.92	335-76-2	
N-MeFOSAA*	Not detected	1.9		ng/L	1.92	2355-31-9	
EtFOSAA*	Not detected	3.8		ng/L	1.92	2991-50-6	
PFOS*	54	1.9		ng/L	1.92	1763-23-1	
PFOS-LN*	36	1.9		ng/L	1.92	1763-23-1-LN	
PFOS-BR*	18	1.9		ng/L	1.92	1763-23-1-BR	
PFUnDA*	Not detected	1.9		ng/L	1.92	2058-94-8	
PFNS*	Not detected	1.9		ng/L	1.92	68259-12-1	
PFDODA*	Not detected	1.9		ng/L	1.92	307-55-1	
PFDS*	Not detected	1.9		ng/L	1.92	335-77-3	
PFTTrDA*	Not detected	1.9		ng/L	1.92	72629-94-8	
FOSA*	4.8	1.9		ng/L	1.92	754-91-6	
PFTeDA*	Not detected	3.8		ng/L	1.92	376-06-7	
11Cl-PF3OUdS*	Not detected	1.9		ng/L	1.92	763051-92-9	
9Cl-PF3ONS*	Not detected	1.9		ng/L	1.92	756426-58-1	
ADONA*	Not detected	1.9		ng/L	1.92	919005-14-4	
HFPO-DA*	Not detected	1.9		ng/L	1.92	13252-13-6	
PFECHS*	Not detected	1.9		ng/L	1.92	67584-42-3	
PFBSA*	Not detected	1.9		ng/L	1.92	30334-69-1	
PFHxSA*	Not detected	1.9		ng/L	1.92	41997-13-1	



Analytical Laboratory Report

Lab Sample ID: S46699.06

Sample Tag: MW-22-18

Collected Date/Time: 03/23/2023 09:08

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.55/6.52/10	ASTMD7979-19M	04/14/23 14:00	AB	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 04/14/23 22:57, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	12	10.0		ng/L	1.99	375-22-4	
PFPeA*	6.3	4.0		ng/L	1.99	2706-90-3	
4:2 FTSA*	Not detected	2.0		ng/L	1.99	757124-72-4	
PFHxA*	5.8	2.0		ng/L	1.99	307-24-4	
PFBS*	4.3	2.0		ng/L	1.99	375-73-5	
PFHpA*	5.0	2.0		ng/L	1.99	375-85-9	
PFPeS*	Not detected	2.0		ng/L	1.99	2706-91-4	
6:2 FTSA*	Not detected	2.0		ng/L	1.99	27619-97-2	
PFOA*	14	2.0		ng/L	1.99	335-67-1	
PFHxS*	4.2	2.0		ng/L	1.99	355-46-4	
PFHxS-LN*	3.4	2.0		ng/L	1.99	355-46-4-LN	
PFHxS-BR*	Not detected	2.0		ng/L	1.99	355-46-4-BR	
PFNA*	Not detected	2.0		ng/L	1.99	375-95-1	
8:2 FTSA*	Not detected	2.0		ng/L	1.99	39108-34-4	
PFHpS*	Not detected	2.0		ng/L	1.99	375-92-8	
PFDA*	Not detected	2.0		ng/L	1.99	335-76-2	
N-MeFOSAA*	Not detected	2.0		ng/L	1.99	2355-31-9	
EtFOSAA*	Not detected	4.0		ng/L	1.99	2991-50-6	
PFOS*	10	2.0		ng/L	1.99	1763-23-1	
PFOS-LN*	4.7	2.0		ng/L	1.99	1763-23-1-LN	
PFOS-BR*	5.7	2.0		ng/L	1.99	1763-23-1-BR	
PFUnDA*	Not detected	2.0		ng/L	1.99	2058-94-8	
PFNS*	Not detected	2.0		ng/L	1.99	68259-12-1	
PFDoDA*	Not detected	2.0		ng/L	1.99	307-55-1	
PFDS*	Not detected	2.0		ng/L	1.99	335-77-3	
PFTTrDA*	Not detected	2.0		ng/L	1.99	72629-94-8	
FOSA*	Not detected	2.0		ng/L	1.99	754-91-6	
PFTeDA*	Not detected	4.0		ng/L	1.99	376-06-7	
11Cl-PF3OUdS*	Not detected	2.0		ng/L	1.99	763051-92-9	
9Cl-PF3ONS*	Not detected	2.0		ng/L	1.99	756426-58-1	
ADONA*	Not detected	2.0		ng/L	1.99	919005-14-4	
HFPO-DA*	Not detected	2.0		ng/L	1.99	13252-13-6	
PFECHS*	Not detected	2.0		ng/L	1.99	67584-42-3	
PFBSA*	Not detected	2.0		ng/L	1.99	30334-69-1	
PFHxSA*	Not detected	2.0		ng/L	1.99	41997-13-1	



Analytical Laboratory Report

Lab Sample ID: S46699.07

Sample Tag: MW-128

Collected Date/Time: 03/23/2023 10:00

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.34/6.51/10	ASTMD7979-19M	04/14/23 14:00	AB	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 04/14/23 23:16, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	12	10		ng/L	2.07	375-22-4	
PFPeA*	8.7	4.1		ng/L	2.07	2706-90-3	
4:2 FTSA*	Not detected	2.1		ng/L	2.07	757124-72-4	
PFHxA*	8.4	2.1		ng/L	2.07	307-24-4	
PFBS*	4.1	2.1		ng/L	2.07	375-73-5	
PFHpA*	7.6	2.1		ng/L	2.07	375-85-9	
PFPeS*	Not detected	2.1		ng/L	2.07	2706-91-4	
6:2 FTSA*	Not detected	2.1		ng/L	2.07	27619-97-2	
PFOA*	27	2.1		ng/L	2.07	335-67-1	
PFHxS*	5.7	2.1		ng/L	2.07	355-46-4	
PFHxS-LN*	4.5	2.1		ng/L	2.07	355-46-4-LN	
PFHxS-BR*	Not detected	2.1		ng/L	2.07	355-46-4-BR	
PFNA*	2.6	2.1		ng/L	2.07	375-95-1	
8:2 FTSA*	Not detected	2.1		ng/L	2.07	39108-34-4	
PFHpS*	Not detected	2.1		ng/L	2.07	375-92-8	
PFDA*	Not detected	2.1		ng/L	2.07	335-76-2	
N-MeFOSAA*	Not detected	2.1		ng/L	2.07	2355-31-9	
EtFOSAA*	Not detected	4.1		ng/L	2.07	2991-50-6	
PFOS*	35	2.1		ng/L	2.07	1763-23-1	
PFOS-LN*	19	2.1		ng/L	2.07	1763-23-1-LN	
PFOS-BR*	16	2.1		ng/L	2.07	1763-23-1-BR	
PFUnDA*	Not detected	2.1		ng/L	2.07	2058-94-8	
PFNS*	Not detected	2.1		ng/L	2.07	68259-12-1	
PFDODA*	Not detected	2.1		ng/L	2.07	307-55-1	
PFDS*	Not detected	2.1		ng/L	2.07	335-77-3	
PFTTrDA*	Not detected	2.1		ng/L	2.07	72629-94-8	
FOSA*	Not detected	2.1		ng/L	2.07	754-91-6	
PFTeDA*	Not detected	4.1		ng/L	2.07	376-06-7	
11Cl-PF3OUdS*	Not detected	2.1		ng/L	2.07	763051-92-9	
9Cl-PF3ONS*	Not detected	2.1		ng/L	2.07	756426-58-1	
ADONA*	Not detected	2.1		ng/L	2.07	919005-14-4	
HFPO-DA*	Not detected	2.1		ng/L	2.07	13252-13-6	
PFECHS*	Not detected	2.1		ng/L	2.07	67584-42-3	
PFBSA*	Not detected	2.1		ng/L	2.07	30334-69-1	
PFHxSA*	Not detected	2.1		ng/L	2.07	41997-13-1	



Analytical Laboratory Report

Lab Sample ID: S46699.08

Sample Tag: MW-22-19

Collected Date/Time: 03/23/2023 10:56

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.61/6.45/10	ASTMD7979-19M	04/14/23 14:00	AB	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 04/14/23 23:36, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	12	9.7		ng/L	1.94	375-22-4	
PFPeA*	6.4	3.9		ng/L	1.94	2706-90-3	
4:2 FTSA*	Not detected	1.9		ng/L	1.94	757124-72-4	
PFHxA*	6.2	1.9		ng/L	1.94	307-24-4	
PFBS*	6.1	1.9		ng/L	1.94	375-73-5	
PFHpA*	4.2	1.9		ng/L	1.94	375-85-9	
PFPeS*	Not detected	1.9		ng/L	1.94	2706-91-4	
6:2 FTSA*	Not detected	1.9		ng/L	1.94	27619-97-2	
PFOA*	19	1.9		ng/L	1.94	335-67-1	
PFHxS*	9.3	1.9		ng/L	1.94	355-46-4	
PFHxS-LN*	7.5	1.9		ng/L	1.94	355-46-4-LN	
PFHxS-BR*	Not detected	1.9		ng/L	1.94	355-46-4-BR	
PFNA*	2.8	1.9		ng/L	1.94	375-95-1	
8:2 FTSA*	Not detected	1.9		ng/L	1.94	39108-34-4	
PFHpS*	Not detected	1.9		ng/L	1.94	375-92-8	
PFDA*	Not detected	1.9		ng/L	1.94	335-76-2	
N-MeFOSAA*	Not detected	1.9		ng/L	1.94	2355-31-9	
EtFOSAA*	Not detected	3.9		ng/L	1.94	2991-50-6	
PFOS*	25	1.9		ng/L	1.94	1763-23-1	
PFOS-LN*	13	1.9		ng/L	1.94	1763-23-1-LN	
PFOS-BR*	12	1.9		ng/L	1.94	1763-23-1-BR	
PFUnDA*	Not detected	1.9		ng/L	1.94	2058-94-8	
PFNS*	Not detected	1.9		ng/L	1.94	68259-12-1	
PFDODA*	Not detected	1.9		ng/L	1.94	307-55-1	
PFDS*	Not detected	1.9		ng/L	1.94	335-77-3	
PFTTrDA*	Not detected	1.9		ng/L	1.94	72629-94-8	
FOSA*	Not detected	1.9		ng/L	1.94	754-91-6	
PFTeDA*	Not detected	3.9		ng/L	1.94	376-06-7	
11Cl-PF3OUdS*	Not detected	1.9		ng/L	1.94	763051-92-9	
9Cl-PF3ONS*	Not detected	1.9		ng/L	1.94	756426-58-1	
ADONA*	Not detected	1.9		ng/L	1.94	919005-14-4	
HFPO-DA*	Not detected	1.9		ng/L	1.94	13252-13-6	
PFECHS*	Not detected	1.9		ng/L	1.94	67584-42-3	
PFBSA*	Not detected	1.9		ng/L	1.94	30334-69-1	
PFHxSA*	Not detected	1.9		ng/L	1.94	41997-13-1	



Analytical Laboratory Report

Lab Sample ID: S46699.09

Sample Tag: MW-22-20

Collected Date/Time: 03/23/2023 11:48

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.52/6.45/10	ASTMD7979-19M	04/14/23 14:00	AB	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 04/14/23 23:55, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	9.9		ng/L	1.97	375-22-4	
PFPeA*	4.3	3.9		ng/L	1.97	2706-90-3	
4:2 FTSA*	Not detected	2.0		ng/L	1.97	757124-72-4	
PFHxA*	3.5	2.0		ng/L	1.97	307-24-4	
PFBS*	4.7	2.0		ng/L	1.97	375-73-5	
PFHpA*	3.1	2.0		ng/L	1.97	375-85-9	
PFPeS*	Not detected	2.0		ng/L	1.97	2706-91-4	
6:2 FTSA*	Not detected	2.0		ng/L	1.97	27619-97-2	
PFOA*	6.6	2.0		ng/L	1.97	335-67-1	
PFHxS*	15	2.0		ng/L	1.97	355-46-4	
PFHxS-LN*	12	2.0		ng/L	1.97	355-46-4-LN	
PFHxS-BR*	2.7	2.0		ng/L	1.97	355-46-4-BR	
PFNA*	Not detected	2.0		ng/L	1.97	375-95-1	
8:2 FTSA*	Not detected	2.0		ng/L	1.97	39108-34-4	
PFHpS*	Not detected	2.0		ng/L	1.97	375-92-8	
PFDA*	Not detected	2.0		ng/L	1.97	335-76-2	
N-MeFOSAA*	Not detected	2.0		ng/L	1.97	2355-31-9	
EtFOSAA*	Not detected	3.9		ng/L	1.97	2991-50-6	
PFOS*	3.2	2.0		ng/L	1.97	1763-23-1	
PFOS-LN*	Not detected	2.0		ng/L	1.97	1763-23-1-LN	
PFOS-BR*	Not detected	2.0		ng/L	1.97	1763-23-1-BR	
PFUnDA*	Not detected	2.0		ng/L	1.97	2058-94-8	
PFNS*	Not detected	2.0		ng/L	1.97	68259-12-1	
PFDODA*	Not detected	2.0		ng/L	1.97	307-55-1	
PFDS*	Not detected	2.0		ng/L	1.97	335-77-3	
PFTTrDA*	Not detected	2.0		ng/L	1.97	72629-94-8	
FOSA*	Not detected	2.0		ng/L	1.97	754-91-6	
PFTeDA*	Not detected	3.9		ng/L	1.97	376-06-7	
11Cl-PF3OUdS*	Not detected	2.0		ng/L	1.97	763051-92-9	
9Cl-PF3ONS*	Not detected	2.0		ng/L	1.97	756426-58-1	
ADONA*	Not detected	2.0		ng/L	1.97	919005-14-4	
HFPO-DA*	Not detected	2.0		ng/L	1.97	13252-13-6	
PFECHS*	Not detected	2.0		ng/L	1.97	67584-42-3	
PFBSA*	Not detected	2.0		ng/L	1.97	30334-69-1	
PFHxSA*	Not detected	2.0		ng/L	1.97	41997-13-1	



Analytical Laboratory Report

Lab Sample ID: S46699.10

Sample Tag: MW-22-22D

Collected Date/Time: 03/23/2023 12:50

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.01/6.49/10	ASTMD7979-19M	04/14/23 14:00	AB	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 04/15/23 00:15, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	11		ng/L	2.21	375-22-4	
PFPeA*	Not detected	4.4		ng/L	2.21	2706-90-3	
4:2 FTSA*	Not detected	2.2		ng/L	2.21	757124-72-4	
PFHxA*	Not detected	2.2		ng/L	2.21	307-24-4	
PFBS*	Not detected	2.2		ng/L	2.21	375-73-5	
PFHpA*	Not detected	2.2		ng/L	2.21	375-85-9	
PFPeS*	Not detected	2.2		ng/L	2.21	2706-91-4	
6:2 FTSA*	Not detected	2.2		ng/L	2.21	27619-97-2	
PFOA*	Not detected	2.2		ng/L	2.21	335-67-1	
PFHxS*	Not detected	2.2		ng/L	2.21	355-46-4	
PFHxS-LN*	Not detected	2.2		ng/L	2.21	355-46-4-LN	
PFHxS-BR*	Not detected	2.2		ng/L	2.21	355-46-4-BR	
PFNA*	Not detected	2.2		ng/L	2.21	375-95-1	
8:2 FTSA*	Not detected	2.2		ng/L	2.21	39108-34-4	
PFHpS*	Not detected	2.2		ng/L	2.21	375-92-8	
PFDA*	Not detected	2.2		ng/L	2.21	335-76-2	
N-MeFOSAA*	Not detected	2.2		ng/L	2.21	2355-31-9	
EtFOSAA*	Not detected	4.4		ng/L	2.21	2991-50-6	
PFOS*	Not detected	2.2		ng/L	2.21	1763-23-1	
PFOS-LN*	Not detected	2.2		ng/L	2.21	1763-23-1-LN	
PFOS-BR*	Not detected	2.2		ng/L	2.21	1763-23-1-BR	
PFUnDA*	Not detected	2.2		ng/L	2.21	2058-94-8	
PFNS*	Not detected	2.2		ng/L	2.21	68259-12-1	
PFDoDA*	Not detected	2.2		ng/L	2.21	307-55-1	
PFDS*	Not detected	2.2		ng/L	2.21	335-77-3	
PFTTrDA*	Not detected	2.2		ng/L	2.21	72629-94-8	
FOSA*	Not detected	2.2		ng/L	2.21	754-91-6	
PFTeDA*	Not detected	4.4		ng/L	2.21	376-06-7	
11Cl-PF3OUdS*	Not detected	2.2		ng/L	2.21	763051-92-9	
9Cl-PF3ONS*	Not detected	2.2		ng/L	2.21	756426-58-1	
ADONA*	Not detected	2.2		ng/L	2.21	919005-14-4	
HFPO-DA*	Not detected	2.2		ng/L	2.21	13252-13-6	
PFECHS*	Not detected	2.2		ng/L	2.21	67584-42-3	
PFBSA*	Not detected	2.2		ng/L	2.21	30334-69-1	
PFHxSA*	Not detected	2.2		ng/L	2.21	41997-13-1	



Analytical Laboratory Report

Lab Sample ID: S46699.11

Sample Tag: MW-22-14

Collected Date/Time: 03/23/2023 13:50

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.51/6.45/10	ASTMD7979-19M	04/14/23 14:00	AB	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 04/15/23 00:34, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	9.9		ng/L	1.98	375-22-4	
PFPeA*	4.5	4.0		ng/L	1.98	2706-90-3	
4:2 FTSA*	Not detected	2.0		ng/L	1.98	757124-72-4	
PFHxA*	5.3	2.0		ng/L	1.98	307-24-4	
PFBS*	3.8	2.0		ng/L	1.98	375-73-5	
PFHpA*	4.7	2.0		ng/L	1.98	375-85-9	
PFPeS*	Not detected	2.0		ng/L	1.98	2706-91-4	
6:2 FTSA*	Not detected	2.0		ng/L	1.98	27619-97-2	
PFOA*	11	2.0		ng/L	1.98	335-67-1	
PFHxS*	2.9	2.0		ng/L	1.98	355-46-4	
PFHxS-LN*	2.3	2.0		ng/L	1.98	355-46-4-LN	
PFHxS-BR*	Not detected	2.0		ng/L	1.98	355-46-4-BR	
PFNA*	Not detected	2.0		ng/L	1.98	375-95-1	
8:2 FTSA*	Not detected	2.0		ng/L	1.98	39108-34-4	
PFHpS*	Not detected	2.0		ng/L	1.98	375-92-8	
PFDA*	Not detected	2.0		ng/L	1.98	335-76-2	
N-MeFOSAA*	Not detected	2.0		ng/L	1.98	2355-31-9	
EtFOSAA*	Not detected	4.0		ng/L	1.98	2991-50-6	
PFOS*	3.2	2.0		ng/L	1.98	1763-23-1	
PFOS-LN*	Not detected	2.0		ng/L	1.98	1763-23-1-LN	
PFOS-BR*	Not detected	2.0		ng/L	1.98	1763-23-1-BR	
PFUnDA*	Not detected	2.0		ng/L	1.98	2058-94-8	
PFNS*	Not detected	2.0		ng/L	1.98	68259-12-1	
PFDODA*	Not detected	2.0		ng/L	1.98	307-55-1	
PFDS*	Not detected	2.0		ng/L	1.98	335-77-3	
PFTTrDA*	Not detected	2.0		ng/L	1.98	72629-94-8	
FOSA*	Not detected	2.0		ng/L	1.98	754-91-6	
PFTeDA*	Not detected	4.0		ng/L	1.98	376-06-7	
11Cl-PF3OUdS*	Not detected	2.0		ng/L	1.98	763051-92-9	
9Cl-PF3ONS*	Not detected	2.0		ng/L	1.98	756426-58-1	
ADONA*	Not detected	2.0		ng/L	1.98	919005-14-4	
HFPO-DA*	Not detected	2.0		ng/L	1.98	13252-13-6	
PFECHS*	Not detected	2.0		ng/L	1.98	67584-42-3	
PFBSA*	Not detected	2.0		ng/L	1.98	30334-69-1	
PFHxSA*	Not detected	2.0		ng/L	1.98	41997-13-1	



Analytical Laboratory Report

Lab Sample ID: S46699.12

Sample Tag: F.B.

Collected Date/Time: 03/23/2023 14:13

Matrix: Water

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.21/6.45/10	ASTMD7979-19M	04/14/23 14:00	AB	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 04/15/23 00:54, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	11		ng/L	2.1	375-22-4	
PFPeA*	Not detected	4.2		ng/L	2.1	2706-90-3	
4:2 FTSA*	Not detected	2.1		ng/L	2.1	757124-72-4	
PFHxA*	Not detected	2.1		ng/L	2.1	307-24-4	
PFBS*	Not detected	2.1		ng/L	2.1	375-73-5	
PFHpA*	Not detected	2.1		ng/L	2.1	375-85-9	
PFPeS*	Not detected	2.1		ng/L	2.1	2706-91-4	
6:2 FTSA*	Not detected	2.1		ng/L	2.1	27619-97-2	
PFOA*	Not detected	2.1		ng/L	2.1	335-67-1	
PFHxS*	Not detected	2.1		ng/L	2.1	355-46-4	
PFHxS-LN*	Not detected	2.1		ng/L	2.1	355-46-4-LN	
PFHxS-BR*	Not detected	2.1		ng/L	2.1	355-46-4-BR	
PFNA*	Not detected	2.1		ng/L	2.1	375-95-1	
8:2 FTSA*	Not detected	2.1		ng/L	2.1	39108-34-4	
PFHpS*	Not detected	2.1		ng/L	2.1	375-92-8	
PFDA*	Not detected	2.1		ng/L	2.1	335-76-2	
N-MeFOSAA*	Not detected	2.1		ng/L	2.1	2355-31-9	
EtFOSAA*	Not detected	4.2		ng/L	2.1	2991-50-6	
PFOS*	Not detected	2.1		ng/L	2.1	1763-23-1	
PFOS-LN*	Not detected	2.1		ng/L	2.1	1763-23-1-LN	
PFOS-BR*	Not detected	2.1		ng/L	2.1	1763-23-1-BR	
PFUnDA*	Not detected	2.1		ng/L	2.1	2058-94-8	
PFNS*	Not detected	2.1		ng/L	2.1	68259-12-1	
PFDODA*	Not detected	2.1		ng/L	2.1	307-55-1	
PFDS*	Not detected	2.1		ng/L	2.1	335-77-3	
PFTTrDA*	Not detected	2.1		ng/L	2.1	72629-94-8	
FOSA*	Not detected	2.1		ng/L	2.1	754-91-6	
PFTeDA*	Not detected	4.2		ng/L	2.1	376-06-7	
11Cl-PF3OUdS*	Not detected	2.1		ng/L	2.1	763051-92-9	
9Cl-PF3ONS*	Not detected	2.1		ng/L	2.1	756426-58-1	
ADONA*	Not detected	2.1		ng/L	2.1	919005-14-4	
HFPO-DA*	Not detected	2.1		ng/L	2.1	13252-13-6	
PFECHS*	Not detected	2.1		ng/L	2.1	67584-42-3	
PFBSA*	Not detected	2.1		ng/L	2.1	30334-69-1	
PFHxSA*	Not detected	2.1		ng/L	2.1	41997-13-1	



Analytical Laboratory Report

Lab Sample ID: S46699.13

Sample Tag: E.B.

Collected Date/Time: 03/23/2023 14:15

Matrix: Water

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.37/6.48/10	ASTMD7979-19M	04/14/23 14:00	AB	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 04/15/23 01:13, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	10		ng/L	2.04	375-22-4	
PFPeA*	Not detected	4.1		ng/L	2.04	2706-90-3	
4:2 FTSA*	Not detected	2.0		ng/L	2.04	757124-72-4	
PFHxA*	Not detected	2.0		ng/L	2.04	307-24-4	
PFBS*	Not detected	2.0		ng/L	2.04	375-73-5	
PFHpA*	Not detected	2.0		ng/L	2.04	375-85-9	
PFPeS*	Not detected	2.0		ng/L	2.04	2706-91-4	
6:2 FTSA*	Not detected	2.0		ng/L	2.04	27619-97-2	
PFOA*	Not detected	2.0		ng/L	2.04	335-67-1	
PFHxS*	Not detected	2.0		ng/L	2.04	355-46-4	
PFHxS-LN*	Not detected	2.0		ng/L	2.04	355-46-4-LN	
PFHxS-BR*	Not detected	2.0		ng/L	2.04	355-46-4-BR	
PFNA*	Not detected	2.0		ng/L	2.04	375-95-1	
8:2 FTSA*	Not detected	2.0		ng/L	2.04	39108-34-4	
PFHpS*	Not detected	2.0		ng/L	2.04	375-92-8	
PFDA*	Not detected	2.0		ng/L	2.04	335-76-2	
N-MeFOSAA*	Not detected	2.0		ng/L	2.04	2355-31-9	
EtFOSAA*	Not detected	4.1		ng/L	2.04	2991-50-6	
PFOS*	Not detected	2.0		ng/L	2.04	1763-23-1	
PFOS-LN*	Not detected	2.0		ng/L	2.04	1763-23-1-LN	
PFOS-BR*	Not detected	2.0		ng/L	2.04	1763-23-1-BR	
PFUnDA*	Not detected	2.0		ng/L	2.04	2058-94-8	
PFNS*	Not detected	2.0		ng/L	2.04	68259-12-1	
PFDODA*	Not detected	2.0		ng/L	2.04	307-55-1	
PFDS*	Not detected	2.0		ng/L	2.04	335-77-3	
PFTTrDA*	Not detected	2.0		ng/L	2.04	72629-94-8	
FOSA*	Not detected	2.0		ng/L	2.04	754-91-6	
PFTeDA*	Not detected	4.1		ng/L	2.04	376-06-7	
11Cl-PF3OUdS*	Not detected	2.0		ng/L	2.04	763051-92-9	
9Cl-PF3ONS*	Not detected	2.0		ng/L	2.04	756426-58-1	
ADONA*	Not detected	2.0		ng/L	2.04	919005-14-4	
HFPO-DA*	Not detected	2.0		ng/L	2.04	13252-13-6	
PFECHS*	Not detected	2.0		ng/L	2.04	67584-42-3	
PFBSA*	Not detected	2.0		ng/L	2.04	30334-69-1	
PFHxSA*	Not detected	2.0		ng/L	2.04	41997-13-1	



Analytical Laboratory Report

Lab Sample ID: S46699.14

Sample Tag: Field Blank

Collected Date/Time: 03/23/2023 00:01

Matrix: Water

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	15ml Centrifuge Tube	None	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Initial wt. (g) / Final wt. (g) / Volume (ml)*	11.58/6.50/10	ASTMD7979-19M	04/14/23 14:00	AB	

Organics

31 PFAs, Method: ASTMD7979-19M, Run Date: 04/15/23 01:33, Analyst: KCV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
PFBA*	Not detected	9.9		ng/L	1.97	375-22-4	
PFPeA*	Not detected	3.9		ng/L	1.97	2706-90-3	
4:2 FTSA*	Not detected	2.0		ng/L	1.97	757124-72-4	
PFHxA*	Not detected	2.0		ng/L	1.97	307-24-4	
PFBS*	Not detected	2.0		ng/L	1.97	375-73-5	
PFHpA*	Not detected	2.0		ng/L	1.97	375-85-9	
PFPeS*	Not detected	2.0		ng/L	1.97	2706-91-4	
6:2 FTSA*	Not detected	2.0		ng/L	1.97	27619-97-2	
PFOA*	Not detected	2.0		ng/L	1.97	335-67-1	
PFHxS*	Not detected	2.0		ng/L	1.97	355-46-4	
PFHxS-LN*	Not detected	2.0		ng/L	1.97	355-46-4-LN	
PFHxS-BR*	Not detected	2.0		ng/L	1.97	355-46-4-BR	
PFNA*	Not detected	2.0		ng/L	1.97	375-95-1	
8:2 FTSA*	Not detected	2.0		ng/L	1.97	39108-34-4	
PFHpS*	Not detected	2.0		ng/L	1.97	375-92-8	
PFDA*	Not detected	2.0		ng/L	1.97	335-76-2	
N-MeFOSAA*	Not detected	2.0		ng/L	1.97	2355-31-9	
EtFOSAA*	Not detected	3.9		ng/L	1.97	2991-50-6	
PFOS*	Not detected	2.0		ng/L	1.97	1763-23-1	
PFOS-LN*	Not detected	2.0		ng/L	1.97	1763-23-1-LN	
PFOS-BR*	Not detected	2.0		ng/L	1.97	1763-23-1-BR	
PFUnDA*	Not detected	2.0		ng/L	1.97	2058-94-8	
PFNS*	Not detected	2.0		ng/L	1.97	68259-12-1	
PFDoDA*	Not detected	2.0		ng/L	1.97	307-55-1	
PFDS*	Not detected	2.0		ng/L	1.97	335-77-3	
PFTTrDA*	Not detected	2.0		ng/L	1.97	72629-94-8	
FOSA*	Not detected	2.0		ng/L	1.97	754-91-6	
PFTeDA*	Not detected	3.9		ng/L	1.97	376-06-7	
11Cl-PF3OUdS*	Not detected	2.0		ng/L	1.97	763051-92-9	
9Cl-PF3ONS*	Not detected	2.0		ng/L	1.97	756426-58-1	
ADONA*	Not detected	2.0		ng/L	1.97	919005-14-4	
HFPO-DA*	Not detected	2.0		ng/L	1.97	13252-13-6	
PFECHS*	Not detected	2.0		ng/L	1.97	67584-42-3	
PFBSA*	Not detected	2.0		ng/L	1.97	30334-69-1	
PFHxSA*	Not detected	2.0		ng/L	1.97	41997-13-1	

Merit Laboratories Login Checklist

Lab Set ID:S46699

Client:TRC (TRC)

Project: Detroit Axle Southern Area

Submitted:03/27/2023 11:00 Login User: MMC

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place

Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Selection	Description	Note
Sample Receiving		
01.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples are received at 4C +/- 2C Thermometer # IR 2.9
02.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Received on ice/ cooling process begun
03.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples shipped
04.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples left in 24 hr. drop box
05.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Are there custody seals/tape or is the drop box locked
Chain of Custody		
06.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC adequately filled out
07.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC signed and relinquished to the lab
08.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sample tag on bottles match COC
09.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Subcontracting needed? Subcontracted to:
Preservation		
10.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Do sample have correct chemical preservation
11.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Completed pH checks on preserved samples? (no VOAs)
12.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Did any samples need to be preserved in the lab?
Bottle Conditions		
13.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	All bottles intact
14.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Appropriate analytical bottles are used
15.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Merit bottles used Merit Field Blank procedure not followed. Ran sample as received.
16.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sufficient sample volume received
17.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples require laboratory filtration
18.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples submitted within holding time
19.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Do water VOC or TOX bottles contain headspace

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____



2680 East Lansing Dr., East Lansing, MI 48823
 Phone (517) 332-0167 Fax (517) 332-4034
 www.meritlabs.com

C.O.C. PAGE # _____ OF _____

REPORT TO **CHAIN OF CUSTODY RECORD** **INVOICE TO**

CONTACT NAME **Kelly Cratsenburg**
 COMPANY **TRC**
 ADDRESS **1540 Eisenhower Place**
 CITY **Ann Arbor** STATE **MI** ZIP CODE **48108**
 PHONE NO. _____ FAX NO. _____ P.O. NO. **198396**
 E-MAIL ADDRESS **kcratsenburg@trccompanies.com** QUOTE NO. **230317-03**

CONTACT NAME _____ SAME
 COMPANY _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP CODE _____
 PHONE NO. _____ E-MAIL ADDRESS _____

PROJECT NO./NAME **Detroit Axle Southern Area** SAMPLER(S) - PLEASE PRINT/SIGN NAME _____
 TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____
 DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER **TRC EDD**

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
 SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIPE A=AIR W=WASTE

Containers & Preservatives

MERIT LAB NO. <small>FOR LAB USE ONLY</small>	20 YEAR 23		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	MeOH	MeOH	OTHER	31 PFAS	Certifications		Project Locations		Special Instructions
	DATE	TIME												<input type="checkbox"/> OHIO VAP	<input type="checkbox"/> Drinking Water	<input type="checkbox"/> DoD	<input type="checkbox"/> NPDES	
46699.01	3/23	648	MW 22-17	W	3	+	+						+					
.02	" "	-	Dep H03	W	3	+							L					
.03	1/11	0935	MW 22-16	W	3	+							+					
.04	1/11	0650	MW 22-15	W	3	+							+					
.05	" "	0801	MW 129	W	3	+							+					
.06	" "	0910	MW 22-18	W	3	+							+					
.07	" "	1022	MW 128	W	3	+							+					
.08	" "	1056	MW 22-19	W	3	+							+					
.09	" "	1148	MW 22-20	W	3	+							+					
.10	1/11	0950	MW 22-22B	W	3	+							+					
.11	1/11	1350	MW 22-14	W	3	+							+					
.12	1/11	1413	F.B	W	3	+							+					

RELINQUISHED BY: _____ DATE **3/23/23** TIME **1:33**
 RECEIVED BY: _____ DATE **3/21/23** TIME **09:35**
 RELINQUISHED BY: _____ DATE **3/21/23** TIME **11:00**
 RECEIVED BY: _____ DATE **3/27/23** TIME **11:00**

RELINQUISHED BY: **TRC** DATE **3/23/23** TIME **15:30**
 RECEIVED BY: _____ DATE _____ TIME _____
 SEAL NO. SEAL INTACT YES NO INITIALS _____
 SEAL NO. SEAL INTACT YES NO INITIALS _____
 NOTES: TEMP. ON ARRIVAL **2.9**

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE



Analytical Laboratory Report

Report ID: S46700.01(01)
Generated on 04/04/2023

Report to

Attention: Kelly Cratsenburg
TRC
1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: 734-412-5424 FAX:
Email: KCratsenburg@trccompanies.com

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John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S46700.01-S46700.12
Project: Detroit Axle Southern Area
Collected Date(s): 03/23/2023
Submitted Date/Time: 03/27/2023 11:00
Sampled by: Unknown
P.O. #: 198396

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Maya Murshak
Technical Director



Analytical Laboratory Report

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Full accreditation certificates are available upon request. Starred (*) analytes are not NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the

FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

Report Narrative

There is no additional narrative for this analytical report



Analytical Laboratory Report

Laboratory Certifications

Authority	Certification ID
Michigan DEQ	#9956
DOD ELAP/ISO 17025	#69699
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Alaska CSLAP	#17-001
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Analytical Laboratory Report

Method Summary

Method	Version
E200.8	EPA Method 200.8 Revision 5.4
E245.1	EPA Method 245.1 Revision 3.0
N/A	Not Applicable
SW3015A	SW 846 Method 3015A Revision 1 February 2007
SW3510C	SW 846 Method 3510C Revision 3 December 1996
SW5030C/8260C	SW 846 Method 8260C Revision 3 August 2006 / 5030C Revision 3 May 2003
SW8260B - SIM	SW 846 Method 8260B Revision 2 December 1996 SIMs
SW8270D	SW 846 Method 8270D Revision 4 February 2007



Analytical Laboratory Report

Sample Summary (12 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S46700.01	MW-22-17	Groundwater	03/23/23 04:40
S46700.02	Dup #03	Groundwater	03/23/23 00:01
S46700.03	MW-22-16	Groundwater	03/23/23 05:35
S46700.04	MW-22-15	Groundwater	03/23/23 06:52
S46700.05	MW-129	Groundwater	03/23/23 08:01
S46700.06	MW-22-18	Groundwater	03/23/23 09:08
S46700.07	MW-128	Groundwater	03/23/23 10:00
S46700.08	MW-22-19	Groundwater	03/23/23 10:56
S46700.09	MW-22-20	Groundwater	03/23/23 11:48
S46700.10	MW-22-22D	Groundwater	03/23/23 12:50
S46700.11	MW-22-14	Groundwater	03/23/23 13:50
S46700.12	Trip Blank	Water	03/23/23 00:01



Analytical Laboratory Report

Lab Sample ID: S46700.01

Sample Tag: MW-22-17

Collected Date/Time: 03/23/2023 04:40

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	2.9	IR
3	40ml Glass	None	Yes	2.9	IR
1	125ml Plastic	HNO3	Yes	2.9	IR
3	1L Amber	None	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	03/30/23 12:22	CTV	
pH check for VOCs*	<2	N/A	03/30/23 10:42	ASW	
Metal Digestion	Completed	SW3015A	03/27/23 12:40	CCM	
BNA Extraction	Completed	SW3510C	03/29/23 10:00	JWR	

Metals

Method: E200.8, Run Date: 03/27/23 13:43, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	Not detected	0.010		mg/L	2	7429-90-5	
Antimony*	Not detected	0.001		mg/L	2	7440-36-0	
Arsenic	Not detected	0.002		mg/L	2	7440-38-2	
Barium	0.059	0.005		mg/L	2	7440-39-3	
Beryllium	Not detected	0.001		mg/L	2	7440-41-7	
Boron	0.05	0.04		mg/L	2	7440-42-8	
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9	
Chromium	Not detected	0.005		mg/L	2	7440-47-3	
Cobalt	Not detected	0.005		mg/L	2	7440-48-4	
Copper	Not detected	0.005		mg/L	2	7440-50-8	
Iron	0.04	0.02		mg/L	2	7439-89-6	
Lead	Not detected	0.003		mg/L	2	7439-92-1	
Manganese	0.154	0.005		mg/L	2	7439-96-5	
Molybdenum	Not detected	0.005		mg/L	2	7439-98-7	
Nickel	Not detected	0.005		mg/L	2	7440-02-0	
Selenium	Not detected	0.005		mg/L	2	7782-49-2	
Silver	Not detected	0.0002		mg/L	2	7440-22-4	
Strontium	0.333	0.005		mg/L	2	7440-24-6	
Thallium	Not detected	0.002		mg/L	2	7440-28-0	
Tin	Not detected	0.02		mg/L	2	7440-31-5	
Titanium	Not detected	0.005		mg/L	2	7440-32-6	
Vanadium	Not detected	0.002		mg/L	2	7440-62-2	
Zinc	Not detected	0.005		mg/L	2	7440-66-6	

Method: E200.8, Run Date: 03/27/23 16:12, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium*	84.8	0.50		mg/L	2	7440-70-2	
Magnesium	13.7	0.50		mg/L	2	7439-95-4	
Potassium	5.43	0.50		mg/L	2	7440-09-7	
Sodium	124	0.50		mg/L	2	7440-23-5	



Analytical Laboratory Report

Lab Sample ID: S46700.01 (continued)

Sample Tag: MW-22-17

Method: E245.1, Run Date: 03/30/23 13:53, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.0002		mg/L	1	7439-97-6	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 03/29/23 20:28, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/L	2		
Acenaphthene	Not detected	5		ug/L	2	83-32-9	
Acenaphthylene	Not detected	5		ug/L	2	208-96-8	
Anthracene	Not detected	5		ug/L	2	120-12-7	
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3	
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2	
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9	
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2	
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1	
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7	
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3	
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7	
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8	
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7	
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7	
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3	
Chrysene	Not detected	1		ug/L	2	218-01-9	
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3	
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2	
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1	
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2	
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2	
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9	
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1	
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5	
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2	
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2	
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0	
Fluoranthene	Not detected	1		ug/L	2	206-44-0	
Fluorene	Not detected	5		ug/L	2	86-73-7	
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1	
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3	
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4	
Hexachloroethane	Not detected	5		ug/L	2	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5	
Isophorone	Not detected	5		ug/L	2	78-59-1	
Naphthalene	Not detected	5		ug/L	2	91-20-3	
Nitrobenzene	Not detected	5		ug/L	2	98-95-3	
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5	
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7	



Analytical Laboratory Report

Lab Sample ID: S46700.01 (continued)

Sample Tag: MW-22-17

Method: SW8270D, Run Date: 03/29/23 20:28, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7	
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5	
Phenanthrene	Not detected	2		ug/L	2	85-01-8	
Phenol	Not detected	5		ug/L	2	108-95-2	
Pyrene	Not detected	5		ug/L	2	129-00-0	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1	
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2	
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9	
Benzidine	Not detected	1		ug/L	2	92-87-5	

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 04/01/23 03:32, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3	

Method: SW5030C/8260C, Run Date: 03/30/23 17:45, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/L	1		

Method: SW8260B - SIM, Run Date: 03/30/23 00:08, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8	
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/30/23 17:45, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Chloroform	Not detected	1		ug/L	1	67-66-3	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	



Analytical Laboratory Report

Lab Sample ID: S46700.01 (continued)

Sample Tag: MW-22-17

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/30/23 17:45, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
Acrolein	Not detected	1		ug/L	1	107-02-8	
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8	
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4	
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9	
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6	
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7	
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	

Other / Misc.

Method: , Run Date: 03/30/23 20:59, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S46700.02

Sample Tag: Dup #03

Collected Date/Time: 03/23/2023 00:01

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	2.9	IR
3	40ml Glass	None	Yes	2.9	IR
1	125ml Plastic	HNO3	Yes	2.9	IR
3	1L Amber	None	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	03/30/23 12:22	CTV	
pH check for VOCs*	<2	N/A	03/30/23 10:42	ASW	
Metal Digestion	Completed	SW3015A	03/27/23 12:40	CCM	
BNA Extraction	Completed	SW3510C	03/29/23 10:00	JWR	

Metals

Method: E200.8, Run Date: 03/27/23 13:48, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	Not detected	0.010		mg/L	2	7429-90-5	
Antimony*	Not detected	0.001		mg/L	2	7440-36-0	
Arsenic	Not detected	0.002		mg/L	2	7440-38-2	
Barium	0.063	0.005		mg/L	2	7440-39-3	
Beryllium	Not detected	0.001		mg/L	2	7440-41-7	
Boron	0.07	0.04		mg/L	2	7440-42-8	
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9	
Chromium	Not detected	0.005		mg/L	2	7440-47-3	
Cobalt	Not detected	0.005		mg/L	2	7440-48-4	
Copper	Not detected	0.005		mg/L	2	7440-50-8	
Iron	0.31	0.02		mg/L	2	7439-89-6	
Lead	Not detected	0.003		mg/L	2	7439-92-1	
Manganese	0.076	0.005		mg/L	2	7439-96-5	
Molybdenum	Not detected	0.005		mg/L	2	7439-98-7	
Nickel	Not detected	0.005		mg/L	2	7440-02-0	
Selenium	Not detected	0.005		mg/L	2	7782-49-2	
Silver	Not detected	0.0002		mg/L	2	7440-22-4	
Strontium	0.307	0.005		mg/L	2	7440-24-6	
Thallium	Not detected	0.002		mg/L	2	7440-28-0	
Tin	Not detected	0.02		mg/L	2	7440-31-5	
Titanium	Not detected	0.005		mg/L	2	7440-32-6	
Vanadium	Not detected	0.002		mg/L	2	7440-62-2	
Zinc	Not detected	0.005		mg/L	2	7440-66-6	

Method: E200.8, Run Date: 03/27/23 16:13, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium*	89.7	0.50		mg/L	2	7440-70-2	
Magnesium	14.4	0.50		mg/L	2	7439-95-4	
Potassium	3.90	0.50		mg/L	2	7440-09-7	
Sodium	193	0.50		mg/L	2	7440-23-5	



Analytical Laboratory Report

Lab Sample ID: S46700.02 (continued)

Sample Tag: Dup #03

Method: E245.1, Run Date: 03/30/23 14:02, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.0002		mg/L	1	7439-97-6	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 03/29/23 20:58, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/L	2		
Acenaphthene	Not detected	5		ug/L	2	83-32-9	
Acenaphthylene	Not detected	5		ug/L	2	208-96-8	
Anthracene	Not detected	5		ug/L	2	120-12-7	
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3	
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2	
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9	
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2	
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1	
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7	
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3	
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7	
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8	
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7	
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7	
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3	
Chrysene	Not detected	1		ug/L	2	218-01-9	
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3	
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2	
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1	
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2	
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2	
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9	
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1	
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5	
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2	
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2	
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0	
Fluoranthene	Not detected	1		ug/L	2	206-44-0	
Fluorene	Not detected	5		ug/L	2	86-73-7	
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1	
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3	
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4	
Hexachloroethane	Not detected	5		ug/L	2	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5	
Isophorone	Not detected	5		ug/L	2	78-59-1	
Naphthalene	Not detected	5		ug/L	2	91-20-3	
Nitrobenzene	Not detected	5		ug/L	2	98-95-3	
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5	
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7	



Analytical Laboratory Report

Lab Sample ID: S46700.02 (continued)

Sample Tag: Dup #03

Method: SW8270D, Run Date: 03/29/23 20:58, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7	
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5	
Phenanthrene	Not detected	2		ug/L	2	85-01-8	
Phenol	Not detected	5		ug/L	2	108-95-2	
Pyrene	Not detected	5		ug/L	2	129-00-0	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1	
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2	
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9	
Benzidine	Not detected	1		ug/L	2	92-87-5	

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 04/01/23 03:56, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3	

Method: SW5030C/8260C, Run Date: 03/30/23 18:05, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/L	1		

Method: SW8260B - SIM, Run Date: 03/30/23 00:30, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8	
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/30/23 18:05, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Chloroform	Not detected	1		ug/L	1	67-66-3	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	



Analytical Laboratory Report

Lab Sample ID: S46700.02 (continued)

Sample Tag: Dup #03

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/30/23 18:05, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
Acrolein	Not detected	1		ug/L	1	107-02-8	
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8	
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4	
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9	
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6	
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7	
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	

Other / Misc.

Method: , Run Date: 03/30/23 21:21, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S46700.03

Sample Tag: MW-22-16

Collected Date/Time: 03/23/2023 05:35

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	2.9	IR
3	40ml Glass	None	Yes	2.9	IR
1	125ml Plastic	HNO3	Yes	2.9	IR
3	1L Amber	None	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	03/30/23 12:22	CTV	
pH check for VOCs*	<2	N/A	03/30/23 10:42	ASW	
Metal Digestion	Completed	SW3015A	03/27/23 12:40	CCM	
BNA Extraction	Completed	SW3510C	03/29/23 10:00	JWR	

Metals

Method: E200.8, Run Date: 03/27/23 13:51, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	Not detected	0.010		mg/L	2	7429-90-5	
Antimony*	Not detected	0.001		mg/L	2	7440-36-0	
Arsenic	Not detected	0.002		mg/L	2	7440-38-2	
Barium	0.062	0.005		mg/L	2	7440-39-3	
Beryllium	Not detected	0.001		mg/L	2	7440-41-7	
Boron	0.07	0.04		mg/L	2	7440-42-8	
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9	
Chromium	Not detected	0.005		mg/L	2	7440-47-3	
Cobalt	Not detected	0.005		mg/L	2	7440-48-4	
Copper	Not detected	0.005		mg/L	2	7440-50-8	
Iron	0.32	0.02		mg/L	2	7439-89-6	
Lead	Not detected	0.003		mg/L	2	7439-92-1	
Manganese	0.075	0.005		mg/L	2	7439-96-5	
Molybdenum	Not detected	0.005		mg/L	2	7439-98-7	
Nickel	Not detected	0.005		mg/L	2	7440-02-0	
Selenium	Not detected	0.005		mg/L	2	7782-49-2	
Silver	Not detected	0.0002		mg/L	2	7440-22-4	
Strontium	0.297	0.005		mg/L	2	7440-24-6	
Thallium	Not detected	0.002		mg/L	2	7440-28-0	
Tin	Not detected	0.02		mg/L	2	7440-31-5	
Titanium	Not detected	0.005		mg/L	2	7440-32-6	
Vanadium	Not detected	0.002		mg/L	2	7440-62-2	
Zinc	Not detected	0.005		mg/L	2	7440-66-6	

Method: E200.8, Run Date: 03/27/23 16:15, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium*	85.5	0.50		mg/L	2	7440-70-2	
Magnesium	13.8	0.50		mg/L	2	7439-95-4	
Potassium	3.79	0.50		mg/L	2	7440-09-7	
Sodium	182	0.50		mg/L	2	7440-23-5	



Analytical Laboratory Report

Lab Sample ID: S46700.03 (continued)

Sample Tag: MW-22-16

Method: E245.1, Run Date: 03/30/23 14:06, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.0002		mg/L	1	7439-97-6	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 03/29/23 21:28, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/L	2		
Acenaphthene	Not detected	5		ug/L	2	83-32-9	
Acenaphthylene	Not detected	5		ug/L	2	208-96-8	
Anthracene	Not detected	5		ug/L	2	120-12-7	
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3	
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2	
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9	
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2	
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1	
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7	
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3	
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7	
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8	
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7	
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7	
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3	
Chrysene	Not detected	1		ug/L	2	218-01-9	
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3	
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2	
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1	
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2	
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2	
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9	
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1	
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5	
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2	
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2	
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0	
Fluoranthene	Not detected	1		ug/L	2	206-44-0	
Fluorene	Not detected	5		ug/L	2	86-73-7	
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1	
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3	
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4	
Hexachloroethane	Not detected	5		ug/L	2	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5	
Isophorone	Not detected	5		ug/L	2	78-59-1	
Naphthalene	Not detected	5		ug/L	2	91-20-3	
Nitrobenzene	Not detected	5		ug/L	2	98-95-3	
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5	
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7	



Analytical Laboratory Report

Lab Sample ID: S46700.03 (continued)

Sample Tag: MW-22-16

Method: SW8270D, Run Date: 03/29/23 21:28, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7	
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5	
Phenanthrene	Not detected	2		ug/L	2	85-01-8	
Phenol	Not detected	5		ug/L	2	108-95-2	
Pyrene	Not detected	5		ug/L	2	129-00-0	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1	
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2	
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9	
Benzidine	Not detected	1		ug/L	2	92-87-5	

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 04/01/23 04:21, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3	

Method: SW5030C/8260C, Run Date: 03/30/23 18:24, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/L	1		

Method: SW8260B - SIM, Run Date: 03/30/23 00:52, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8	
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/30/23 18:24, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Chloroform	Not detected	1		ug/L	1	67-66-3	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	



Analytical Laboratory Report

Lab Sample ID: S46700.03 (continued)

Sample Tag: MW-22-16

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/30/23 18:24, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
Acrolein	Not detected	1		ug/L	1	107-02-8	
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8	
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4	
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9	
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6	
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7	
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	

Other / Misc.

Method: , Run Date: 03/30/23 21:42, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S46700.04

Sample Tag: MW-22-15

Collected Date/Time: 03/23/2023 06:52

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	2.9	IR
3	40ml Glass	None	Yes	2.9	IR
1	125ml Plastic	HNO3	Yes	2.9	IR
3	1L Amber	None	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	03/30/23 12:22	CTV	
pH check for VOCs*	<2	N/A	03/30/23 10:42	ASW	
Metal Digestion	Completed	SW3015A	03/27/23 12:40	CCM	
BNA Extraction	Completed	SW3510C	03/29/23 10:00	JWR	

Metals

Method: E200.8, Run Date: 03/27/23 13:54, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	Not detected	0.010		mg/L	2	7429-90-5	
Antimony*	Not detected	0.001		mg/L	2	7440-36-0	
Arsenic	Not detected	0.002		mg/L	2	7440-38-2	
Barium	0.069	0.005		mg/L	2	7440-39-3	
Beryllium	Not detected	0.001		mg/L	2	7440-41-7	
Boron	0.24	0.04		mg/L	2	7440-42-8	
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9	
Chromium	Not detected	0.005		mg/L	2	7440-47-3	
Cobalt	Not detected	0.005		mg/L	2	7440-48-4	
Copper	Not detected	0.005		mg/L	2	7440-50-8	
Iron	0.15	0.02		mg/L	2	7439-89-6	
Lead	Not detected	0.003		mg/L	2	7439-92-1	
Manganese	0.094	0.005		mg/L	2	7439-96-5	
Molybdenum	0.008	0.005		mg/L	2	7439-98-7	
Nickel	Not detected	0.005		mg/L	2	7440-02-0	
Selenium	Not detected	0.005		mg/L	2	7782-49-2	
Silver	Not detected	0.0002		mg/L	2	7440-22-4	
Strontium	0.472	0.005		mg/L	2	7440-24-6	
Thallium	Not detected	0.002		mg/L	2	7440-28-0	
Tin	Not detected	0.02		mg/L	2	7440-31-5	
Titanium	Not detected	0.005		mg/L	2	7440-32-6	
Vanadium	Not detected	0.002		mg/L	2	7440-62-2	
Zinc	Not detected	0.005		mg/L	2	7440-66-6	

Method: E200.8, Run Date: 03/27/23 16:17, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium*	115	0.50		mg/L	2	7440-70-2	
Magnesium	19.0	0.50		mg/L	2	7439-95-4	
Potassium	10.0	0.50		mg/L	2	7440-09-7	
Sodium	88.4	0.50		mg/L	2	7440-23-5	



Analytical Laboratory Report

Lab Sample ID: S46700.04 (continued)

Sample Tag: MW-22-15

Method: E245.1, Run Date: 03/30/23 14:09, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.0002		mg/L	1	7439-97-6	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 03/29/23 21:58, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/L	2		
Acenaphthene	Not detected	5		ug/L	2	83-32-9	
Acenaphthylene	Not detected	5		ug/L	2	208-96-8	
Anthracene	Not detected	5		ug/L	2	120-12-7	
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3	
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2	
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9	
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2	
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1	
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7	
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3	
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7	
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8	
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7	
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7	
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3	
Chrysene	Not detected	1		ug/L	2	218-01-9	
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3	
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2	
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1	
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2	
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2	
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9	
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1	
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5	
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2	
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2	
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0	
Fluoranthene	Not detected	1		ug/L	2	206-44-0	
Fluorene	Not detected	5		ug/L	2	86-73-7	
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1	
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3	
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4	
Hexachloroethane	Not detected	5		ug/L	2	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5	
Isophorone	Not detected	5		ug/L	2	78-59-1	
Naphthalene	Not detected	5		ug/L	2	91-20-3	
Nitrobenzene	Not detected	5		ug/L	2	98-95-3	
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5	
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7	



Analytical Laboratory Report

Lab Sample ID: S46700.04 (continued)

Sample Tag: MW-22-15

Method: SW8270D, Run Date: 03/29/23 21:58, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7	
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5	
Phenanthrene	Not detected	2		ug/L	2	85-01-8	
Phenol	Not detected	5		ug/L	2	108-95-2	
Pyrene	Not detected	5		ug/L	2	129-00-0	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1	
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2	
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9	
Benzidine	Not detected	1		ug/L	2	92-87-5	

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 04/01/23 04:45, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3	

Method: SW5030C/8260C, Run Date: 03/30/23 18:43, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/L	1		

Method: SW8260B - SIM, Run Date: 03/30/23 01:13, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8	
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/30/23 18:43, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Chloroform	Not detected	1		ug/L	1	67-66-3	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	



Analytical Laboratory Report

Lab Sample ID: S46700.04 (continued)

Sample Tag: MW-22-15

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/30/23 18:43, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	1	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
Acrolein	Not detected	1		ug/L	1	107-02-8	
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8	
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4	
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9	
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6	
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7	
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	

Other / Misc.

Method: , Run Date: 03/30/23 22:04, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S46700.05

Sample Tag: MW-129

Collected Date/Time: 03/23/2023 08:01

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	2.9	IR
3	40ml Glass	None	Yes	2.9	IR
1	125ml Plastic	HNO3	Yes	2.9	IR
3	1L Amber	None	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	03/30/23 12:22	CTV	
pH check for VOCs*	<2	N/A	03/30/23 10:42	ASW	
Metal Digestion	Completed	SW3015A	03/27/23 12:40	CCM	
BNA Extraction	Completed	SW3510C	03/29/23 10:00	JWR	

Metals

Method: E200.8, Run Date: 03/27/23 13:58, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	0.023	0.010		mg/L	2	7429-90-5	
Antimony*	Not detected	0.001		mg/L	2	7440-36-0	
Arsenic	0.007	0.002		mg/L	2	7440-38-2	
Barium	0.084	0.005		mg/L	2	7440-39-3	
Beryllium	Not detected	0.001		mg/L	2	7440-41-7	
Boron	0.55	0.04		mg/L	2	7440-42-8	
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9	
Chromium	Not detected	0.005		mg/L	2	7440-47-3	
Cobalt	Not detected	0.005		mg/L	2	7440-48-4	
Copper	Not detected	0.005		mg/L	2	7440-50-8	
Iron	0.64	0.02		mg/L	2	7439-89-6	
Lead	Not detected	0.003		mg/L	2	7439-92-1	
Manganese	0.332	0.005		mg/L	2	7439-96-5	
Molybdenum	0.035	0.005		mg/L	2	7439-98-7	
Nickel	Not detected	0.005		mg/L	2	7440-02-0	
Selenium	Not detected	0.005		mg/L	2	7782-49-2	
Silver	Not detected	0.0002		mg/L	2	7440-22-4	
Strontium	0.704	0.005		mg/L	2	7440-24-6	
Thallium	Not detected	0.002		mg/L	2	7440-28-0	
Tin	Not detected	0.02		mg/L	2	7440-31-5	
Titanium	Not detected	0.005		mg/L	2	7440-32-6	
Vanadium	0.002	0.002		mg/L	2	7440-62-2	
Zinc	Not detected	0.005		mg/L	2	7440-66-6	

Method: E200.8, Run Date: 03/27/23 16:18, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium*	156	0.50		mg/L	2	7440-70-2	
Magnesium	9.93	0.50		mg/L	2	7439-95-4	
Potassium	67.0	0.50		mg/L	2	7440-09-7	
Sodium	41.5	0.50		mg/L	2	7440-23-5	



Analytical Laboratory Report

Lab Sample ID: S46700.05 (continued)

Sample Tag: MW-129

Method: E245.1, Run Date: 03/30/23 14:12, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.0002		mg/L	1	7439-97-6	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 03/29/23 22:28, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/L	2		
Acenaphthene	Not detected	5		ug/L	2	83-32-9	
Acenaphthylene	Not detected	5		ug/L	2	208-96-8	
Anthracene	Not detected	5		ug/L	2	120-12-7	
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3	
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2	
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9	
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2	
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1	
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7	
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3	
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7	
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8	
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7	
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7	
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3	
Chrysene	Not detected	1		ug/L	2	218-01-9	
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3	
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2	
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1	
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2	
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2	
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9	
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1	
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5	
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2	
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2	
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0	
Fluoranthene	Not detected	1		ug/L	2	206-44-0	
Fluorene	Not detected	5		ug/L	2	86-73-7	
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1	
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3	
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4	
Hexachloroethane	Not detected	5		ug/L	2	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5	
Isophorone	Not detected	5		ug/L	2	78-59-1	
Naphthalene	Not detected	5		ug/L	2	91-20-3	
Nitrobenzene	Not detected	5		ug/L	2	98-95-3	
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5	
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7	



Analytical Laboratory Report

Lab Sample ID: S46700.05 (continued)

Sample Tag: MW-129

Method: SW8270D, Run Date: 03/29/23 22:28, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7	
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5	
Phenanthrene	Not detected	2		ug/L	2	85-01-8	
Phenol	Not detected	5		ug/L	2	108-95-2	
Pyrene	Not detected	5		ug/L	2	129-00-0	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1	
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2	
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9	
Benzidine	Not detected	1		ug/L	2	92-87-5	

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 04/01/23 05:09, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3	

Method: SW8260B - SIM, Run Date: 03/30/23 01:36, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8	
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/30/23 19:02, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	5	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	1	1		ug/L	1	156-59-2	
Chloroform	Not detected	1		ug/L	1	67-66-3	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	2	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S46700.05 (continued)

Sample Tag: MW-129

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/30/23 19:02, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
Acrolein	Not detected	1		ug/L	1	107-02-8	
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8	
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4	
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9	
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6	
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7	
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	

TICs Volatiles, Method: SW5030C/8260C, Run Date: 03/30/23 19:02, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	Completed			ug/L	1		
Ethane, 1-chloro-1-fluoro-*	Found			ug/L	1		
Dichlorofluoromethane*	Found			ug/L	1		

Other / Misc.

Method: , Run Date: 03/30/23 22:26, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S46700.06

Sample Tag: MW-22-18

Collected Date/Time: 03/23/2023 09:08

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	2.9	IR
3	40ml Glass	None	Yes	2.9	IR
1	125ml Plastic	HNO3	Yes	2.9	IR
3	1L Amber	None	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	03/30/23 12:22	CTV	
pH check for VOCs*	<2	N/A	03/30/23 10:42	ASW	
Metal Digestion	Completed	SW3015A	03/27/23 12:40	CCM	
BNA Extraction	Completed	SW3510C	03/29/23 10:00	JWR	

Metals

Method: E200.8, Run Date: 03/27/23 14:13, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	0.019	0.010		mg/L	2	7429-90-5	
Antimony*	Not detected	0.001		mg/L	2	7440-36-0	
Arsenic	Not detected	0.002		mg/L	2	7440-38-2	
Barium	0.169	0.005		mg/L	2	7440-39-3	
Beryllium	Not detected	0.001		mg/L	2	7440-41-7	
Boron	0.31	0.04		mg/L	2	7440-42-8	
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9	
Chromium	Not detected	0.005		mg/L	2	7440-47-3	
Cobalt	Not detected	0.005		mg/L	2	7440-48-4	
Copper	0.008	0.005		mg/L	2	7440-50-8	
Iron	0.05	0.02		mg/L	2	7439-89-6	
Lead	Not detected	0.003		mg/L	2	7439-92-1	
Manganese	0.122	0.005		mg/L	2	7439-96-5	
Molybdenum	0.007	0.005		mg/L	2	7439-98-7	
Nickel	Not detected	0.005		mg/L	2	7440-02-0	
Selenium	Not detected	0.005		mg/L	2	7782-49-2	
Silver	Not detected	0.0002		mg/L	2	7440-22-4	
Strontium	0.457	0.005		mg/L	2	7440-24-6	
Thallium	Not detected	0.002		mg/L	2	7440-28-0	
Tin	Not detected	0.02		mg/L	2	7440-31-5	
Titanium	Not detected	0.005		mg/L	2	7440-32-6	
Vanadium	Not detected	0.002		mg/L	2	7440-62-2	
Zinc	0.006	0.005		mg/L	2	7440-66-6	

Method: E200.8, Run Date: 03/27/23 16:20, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium*	122	0.50		mg/L	2	7440-70-2	
Magnesium	34.6	0.50		mg/L	2	7439-95-4	
Potassium	19.9	0.50		mg/L	2	7440-09-7	
Sodium	89.7	0.50		mg/L	2	7440-23-5	



Analytical Laboratory Report

Lab Sample ID: S46700.06 (continued)

Sample Tag: MW-22-18

Method: E245.1, Run Date: 03/30/23 14:16, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.0002		mg/L	1	7439-97-6	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 03/29/23 22:58, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/L	2		
Acenaphthene	Not detected	5		ug/L	2	83-32-9	
Acenaphthylene	Not detected	5		ug/L	2	208-96-8	
Anthracene	Not detected	5		ug/L	2	120-12-7	
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3	
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2	
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9	
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2	
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1	
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7	
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3	
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7	
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8	
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7	
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7	
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3	
Chrysene	Not detected	1		ug/L	2	218-01-9	
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3	
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2	
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1	
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2	
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2	
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9	
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1	
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5	
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2	
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2	
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0	
Fluoranthene	Not detected	1		ug/L	2	206-44-0	
Fluorene	Not detected	5		ug/L	2	86-73-7	
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1	
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3	
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4	
Hexachloroethane	Not detected	5		ug/L	2	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5	
Isophorone	Not detected	5		ug/L	2	78-59-1	
Naphthalene	Not detected	5		ug/L	2	91-20-3	
Nitrobenzene	Not detected	5		ug/L	2	98-95-3	
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5	
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7	



Analytical Laboratory Report

Lab Sample ID: S46700.06 (continued)

Sample Tag: MW-22-18

Method: SW8270D, Run Date: 03/29/23 22:58, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7	
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5	
Phenanthrene	Not detected	2		ug/L	2	85-01-8	
Phenol	Not detected	5		ug/L	2	108-95-2	
Pyrene	Not detected	5		ug/L	2	129-00-0	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1	
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2	
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9	
Benzidine	Not detected	1		ug/L	2	92-87-5	

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 04/01/23 05:33, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3	

Method: SW8260B - SIM, Run Date: 03/30/23 01:58, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8	
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/30/23 19:22, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Chloroform	Not detected	1		ug/L	1	67-66-3	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S46700.06 (continued)

Sample Tag: MW-22-18

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/30/23 19:22, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
Acrolein	Not detected	1		ug/L	1	107-02-8	
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8	
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4	
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9	
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6	
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7	
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	

TICs Volatiles, Method: SW5030C/8260C, Run Date: 03/30/23 19:22, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	Completed			ug/L	1		
Chlorofluoromethane*	Found			ug/L	1		
Ethane, 1-chloro-1-fluoro-*	Found			ug/L	1		
Dichlorofluoromethane*	Found			ug/L	1		

Other / Misc.

Method: , Run Date: 03/30/23 22:47, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S46700.07

Sample Tag: MW-128

Collected Date/Time: 03/23/2023 10:00

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	2.9	IR
3	40ml Glass	None	Yes	2.9	IR
1	125ml Plastic	HNO3	Yes	2.9	IR
3	1L Amber	None	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	03/30/23 12:22	CTV	
pH check for VOCs*	<2	N/A	03/30/23 10:42	ASW	
Metal Digestion	Completed	SW3015A	03/27/23 12:40	CCM	
BNA Extraction	Completed	SW3510C	03/29/23 10:00	JWR	

Metals

Method: E200.8, Run Date: 03/27/23 14:16, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	0.025	0.010		mg/L	2	7429-90-5	
Antimony*	0.001	0.001		mg/L	2	7440-36-0	
Arsenic	Not detected	0.002		mg/L	2	7440-38-2	
Barium	0.125	0.005		mg/L	2	7440-39-3	
Beryllium	Not detected	0.001		mg/L	2	7440-41-7	
Boron	0.72	0.04		mg/L	2	7440-42-8	
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9	
Chromium	Not detected	0.005		mg/L	2	7440-47-3	
Cobalt	Not detected	0.005		mg/L	2	7440-48-4	
Copper	Not detected	0.005		mg/L	2	7440-50-8	
Iron	0.15	0.02		mg/L	2	7439-89-6	
Lead	Not detected	0.003		mg/L	2	7439-92-1	
Manganese	0.856	0.005		mg/L	2	7439-96-5	
Molybdenum	0.017	0.005		mg/L	2	7439-98-7	
Nickel	Not detected	0.005		mg/L	2	7440-02-0	
Selenium	Not detected	0.005		mg/L	2	7782-49-2	
Silver	Not detected	0.0002		mg/L	2	7440-22-4	
Strontium	0.691	0.005		mg/L	2	7440-24-6	
Thallium	Not detected	0.002		mg/L	2	7440-28-0	
Tin	Not detected	0.02		mg/L	2	7440-31-5	
Titanium	Not detected	0.005		mg/L	2	7440-32-6	
Vanadium	Not detected	0.002		mg/L	2	7440-62-2	
Zinc	Not detected	0.005		mg/L	2	7440-66-6	

Method: E200.8, Run Date: 03/27/23 16:21, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium*	154	0.50		mg/L	2	7440-70-2	
Magnesium	31.9	0.50		mg/L	2	7439-95-4	
Potassium	29.9	0.50		mg/L	2	7440-09-7	
Sodium	48.5	0.50		mg/L	2	7440-23-5	



Analytical Laboratory Report

Lab Sample ID: S46700.07 (continued)

Sample Tag: MW-128

Method: E245.1, Run Date: 03/30/23 14:19, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.0002		mg/L	1	7439-97-6	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 03/29/23 23:28, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/L	2		
Acenaphthene	Not detected	5		ug/L	2	83-32-9	
Acenaphthylene	Not detected	5		ug/L	2	208-96-8	
Anthracene	Not detected	5		ug/L	2	120-12-7	
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3	
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2	
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9	
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2	
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1	
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7	
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3	
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7	
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8	
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7	
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7	
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3	
Chrysene	Not detected	1		ug/L	2	218-01-9	
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3	
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2	
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1	
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2	
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2	
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9	
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1	
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5	
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2	
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2	
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0	
Fluoranthene	Not detected	1		ug/L	2	206-44-0	
Fluorene	Not detected	5		ug/L	2	86-73-7	
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1	
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3	
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4	
Hexachloroethane	Not detected	5		ug/L	2	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5	
Isophorone	Not detected	5		ug/L	2	78-59-1	
Naphthalene	Not detected	5		ug/L	2	91-20-3	
Nitrobenzene	Not detected	5		ug/L	2	98-95-3	
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5	
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7	



Analytical Laboratory Report

Lab Sample ID: S46700.07 (continued)

Sample Tag: MW-128

Method: SW8270D, Run Date: 03/29/23 23:28, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7	
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5	
Phenanthrene	Not detected	2		ug/L	2	85-01-8	
Phenol	Not detected	5		ug/L	2	108-95-2	
Pyrene	Not detected	5		ug/L	2	129-00-0	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1	
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2	
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9	
Benzidine	Not detected	1		ug/L	2	92-87-5	

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 04/01/23 05:58, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3	

Method: SW8260B - SIM, Run Date: 03/30/23 02:20, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8	
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/30/23 19:42, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Chloroform	Not detected	1		ug/L	1	67-66-3	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S46700.07 (continued)

Sample Tag: MW-128

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/30/23 19:42, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	11	1		ug/L	1	127-18-4	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
Acrolein	Not detected	1		ug/L	1	107-02-8	
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8	
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4	
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9	
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6	
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7	
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	

TICs Volatiles, Method: SW5030C/8260C, Run Date: 03/30/23 19:42, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	Completed			ug/L	1		
Dichlorofluoromethane*	Found			ug/L	1		

Other / Misc.

Method: , Run Date: 03/30/23 23:09, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S46700.08

Sample Tag: MW-22-19

Collected Date/Time: 03/23/2023 10:56

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	2.9	IR
3	40ml Glass	None	Yes	2.9	IR
1	125ml Plastic	HNO3	Yes	2.9	IR
3	1L Amber	None	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	03/30/23 12:22	CTV	
pH check for VOCs*	<2	N/A	03/30/23 10:42	ASW	
Metal Digestion	Completed	SW3015A	03/27/23 12:40	CCM	
BNA Extraction	Completed	SW3510C	03/29/23 10:00	JWR	

Metals

Method: E200.8, Run Date: 03/27/23 14:21, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	0.012	0.010		mg/L	2	7429-90-5	
Antimony*	Not detected	0.001		mg/L	2	7440-36-0	
Arsenic	Not detected	0.002		mg/L	2	7440-38-2	
Barium	0.098	0.005		mg/L	2	7440-39-3	
Beryllium	Not detected	0.001		mg/L	2	7440-41-7	
Boron	0.23	0.04		mg/L	2	7440-42-8	
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9	
Chromium	Not detected	0.005		mg/L	2	7440-47-3	
Cobalt	Not detected	0.005		mg/L	2	7440-48-4	
Copper	Not detected	0.005		mg/L	2	7440-50-8	
Iron	0.08	0.02		mg/L	2	7439-89-6	
Lead	Not detected	0.003		mg/L	2	7439-92-1	
Manganese	0.127	0.005		mg/L	2	7439-96-5	
Molybdenum	0.023	0.005		mg/L	2	7439-98-7	
Nickel	Not detected	0.005		mg/L	2	7440-02-0	
Selenium	Not detected	0.005		mg/L	2	7782-49-2	
Silver	Not detected	0.0002		mg/L	2	7440-22-4	
Strontium	0.292	0.005		mg/L	2	7440-24-6	
Thallium	Not detected	0.002		mg/L	2	7440-28-0	
Tin	Not detected	0.02		mg/L	2	7440-31-5	
Titanium	Not detected	0.005		mg/L	2	7440-32-6	
Vanadium	Not detected	0.002		mg/L	2	7440-62-2	
Zinc	Not detected	0.005		mg/L	2	7440-66-6	

Method: E200.8, Run Date: 03/27/23 16:23, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium*	70.7	0.50		mg/L	2	7440-70-2	
Magnesium	12.5	0.50		mg/L	2	7439-95-4	
Potassium	16.9	0.50		mg/L	2	7440-09-7	
Sodium	159	0.50		mg/L	2	7440-23-5	



Analytical Laboratory Report

Lab Sample ID: S46700.08 (continued)

Sample Tag: MW-22-19

Method: E245.1, Run Date: 03/30/23 14:22, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.0002		mg/L	1	7439-97-6	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 03/29/23 23:57, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/L	2		
Acenaphthene	Not detected	5		ug/L	2	83-32-9	
Acenaphthylene	Not detected	5		ug/L	2	208-96-8	
Anthracene	Not detected	5		ug/L	2	120-12-7	
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3	
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2	
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9	
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2	
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1	
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7	
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3	
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7	
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8	
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7	
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7	
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3	
Chrysene	Not detected	1		ug/L	2	218-01-9	
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3	
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2	
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1	
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2	
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2	
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9	
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1	
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5	
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2	
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2	
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0	
Fluoranthene	Not detected	1		ug/L	2	206-44-0	
Fluorene	Not detected	5		ug/L	2	86-73-7	
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1	
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3	
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4	
Hexachloroethane	Not detected	5		ug/L	2	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5	
Isophorone	Not detected	5		ug/L	2	78-59-1	
Naphthalene	Not detected	5		ug/L	2	91-20-3	
Nitrobenzene	Not detected	5		ug/L	2	98-95-3	
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5	
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7	

Lab Sample ID: S46700.08 (continued)

Sample Tag: MW-22-19

Method: SW8270D, Run Date: 03/29/23 23:57, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7	
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5	
Phenanthrene	Not detected	2		ug/L	2	85-01-8	
Phenol	Not detected	5		ug/L	2	108-95-2	
Pyrene	Not detected	5		ug/L	2	129-00-0	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1	
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2	
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9	
Benzidine	Not detected	1		ug/L	2	92-87-5	

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 04/01/23 06:22, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3	

Method: SW8260B - SIM, Run Date: 03/30/23 02:42, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8	
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/30/23 20:01, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Chloroform	Not detected	1		ug/L	1	67-66-3	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S46700.08 (continued)

Sample Tag: MW-22-19

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/30/23 20:01, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
Acrolein	Not detected	1		ug/L	1	107-02-8	
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8	
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4	
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9	
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6	
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7	
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	

TICs Volatiles, Method: SW5030C/8260C, Run Date: 03/30/23 20:01, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	Completed			ug/L	1		
Dichlorofluoromethane*	Found			ug/L	1		

Other / Misc.

Method: , Run Date: 03/30/23 23:31, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S46700.09

Sample Tag: MW-22-20

Collected Date/Time: 03/23/2023 11:48

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	2.9	IR
3	40ml Glass	None	Yes	2.9	IR
1	125ml Plastic	HNO3	Yes	2.9	IR
3	1L Amber	None	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	03/30/23 12:22	CTV	
pH check for VOCs*	<2	N/A	03/30/23 10:42	ASW	
Metal Digestion	Completed	SW3015A	03/27/23 12:40	CCM	
BNA Extraction	Completed	SW3510C	03/29/23 10:00	JWR	

Metals

Method: E200.8, Run Date: 03/27/23 14:24, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	0.011	0.010		mg/L	2	7429-90-5	
Antimony*	Not detected	0.001		mg/L	2	7440-36-0	
Arsenic	Not detected	0.002		mg/L	2	7440-38-2	
Barium	0.091	0.005		mg/L	2	7440-39-3	
Beryllium	Not detected	0.001		mg/L	2	7440-41-7	
Boron	0.12	0.04		mg/L	2	7440-42-8	
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9	
Chromium	Not detected	0.005		mg/L	2	7440-47-3	
Cobalt	Not detected	0.005		mg/L	2	7440-48-4	
Copper	Not detected	0.005		mg/L	2	7440-50-8	
Iron	Not detected	0.02		mg/L	2	7439-89-6	
Lead	Not detected	0.003		mg/L	2	7439-92-1	
Manganese	0.077	0.005		mg/L	2	7439-96-5	
Molybdenum	0.009	0.005		mg/L	2	7439-98-7	
Nickel	Not detected	0.005		mg/L	2	7440-02-0	
Selenium	Not detected	0.005		mg/L	2	7782-49-2	
Silver	Not detected	0.0002		mg/L	2	7440-22-4	
Strontium	0.243	0.005		mg/L	2	7440-24-6	
Thallium	Not detected	0.002		mg/L	2	7440-28-0	
Tin	Not detected	0.02		mg/L	2	7440-31-5	
Titanium	Not detected	0.005		mg/L	2	7440-32-6	
Vanadium	Not detected	0.002		mg/L	2	7440-62-2	
Zinc	Not detected	0.005		mg/L	2	7440-66-6	

Method: E200.8, Run Date: 03/27/23 16:24, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium*	65.9	0.50		mg/L	2	7440-70-2	
Magnesium	11.0	0.50		mg/L	2	7439-95-4	
Potassium	6.75	0.50		mg/L	2	7440-09-7	
Sodium	146	0.50		mg/L	2	7440-23-5	



Analytical Laboratory Report

Lab Sample ID: S46700.09 (continued)

Sample Tag: MW-22-20

Method: E245.1, Run Date: 03/30/23 14:26, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.0002		mg/L	1	7439-97-6	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 03/30/23 00:27, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/L	2		
Acenaphthene	Not detected	5		ug/L	2	83-32-9	
Acenaphthylene	Not detected	5		ug/L	2	208-96-8	
Anthracene	Not detected	5		ug/L	2	120-12-7	
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3	
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2	
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9	
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2	
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1	
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7	
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3	
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7	
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8	
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7	
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7	
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3	
Chrysene	Not detected	1		ug/L	2	218-01-9	
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3	
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2	
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1	
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2	
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2	
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9	
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1	
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5	
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2	
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2	
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0	
Fluoranthene	Not detected	1		ug/L	2	206-44-0	
Fluorene	Not detected	5		ug/L	2	86-73-7	
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1	
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3	
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4	
Hexachloroethane	Not detected	5		ug/L	2	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5	
Isophorone	Not detected	5		ug/L	2	78-59-1	
Naphthalene	Not detected	5		ug/L	2	91-20-3	
Nitrobenzene	Not detected	5		ug/L	2	98-95-3	
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5	
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7	



Analytical Laboratory Report

Lab Sample ID: S46700.09 (continued)

Sample Tag: MW-22-20

Method: SW8270D, Run Date: 03/30/23 00:27, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7	
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5	
Phenanthrene	Not detected	2		ug/L	2	85-01-8	
Phenol	Not detected	5		ug/L	2	108-95-2	
Pyrene	Not detected	5		ug/L	2	129-00-0	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1	
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2	
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9	
Benzidine	Not detected	1		ug/L	2	92-87-5	

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 04/01/23 10:47, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3	

Method: SW5030C/8260C, Run Date: 03/30/23 20:21, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/L	1		

Method: SW8260B - SIM, Run Date: 03/30/23 03:03, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8	
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/30/23 20:21, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Chloroform	Not detected	1		ug/L	1	67-66-3	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	



Analytical Laboratory Report

Lab Sample ID: S46700.09 (continued)

Sample Tag: MW-22-20

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/30/23 20:21, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
Acrolein	Not detected	1		ug/L	1	107-02-8	
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8	
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4	
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9	
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6	
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7	
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	

Other / Misc.

Method: , Run Date: 03/30/23 23:52, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S46700.10

Sample Tag: MW-22-22D

Collected Date/Time: 03/23/2023 12:50

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	2.9	IR
3	40ml Glass	None	Yes	2.9	IR
1	125ml Plastic	HNO3	Yes	2.9	IR
3	1L Amber	None	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	03/30/23 12:22	CTV	
pH check for VOCs*	<2	N/A	03/30/23 10:42	ASW	
Metal Digestion	Completed	SW3015A	03/27/23 12:40	CCM	
BNA Extraction	Completed	SW3510C	03/29/23 10:00	JWR	

Metals

Method: E200.8, Run Date: 03/27/23 16:26, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Potassium	10.9	0.50		mg/L	2	7440-09-7	

Method: E200.8, Run Date: 03/27/23 14:31, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	0.029	0.020		mg/L	10	7429-90-5	
Antimony*	Not detected	0.005		mg/L	10	7440-36-0	
Arsenic	0.005	0.005		mg/L	10	7440-38-2	
Barium	0.784	0.005		mg/L	10	7440-39-3	
Beryllium	Not detected	0.001		mg/L	10	7440-41-7	
Boron	1.63	0.04		mg/L	10	7440-42-8	
Cadmium	Not detected	0.0010		mg/L	10	7440-43-9	
Chromium	Not detected	0.005		mg/L	10	7440-47-3	
Cobalt	Not detected	0.005		mg/L	10	7440-48-4	
Copper	Not detected	0.010		mg/L	10	7440-50-8	
Iron	0.08	0.02		mg/L	10	7439-89-6	
Lead	Not detected	0.005		mg/L	10	7439-92-1	
Manganese	0.136	0.005		mg/L	10	7439-96-5	
Molybdenum	0.061	0.005		mg/L	10	7439-98-7	
Nickel	Not detected	0.005		mg/L	10	7440-02-0	
Selenium	0.026	0.010		mg/L	10	7782-49-2	
Silver	Not detected	0.0010		mg/L	10	7440-22-4	
Strontium	4.26	0.005		mg/L	10	7440-24-6	
Thallium	Not detected	0.005		mg/L	10	7440-28-0	
Tin	Not detected	0.02		mg/L	10	7440-31-5	
Titanium	Not detected	0.005		mg/L	10	7440-32-6	
Vanadium	Not detected	0.005		mg/L	10	7440-62-2	
Zinc	Not detected	0.010		mg/L	10	7440-66-6	



Analytical Laboratory Report

Lab Sample ID: S46700.10 (continued)

Sample Tag: MW-22-22D

Method: E200.8, Run Date: 03/27/23 16:29, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium*	150	10.0		mg/L	100	7440-70-2	
Magnesium	63.3	10.0		mg/L	100	7439-95-4	
Sodium	993	10.0		mg/L	100	7440-23-5	

Method: E245.1, Run Date: 03/30/23 14:29, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.0002		mg/L	1	7439-97-6	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 03/30/23 00:57, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/L	2		
Acenaphthene	Not detected	5		ug/L	2	83-32-9	
Acenaphthylene	Not detected	5		ug/L	2	208-96-8	
Anthracene	Not detected	5		ug/L	2	120-12-7	
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3	
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2	
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9	
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2	
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1	
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7	
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3	
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7	
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8	
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7	
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7	
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3	
Chrysene	Not detected	1		ug/L	2	218-01-9	
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3	
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2	
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1	
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2	
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2	
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9	
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1	
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5	
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2	
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2	
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0	
Fluoranthene	Not detected	1		ug/L	2	206-44-0	
Fluorene	Not detected	5		ug/L	2	86-73-7	
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1	
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3	
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4	
Hexachloroethane	Not detected	5		ug/L	2	67-72-1	



Analytical Laboratory Report

Lab Sample ID: S46700.10 (continued)

Sample Tag: MW-22-22D

Method: SW8270D, Run Date: 03/30/23 00:57, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5	
Isophorone	Not detected	5		ug/L	2	78-59-1	
Naphthalene	Not detected	5		ug/L	2	91-20-3	
Nitrobenzene	Not detected	5		ug/L	2	98-95-3	
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5	
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7	
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7	
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5	
Phenanthrene	Not detected	2		ug/L	2	85-01-8	
Phenol	Not detected	5		ug/L	2	108-95-2	
Pyrene	Not detected	5		ug/L	2	129-00-0	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1	
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2	
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9	
Benzidine	Not detected	1		ug/L	2	92-87-5	

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 04/01/23 11:11, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3	

Method: SW8260B - SIM, Run Date: 03/30/23 03:25, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8	
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/30/23 20:40, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Chloroform	Not detected	1		ug/L	1	67-66-3	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	6	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	



Analytical Laboratory Report

Lab Sample ID: S46700.10 (continued)

Sample Tag: MW-22-22D

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/30/23 20:40, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	2	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
Acrolein	Not detected	1		ug/L	1	107-02-8	
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8	
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4	
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9	
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6	
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7	
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	

TICs Volatiles, Method: SW5030C/8260C, Run Date: 03/30/23 20:40, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	Completed			ug/L	1		
Propane*	Found			ug/L	1		
Cyclopropane*	Found			ug/L	1		



Analytical Laboratory Report

Lab Sample ID: S46700.10 (continued)

Sample Tag: MW-22-22D

TICs Volatiles, Method: SW5030C/8260C, Run Date: 03/30/23 20:40, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Butane*	Found			ug/L	1		
1-Pentene*	Found			ug/L	1		
methyl-Cyclopentane*	Found			ug/L	1		

Other / Misc.

Method: , Run Date: 03/31/23 00:14, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S46700.11

Sample Tag: MW-22-14

Collected Date/Time: 03/23/2023 13:50

Matrix: Groundwater

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
5	40ml Glass	HCL	Yes	2.9	IR
3	40ml Glass	None	Yes	2.9	IR
1	125ml Plastic	HNO3	Yes	2.9	IR
3	1L Amber	None	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Mercury Digestion	Completed	E245.1	03/31/23 13:03	CTV	
pH check for VOCs*	<2	N/A	03/30/23 10:42	ASW	
Metal Digestion	Completed	SW3015A	03/27/23 12:40	CCM	
BNA Extraction	Completed	SW3510C	03/29/23 10:00	JWR	

Metals

Method: E200.8, Run Date: 03/27/23 14:34, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Aluminum	Not detected	0.010		mg/L	2	7429-90-5	
Antimony*	Not detected	0.001		mg/L	2	7440-36-0	
Arsenic	Not detected	0.002		mg/L	2	7440-38-2	
Barium	0.067	0.005		mg/L	2	7440-39-3	
Beryllium	Not detected	0.001		mg/L	2	7440-41-7	
Boron	0.26	0.04		mg/L	2	7440-42-8	
Cadmium	Not detected	0.0005		mg/L	2	7440-43-9	
Chromium	Not detected	0.005		mg/L	2	7440-47-3	
Cobalt	Not detected	0.005		mg/L	2	7440-48-4	
Copper	0.015	0.005		mg/L	2	7440-50-8	
Iron	0.03	0.02		mg/L	2	7439-89-6	
Lead	Not detected	0.003		mg/L	2	7439-92-1	
Manganese	0.145	0.005		mg/L	2	7439-96-5	
Molybdenum	Not detected	0.005		mg/L	2	7439-98-7	
Nickel	Not detected	0.005		mg/L	2	7440-02-0	
Selenium	Not detected	0.005		mg/L	2	7782-49-2	
Silver	Not detected	0.0002		mg/L	2	7440-22-4	
Strontium	0.495	0.005		mg/L	2	7440-24-6	
Thallium	Not detected	0.002		mg/L	2	7440-28-0	
Tin	Not detected	0.02		mg/L	2	7440-31-5	
Titanium	Not detected	0.005		mg/L	2	7440-32-6	
Vanadium	Not detected	0.002		mg/L	2	7440-62-2	
Zinc	Not detected	0.005		mg/L	2	7440-66-6	

Method: E200.8, Run Date: 03/27/23 16:38, Analyst: CCM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Calcium*	121	0.50		mg/L	2	7440-70-2	
Magnesium	25.7	0.50		mg/L	2	7439-95-4	
Potassium	13.0	0.50		mg/L	2	7440-09-7	
Sodium	224	0.50		mg/L	2	7440-23-5	



Analytical Laboratory Report

Lab Sample ID: S46700.11 (continued)

Sample Tag: MW-22-14

Method: E245.1, Run Date: 03/31/23 15:13, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.0002		mg/L	1	7439-97-6	

Organics - Semi-Volatiles

Method: SW8270D, Run Date: 03/30/23 01:26, Analyst: PL

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	None Found			ug/L	2		
Acenaphthene	Not detected	5		ug/L	2	83-32-9	
Acenaphthylene	Not detected	5		ug/L	2	208-96-8	
Anthracene	Not detected	5		ug/L	2	120-12-7	
Benzo(a)anthracene	Not detected	1		ug/L	2	56-55-3	
Benzo(b)fluoranthene	Not detected	1		ug/L	2	205-99-2	
Benzo(k)fluoranthene	Not detected	1		ug/L	2	207-08-9	
Benzo(ghi)perylene	Not detected	1		ug/L	2	191-24-2	
Benzo(a)pyrene	Not detected	1		ug/L	2	50-32-8	
bis(2-Chloroethoxy)methane	Not detected	5		ug/L	2	111-91-1	
bis(2-Chloroethyl)ether	Not detected	5		ug/L	2	111-44-4	
bis(2-Chloroisopropyl)ether*	Not detected	5		ug/L	2	108-60-1	
bis(2-Ethylhexyl)phthalate	Not detected	5		ug/L	2	117-81-7	
4-Bromophenyl phenyl ether	Not detected	5		ug/L	2	101-55-3	
Butyl benzyl phthalate	Not detected	5		ug/L	2	85-68-7	
4-Chloroaniline	Not detected	10		ug/L	2	106-47-8	
2-Chloronaphthalene	Not detected	5		ug/L	2	91-58-7	
4-Chloro-3-methylphenol	Not detected	5		ug/L	2	59-50-7	
2-Chlorophenol	Not detected	10		ug/L	2	95-57-8	
4-Chlorophenyl phenyl ether	Not detected	5		ug/L	2	7005-72-3	
Chrysene	Not detected	1		ug/L	2	218-01-9	
Dibenzo(ah)anthracene	Not detected	2		ug/L	2	53-70-3	
di-n-Butyl phthalate	Not detected	5		ug/L	2	84-74-2	
3,3'-Dichlorobenzidine	Not detected	5		ug/L	2	91-94-1	
2,4-Dichlorophenol	Not detected	10		ug/L	2	120-83-2	
Diethyl phthalate	Not detected	5		ug/L	2	84-66-2	
2,4-Dimethylphenol	Not detected	5		ug/L	2	105-67-9	
Dimethyl phthalate	Not detected	5		ug/L	2	131-11-3	
4,6-Dinitro-2-methylphenol	Not detected	20		ug/L	2	534-52-1	
2,4-Dinitrophenol	Not detected	25		ug/L	2	51-28-5	
2,4-Dinitrotoluene	Not detected	5		ug/L	2	121-14-2	
2,6-Dinitrotoluene	Not detected	5		ug/L	2	606-20-2	
di-n-Octyl phthalate	Not detected	5		ug/L	2	117-84-0	
Fluoranthene	Not detected	1		ug/L	2	206-44-0	
Fluorene	Not detected	5		ug/L	2	86-73-7	
Hexachlorobenzene	Not detected	5		ug/L	2	118-74-1	
Hexachlorobutadiene	Not detected	10		ug/L	2	87-68-3	
Hexachlorocyclopentadiene*	Not detected	5		ug/L	2	77-47-4	
Hexachloroethane	Not detected	5		ug/L	2	67-72-1	
Indeno(1,2,3-cd)pyrene	Not detected	2		ug/L	2	193-39-5	
Isophorone	Not detected	5		ug/L	2	78-59-1	
Naphthalene	Not detected	5		ug/L	2	91-20-3	
Nitrobenzene	Not detected	5		ug/L	2	98-95-3	
2-Nitrophenol	Not detected	5		ug/L	2	88-75-5	
4-Nitrophenol	Not detected	25		ug/L	2	100-02-7	



Analytical Laboratory Report

Lab Sample ID: S46700.11 (continued)

Sample Tag: MW-22-14

Method: SW8270D, Run Date: 03/30/23 01:26, Analyst: PL (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
N-Nitrosodiphenylamine	Not detected	5		ug/L	2	86-30-6	
N-Nitrosodi-n-propylamine	Not detected	5		ug/L	2	621-64-7	
Pentachlorophenol	Not detected	5		ug/L	2	87-86-5	
Phenanthrene	Not detected	2		ug/L	2	85-01-8	
Phenol	Not detected	5		ug/L	2	108-95-2	
Pyrene	Not detected	5		ug/L	2	129-00-0	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	2	120-82-1	
2,4,6-Trichlorophenol	Not detected	4		ug/L	2	88-06-2	
N-Nitrosodimethylamine	Not detected	5		ug/L	2	62-75-9	
Benzidine	Not detected	1		ug/L	2	92-87-5	

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 04/01/23 11:35, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3	

Method: SW8260B - SIM, Run Date: 03/30/23 03:47, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,2-Dibromo-3-chloropropane*	Not detected	0.05		ug/L	1	96-12-8	
1,4-Dioxane*	Not detected	1		ug/L	1	123-91-1	

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/30/23 21:00, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Chloroform	Not detected	1		ug/L	1	67-66-3	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	



Analytical Laboratory Report

Lab Sample ID: S46700.11 (continued)

Sample Tag: MW-22-14

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/30/23 21:00, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
Acrolein	Not detected	1		ug/L	1	107-02-8	
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8	
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4	
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9	
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6	
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7	
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	

TICs Volatiles, Method: SW5030C/8260C, Run Date: 03/30/23 21:00, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
TICs*	Completed			ug/L	1		
Ethane, 1-chloro-1-fluoro-*	Found			ug/L	1		
Dichlorofluoromethane*	Found			ug/L	1		

Other / Misc.

Method: , Run Date: 03/31/23 00:36, Analyst: EF

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Alcohols*	Completed				1		O

O-Analysis performed by outside laboratory. See attached report.



Analytical Laboratory Report

Lab Sample ID: S46700.12

Sample Tag: Trip Blank

Collected Date/Time: 03/23/2023 00:01

Matrix: Water

COC Reference:

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	40ml Glass	HCL	Yes	2.9	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
pH check for VOCs*	<2	N/A	03/31/23 11:03	ASW	

Organics - Volatiles

Method: SW5030C/8260C, Run Date: 04/01/23 10:23, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Diisopropyl ether (DIPE)	Not detected	5		ug/L	1	108-20-3	

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/30/23 14:51, Analyst: KAG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Acetone	Not detected	50		ug/L	1	67-64-1	
tert-Methyl butyl ether (MTBE)	Not detected	5		ug/L	1	1634-04-4	
Acrylonitrile	Not detected	2		ug/L	1	107-13-1	
2-Butanone (MEK)	Not detected	25		ug/L	1	78-93-3	
Dichlorodifluoromethane	Not detected	5		ug/L	1	75-71-8	
Chloromethane	Not detected	5		ug/L	1	74-87-3	
Vinyl chloride	Not detected	1		ug/L	1	75-01-4	
Bromomethane	Not detected	5		ug/L	1	74-83-9	
Chloroethane	Not detected	5		ug/L	1	75-00-3	
Trichlorofluoromethane	Not detected	1		ug/L	1	75-69-4	
1,1-Dichloroethene	Not detected	1		ug/L	1	75-35-4	
Methylene chloride	Not detected	5		ug/L	1	75-09-2	
trans-1,2-Dichloroethene	Not detected	1		ug/L	1	156-60-5	
1,1-Dichloroethane	Not detected	1		ug/L	1	75-34-3	
cis-1,2-Dichloroethene	Not detected	1		ug/L	1	156-59-2	
Chloroform	Not detected	1		ug/L	1	67-66-3	
1,1,1-Trichloroethane	Not detected	1		ug/L	1	71-55-6	
4-Methyl-2-pentanone (MIBK)	Not detected	50		ug/L	1	108-10-1	
Carbon tetrachloride	Not detected	1		ug/L	1	56-23-5	
Benzene	Not detected	1		ug/L	1	71-43-2	
1,2-Dichloroethane	Not detected	1		ug/L	1	107-06-2	
Trichloroethene	Not detected	1		ug/L	1	79-01-6	
1,2-Dichloropropane	Not detected	1		ug/L	1	78-87-5	
Bromodichloromethane	Not detected	1		ug/L	1	75-27-4	
Dibromomethane	Not detected	5		ug/L	1	74-95-3	
cis-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-01-5	
Toluene	Not detected	1		ug/L	1	108-88-3	
trans-1,3-Dichloropropene	Not detected	1		ug/L	1	10061-02-6	
1,1,2-Trichloroethane	Not detected	1		ug/L	1	79-00-5	
Tetrachloroethene	Not detected	1		ug/L	1	127-18-4	
Dibromochloromethane	Not detected	5		ug/L	1	124-48-1	
1,2-Dibromoethane	Not detected	1		ug/L	1	106-93-4	
Chlorobenzene	Not detected	1		ug/L	1	108-90-7	



Analytical Laboratory Report

Lab Sample ID: S46700.12 (continued)

Sample Tag: Trip Blank

Volatile Organics, Method: SW5030C/8260C, Run Date: 03/30/23 14:51, Analyst: KAG (continued)

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
1,1,1,2-Tetrachloroethane	Not detected	1		ug/L	1	630-20-6	
Ethylbenzene	Not detected	1		ug/L	1	100-41-4	
p,m-Xylene*	Not detected	2		ug/L	1		
o-Xylene	Not detected	1		ug/L	1	95-47-6	
Styrene	Not detected	1		ug/L	1	100-42-5	
Isopropylbenzene	Not detected	5		ug/L	1	98-82-8	
Bromoform	Not detected	1		ug/L	1	75-25-2	
1,1,2,2-Tetrachloroethane	Not detected	1		ug/L	1	79-34-5	
1,2,3-Trichloropropane	Not detected	1		ug/L	1	96-18-4	
n-Propylbenzene	Not detected	1		ug/L	1	103-65-1	
Bromobenzene	Not detected	1		ug/L	1	108-86-1	
1,3,5-Trimethylbenzene	Not detected	1		ug/L	1	108-67-8	
tert-Butylbenzene	Not detected	1		ug/L	1	98-06-6	
1,2,4-Trimethylbenzene	Not detected	1		ug/L	1	95-63-6	
sec-Butylbenzene	Not detected	1		ug/L	1	135-98-8	
p-Isopropyltoluene	Not detected	5		ug/L	1	99-87-6	
1,3-Dichlorobenzene	Not detected	1		ug/L	1	541-73-1	
1,4-Dichlorobenzene	Not detected	1		ug/L	1	106-46-7	
1,2-Dichlorobenzene	Not detected	1		ug/L	1	95-50-1	
1,2,3-Trimethylbenzene	Not detected	1		ug/L	1	526-73-8	
n-Butylbenzene	Not detected	1		ug/L	1	104-51-8	
1,2,4-Trichlorobenzene	Not detected	5		ug/L	1	120-82-1	
1,2,3-Trichlorobenzene	Not detected	5		ug/L	1	87-61-6	
Naphthalene	Not detected	5		ug/L	1	91-20-3	
Acrolein	Not detected	1		ug/L	1	107-02-8	
2-Chlorotoluene	Not detected	1		ug/L	1	95-49-8	
4-Chlorotoluene	Not detected	1		ug/L	1	106-43-4	
1,3-Dichloropropane	Not detected	1		ug/L	1	142-28-9	
1,1-Dichloropropene	Not detected	1		ug/L	1	563-58-6	
2,2-Dichloropropane	Not detected	1		ug/L	1	594-20-7	
Hexachlorobutadiene	Not detected	1		ug/L	1	87-68-3	
1,1,2-Trichloro-1,2,2-trifluoroethane	Not detected	1		ug/L	1	76-13-1	

Merit Laboratories Login Checklist

Lab Set ID:S46700

Client:TRC (TRC)

Project: Detroit Axle Southern Area

Submitted:03/27/2023 11:00 Login User: MMC

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place

Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Selection	Description	Note
Sample Receiving		
01.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples are received at 4C +/- 2C Thermometer # IR 2.9
02.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Received on ice/ cooling process begun
03.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples shipped
04.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples left in 24 hr. drop box
05.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Are there custody seals/tape or is the drop box locked
Chain of Custody		
06.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC adequately filled out
07.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	COC signed and relinquished to the lab
08.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sample tag on bottles match COC Trip blank not listed on COC
09.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Subcontracting needed? Subcontracted to: Eurofins
Preservation		
10.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Do sample have correct chemical preservation
11.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Completed pH checks on preserved samples? (no VOAs)
12.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Did any samples need to be preserved in the lab?
Bottle Conditions		
13.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	All bottles intact
14.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Appropriate analytical bottles are used
15.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Merit bottles used
16.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Sufficient sample volume received
17.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Samples require laboratory filtration
18.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Samples submitted within holding time
19.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Do water VOC or TOX bottles contain headspace

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____

Merit Laboratories Bottle Preservation Check

Lab Set ID: S46700 Submitted: 03/27/2023 11:00

Client: TRC (TRC)

Project: Detroit Axle Southern Area

Initial Preservation Check: 03/27/2023 11:45 MMC

Preservation Recheck (E200.8): N/A

Attention: Kelly Cratsenburg

Address: TRC

1540 Eisenhower Place
Ann Arbor, MI 48108

Phone: 734-585-7829 C: FAX:

Email: KCratsenburg@trccompanies.com

Sample ID	Bottle / Preservation	pH (Orig)	Add ml	pH (New)	Notes
S46700.01	125ml Plastic HNO3	<2			
S46700.02	125ml Plastic HNO3	<2			
S46700.03	125ml Plastic HNO3	<2			
S46700.04	125ml Plastic HNO3	<2			
S46700.05	125ml Plastic HNO3	<2			
S46700.06	125ml Plastic HNO3	<2			
S46700.07	125ml Plastic HNO3	<2			
S46700.08	125ml Plastic HNO3	<2			
S46700.09	125ml Plastic HNO3	<2			
S46700.10	125ml Plastic HNO3	<2			
S46700.11	125ml Plastic HNO3	<2			



2680 East Lansing Dr., East Lansing, MI 48823
 Phone (517) 332-0167 Fax (517) 332-4034
 www.meritlabs.com

C.O.C. PAGE # _____ OF _____

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME **Kelly Cratsenburg**
 COMPANY **TRC**
 ADDRESS **1540 Eisenhower Place**
 CITY **Ann Arbor** STATE **MI** ZIP CODE **48108**
 PHONE NO. _____ FAX NO. _____ P.O. NO. **148396**
 E-MAIL ADDRESS **kcratsenburg@trccompanies.com** QUOTE NO. **230317-03**

CONTACT NAME SAME
 COMPANY _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP CODE _____
 PHONE NO. _____ E-MAIL ADDRESS _____

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME **Detroit Axle Southern Area** SAMPLER(S) - PLEASE PRINT/SIGN NAME _____
 TURNAROUND TIME REQUIRED 1 DAY 2 DAYS 3 DAYS STANDARD OTHER _____
 DELIVERABLES REQUIRED STD LEVEL II LEVEL III LEVEL IV EDD OTHER **TRC EDD**

MATRIX CODE:	GW=GROUNDWATER SL=SLUDGE	WW=WASTEWATER DW=DRINKING WATER	S=SOIL O=OIL	L=LIQUID WP=WIPE	SD=SOLID A=AIR	W=WASTE
--------------	-----------------------------	------------------------------------	-----------------	---------------------	-------------------	---------

Containers & Preservatives

MERIT LAB NO. FOR LAB USE ONLY	20 YEAR 03		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	VOC-SIMS & TICS, 1,4 Dioxane	SVOC + TICS	METALS*	3 Alcohols
	DATE	TIME														
46700.01	3/23	0440	MW-22-17	W	10		+	+					+	+	+	+
.02	"	"	Dup #103	W	10		+	+					+	+	+	+
.03	"	0535	MW-22-16	W	10		+	+					+	+	+	+
.04	"	0652	MW-22-15	W	10		+	+					+	+	+	+
.05	"	0801	MW-129	W	10		+	+					+	+	+	+
.06	"	0908	MW-22-18	W	10		+	+					+	+	+	+
.07	"	1000	MW-128	W	10		+	+					+	+	+	+
.08	"	1056	MW-22-19	W	10		+	+					+	+	+	+
.09	"	1148	MW-22-20	W	10		+	+					+	+	+	+
.10	"	1250	MW-22-22D	W	10		+	+					+	+	+	+
.11	"	1352	MW-22-14	W	10		+	+					+	+	+	+
.12																

Certifications
 OHIO VAP Drinking Water
 DoD NPDES
 Project Locations
 Detroit New York
 Other _____
 Special Instructions

*Southern Area metals list

RELINQUISHED BY: _____ DATE **3/23/13** TIME **1530**
 RECEIVED BY: _____ DATE **3/27/13** TIME **0935**
 RELINQUISHED BY: _____ DATE **3/27/13** TIME **1100**
 RECEIVED BY: **M. Calcolo** DATE **3/27/13** TIME **1100**

RELINQUISHED BY: **TRC** DATE **3/23/13** TIME **1530**
 RECEIVED BY: _____ DATE _____ TIME _____
 SEAL NO. _____ SEAL INTACT YES NO INITIALS _____
 SEAL NO. _____ SEAL INTACT YES NO INITIALS _____
 NOTES: TEMP. ON ARRIVAL **2.9**

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Lab Results
Merit Laboratories
2680 E Lansing Drive
East Lansing, Michigan 48823

Generated 3/31/2023 9:57:51 AM

JOB DESCRIPTION

S46700

JOB NUMBER

190-31353-1

Eurofins Michigan

Job Notes

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of Eurofins Environment Testing North Central, LLC and its client. All questions regarding this report should be directed to the Eurofins Environment Testing North Central, LLC Project Manager who has signed this report.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



Generated
3/31/2023 9:57:51 AM

Authorized for release by
Sue Schafer, Project Manager II
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(810)229-2763



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Sample Summary

Client: Merit Laboratories
Project/Site: S46700

Job ID: 190-31353-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
190-31353-1	S46700.01	Water	03/23/23 04:40	03/28/23 09:43
190-31353-2	S46700.02	Water	03/23/23 00:01	03/28/23 09:43
190-31353-3	S46700.03	Water	03/23/23 05:35	03/28/23 09:43
190-31353-4	S46700.04	Water	03/23/23 06:52	03/28/23 09:43
190-31353-5	S46700.05	Water	03/23/23 08:01	03/28/23 09:43
190-31353-6	S46700.06	Water	03/23/23 09:08	03/28/23 09:43
190-31353-7	S46700.07	Water	03/23/23 10:00	03/28/23 09:43
190-31353-8	S46700.08	Water	03/23/23 10:56	03/28/23 09:43
190-31353-9	S46700.09	Water	03/23/23 11:48	03/28/23 09:43
190-31353-10	S46700.10	Water	03/23/23 12:50	03/28/23 09:43
190-31353-11	S46700.11	Water	03/23/23 13:50	03/28/23 09:43

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Case Narrative

Client: Merit Laboratories
Project/Site: S46700

Job ID: 190-31353-1

Job ID: 190-31353-1

Laboratory: Eurofins Michigan

Narrative

Job Narrative
190-31353-1

Receipt

The samples were received on 3/28/2023 9:43 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.0°C

GC Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Client Sample Results

Client: Merit Laboratories
Project/Site: S46700

Job ID: 190-31353-1

Client Sample ID: S46700.01

Lab Sample ID: 190-31353-1

Date Collected: 03/23/23 04:40

Matrix: Water

Date Received: 03/28/23 09:43

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			03/30/23 20:59	1
Ethanol	<5.0		5.0	mg/L			03/30/23 20:59	1
n-Butanol	<5.0		5.0	mg/L			03/30/23 20:59	1

Client Sample ID: S46700.02

Lab Sample ID: 190-31353-2

Date Collected: 03/23/23 00:01

Matrix: Water

Date Received: 03/28/23 09:43

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			03/30/23 21:21	1
Ethanol	<5.0		5.0	mg/L			03/30/23 21:21	1
n-Butanol	<5.0		5.0	mg/L			03/30/23 21:21	1

Client Sample ID: S46700.03

Lab Sample ID: 190-31353-3

Date Collected: 03/23/23 05:35

Matrix: Water

Date Received: 03/28/23 09:43

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			03/30/23 21:42	1
Ethanol	<5.0		5.0	mg/L			03/30/23 21:42	1
n-Butanol	<5.0		5.0	mg/L			03/30/23 21:42	1

Client Sample ID: S46700.04

Lab Sample ID: 190-31353-4

Date Collected: 03/23/23 06:52

Matrix: Water

Date Received: 03/28/23 09:43

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			03/30/23 22:04	1
Ethanol	<5.0		5.0	mg/L			03/30/23 22:04	1
n-Butanol	<5.0		5.0	mg/L			03/30/23 22:04	1

Client Sample ID: S46700.05

Lab Sample ID: 190-31353-5

Date Collected: 03/23/23 08:01

Matrix: Water

Date Received: 03/28/23 09:43

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			03/30/23 22:26	1
Ethanol	<5.0		5.0	mg/L			03/30/23 22:26	1
n-Butanol	<5.0		5.0	mg/L			03/30/23 22:26	1

Client Sample ID: S46700.06

Lab Sample ID: 190-31353-6

Date Collected: 03/23/23 09:08

Matrix: Water

Date Received: 03/28/23 09:43

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			03/30/23 22:47	1
Ethanol	<5.0		5.0	mg/L			03/30/23 22:47	1

Eurofins Michigan

Client Sample Results

Client: Merit Laboratories
Project/Site: S46700

Job ID: 190-31353-1

Client Sample ID: S46700.06

Lab Sample ID: 190-31353-6

Date Collected: 03/23/23 09:08

Matrix: Water

Date Received: 03/28/23 09:43

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butanol	<5.0		5.0	mg/L			03/30/23 22:47	1

Client Sample ID: S46700.07

Lab Sample ID: 190-31353-7

Date Collected: 03/23/23 10:00

Matrix: Water

Date Received: 03/28/23 09:43

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			03/30/23 23:09	1
Ethanol	<5.0		5.0	mg/L			03/30/23 23:09	1
n-Butanol	<5.0		5.0	mg/L			03/30/23 23:09	1

Client Sample ID: S46700.08

Lab Sample ID: 190-31353-8

Date Collected: 03/23/23 10:56

Matrix: Water

Date Received: 03/28/23 09:43

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			03/30/23 23:31	1
Ethanol	<5.0		5.0	mg/L			03/30/23 23:31	1
n-Butanol	<5.0		5.0	mg/L			03/30/23 23:31	1

Client Sample ID: S46700.09

Lab Sample ID: 190-31353-9

Date Collected: 03/23/23 11:48

Matrix: Water

Date Received: 03/28/23 09:43

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			03/30/23 23:52	1
Ethanol	<5.0		5.0	mg/L			03/30/23 23:52	1
n-Butanol	<5.0		5.0	mg/L			03/30/23 23:52	1

Client Sample ID: S46700.10

Lab Sample ID: 190-31353-10

Date Collected: 03/23/23 12:50

Matrix: Water

Date Received: 03/28/23 09:43

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			03/31/23 00:14	1
Ethanol	<5.0		5.0	mg/L			03/31/23 00:14	1
n-Butanol	<5.0		5.0	mg/L			03/31/23 00:14	1

Client Sample ID: S46700.11

Lab Sample ID: 190-31353-11

Date Collected: 03/23/23 13:50

Matrix: Water

Date Received: 03/28/23 09:43

Method: SW846 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Methanol	<3.7		3.7	mg/L			03/31/23 00:36	1
Ethanol	<5.0		5.0	mg/L			03/31/23 00:36	1
n-Butanol	<5.0		5.0	mg/L			03/31/23 00:36	1

Eurofins Michigan

QC Sample Results

Client: Merit Laboratories
Project/Site: S46700

Job ID: 190-31353-1

Method: 8015D - Nonhalogenated Organic Compounds - Direct Injection (GC)

Lab Sample ID: MB 680-770608/13

Matrix: Water

Analysis Batch: 770608

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Methanol	<3.7		3.7	mg/L			03/30/23 20:37	1
Ethanol	<5.0		5.0	mg/L			03/30/23 20:37	1
n-Butanol	<5.0		5.0	mg/L			03/30/23 20:37	1

Lab Sample ID: LCS 680-770608/6

Matrix: Water

Analysis Batch: 770608

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Methanol	20.0	16.9		mg/L		84	43 - 143
Ethanol	20.0	20.9		mg/L		104	38 - 156
n-Butanol	20.0	20.9		mg/L		105	70 - 130

Lab Sample ID: LCSD 680-770608/7

Matrix: Water

Analysis Batch: 770608

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
		Result	Qualifier						
Methanol	20.0	17.0		mg/L		85	43 - 143	1	50
Ethanol	20.0	21.0		mg/L		105	38 - 156	0	50
n-Butanol	20.0	21.1		mg/L		106	70 - 130	1	30

Definitions/Glossary

Client: Merit Laboratories
Project/Site: S46700

Job ID: 190-31353-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Association Summary

Client: Merit Laboratories
Project/Site: S46700

Job ID: 190-31353-1

GC Semi VOA

Analysis Batch: 770608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
190-31353-1	S46700.01	Total/NA	Water	8015D	
190-31353-2	S46700.02	Total/NA	Water	8015D	
190-31353-3	S46700.03	Total/NA	Water	8015D	
190-31353-4	S46700.04	Total/NA	Water	8015D	
190-31353-5	S46700.05	Total/NA	Water	8015D	
190-31353-6	S46700.06	Total/NA	Water	8015D	
190-31353-7	S46700.07	Total/NA	Water	8015D	
190-31353-8	S46700.08	Total/NA	Water	8015D	
190-31353-9	S46700.09	Total/NA	Water	8015D	
190-31353-10	S46700.10	Total/NA	Water	8015D	
190-31353-11	S46700.11	Total/NA	Water	8015D	
MB 680-770608/13	Method Blank	Total/NA	Water	8015D	
LCS 680-770608/6	Lab Control Sample	Total/NA	Water	8015D	
LCSD 680-770608/7	Lab Control Sample Dup	Total/NA	Water	8015D	

Lab Chronicle

Client: Merit Laboratories
Project/Site: S46700

Job ID: 190-31353-1

Client Sample ID: S46700.01

Lab Sample ID: 190-31353-1

Date Collected: 03/23/23 04:40

Matrix: Water

Date Received: 03/28/23 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	770608	JCK	EET SAV	03/30/23 20:59

Client Sample ID: S46700.02

Lab Sample ID: 190-31353-2

Date Collected: 03/23/23 00:01

Matrix: Water

Date Received: 03/28/23 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	770608	JCK	EET SAV	03/30/23 21:21

Client Sample ID: S46700.03

Lab Sample ID: 190-31353-3

Date Collected: 03/23/23 05:35

Matrix: Water

Date Received: 03/28/23 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	770608	JCK	EET SAV	03/30/23 21:42

Client Sample ID: S46700.04

Lab Sample ID: 190-31353-4

Date Collected: 03/23/23 06:52

Matrix: Water

Date Received: 03/28/23 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	770608	JCK	EET SAV	03/30/23 22:04

Client Sample ID: S46700.05

Lab Sample ID: 190-31353-5

Date Collected: 03/23/23 08:01

Matrix: Water

Date Received: 03/28/23 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	770608	JCK	EET SAV	03/30/23 22:26

Client Sample ID: S46700.06

Lab Sample ID: 190-31353-6

Date Collected: 03/23/23 09:08

Matrix: Water

Date Received: 03/28/23 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	770608	JCK	EET SAV	03/30/23 22:47

Client Sample ID: S46700.07

Lab Sample ID: 190-31353-7

Date Collected: 03/23/23 10:00

Matrix: Water

Date Received: 03/28/23 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	770608	JCK	EET SAV	03/30/23 23:09

Lab Chronicle

Client: Merit Laboratories
Project/Site: S46700

Job ID: 190-31353-1

Client Sample ID: S46700.08

Lab Sample ID: 190-31353-8

Date Collected: 03/23/23 10:56

Matrix: Water

Date Received: 03/28/23 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	770608	JCK	EET SAV	03/30/23 23:31

Client Sample ID: S46700.09

Lab Sample ID: 190-31353-9

Date Collected: 03/23/23 11:48

Matrix: Water

Date Received: 03/28/23 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	770608	JCK	EET SAV	03/30/23 23:52

Client Sample ID: S46700.10

Lab Sample ID: 190-31353-10

Date Collected: 03/23/23 12:50

Matrix: Water

Date Received: 03/28/23 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	770608	JCK	EET SAV	03/31/23 00:14

Client Sample ID: S46700.11

Lab Sample ID: 190-31353-11

Date Collected: 03/23/23 13:50

Matrix: Water

Date Received: 03/28/23 09:43

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015D		1	770608	JCK	EET SAV	03/31/23 00:36

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Analyst References:

Lab: EET SAV

Batch Type: Analysis

JCK = Joshua Kellar

Accreditation/Certification Summary

Client: Merit Laboratories
Project/Site: S46700

Job ID: 190-31353-1

Laboratory: Eurofins Savannah

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	SAVLAB	
Alabama	State	41450	06-30-23
ANAB	Dept. of Defense ELAP	L2463	09-22-24
Arkansas DEQ	State	19-015-0	02-01-24
California	State	2939	06-30-23
Connecticut	State	PH-0161	03-31-23
Florida	NELAP	E87052	06-30-23
Georgia	State	E87052	06-30-23
Georgia (DW)	State	803	06-30-23
Guam	State	19-007R	04-17-23
Hawaii	State	<cert No.>	06-30-23
Illinois	NELAP	200022	11-30-23
Indiana	State	C-GA-02	06-30-23
Iowa	State	353	07-01-23
Kentucky (UST)	State	NA	06-30-23
Louisiana	NELAP	30690	06-30-23
Louisiana (All)	NELAP	30690	06-30-23
Louisiana (DW)	State	LA009	12-31-23
Maine	State	GA00006	09-25-24
Maryland	State	250	12-31-23
Massachusetts	State	M-GA006	06-30-23
Michigan	State	9925	06-30-23
Mississippi	State	<cert No.>	06-30-23
Nebraska	State	NE-OS-7-04	06-30-23
New Jersey	NELAP	GA769	06-30-23
New Mexico	State	GA00006	06-30-23
New York	NELAP	10842	04-01-23
North Carolina (DW)	State	13701	07-31-23
North Carolina (WW/SW)	State	269	12-31-23
Pennsylvania	NELAP	68-00474	06-30-23
Puerto Rico	State	GA00006	01-01-24
South Carolina	State	98001	06-30-23
Tennessee	State	TN02961	06-30-23
Texas	NELAP	T1047004185-19-14	11-30-23
Texas	TCEQ Water Supply	T104704185	06-30-23
USDA	US Federal Programs	P330-18-00313	09-03-24
Virginia	NELAP	460161	06-14-23
Wisconsin	State	999819810	08-31-23
Wyoming	State	8TMS-L	06-30-23

Method Summary

Client: Merit Laboratories
Project/Site: S46700

Job ID: 190-31353-1

Method	Method Description	Protocol	Laboratory
8015D	Nonhalogenated Organic Compounds - Direct Injection (GC)	SW846	EET SAV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858



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 Phone (517) 332-0167 Fax (517) 332-4034
 www.meritlabs.com



REPORT TO		CHAIN OF CUSTODY RECORD		INVOICE TO	
CONTACT NAME Project Management Team		CONTACT NAME Julie Teague		CONTACT NAME <input checked="" type="checkbox"/> SAME	
COMPANY Merit Laboratories		COMPANY Merit Laboratories		COMPANY Merit Laboratories	
ADDRESS 2680 East Lansing Drive		ADDRESS 2680 East Lansing Drive		ADDRESS 2680 East Lansing Drive	
CITY East Lansing	STATE MI	CITY East Lansing	STATE MI	CITY East Lansing	STATE MI
PHONE NO. 517-332-0167	FAX NO.	PHONE NO. 517-332-0167	FAX NO.	PHONE NO. 517-332-0167	FAX NO.
E-MAIL ADDRESS results@meritlabs.com		E-MAIL ADDRESS juliet@meritlabs.com		E-MAIL ADDRESS juliet@meritlabs.com	
PROJECT NO./NAME S46700		PROJECT NO./NAME S46700		PROJECT NO./NAME S46700	
TURNAROUND TIME REQUIRED <input type="checkbox"/> 1 DAY <input type="checkbox"/> 2 DAYS <input type="checkbox"/> 3 DAYS <input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> OTHER		TURNAROUND TIME REQUIRED <input type="checkbox"/> 1 DAY <input type="checkbox"/> 2 DAYS <input type="checkbox"/> 3 DAYS <input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> OTHER		TURNAROUND TIME REQUIRED <input type="checkbox"/> 1 DAY <input type="checkbox"/> 2 DAYS <input type="checkbox"/> 3 DAYS <input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> OTHER	
DELIVERABLES REQUIRED <input type="checkbox"/> STD <input checked="" type="checkbox"/> LEVEL II <input type="checkbox"/> LEVEL III <input type="checkbox"/> LEVEL IV <input type="checkbox"/> EDD <input type="checkbox"/> OTHER		DELIVERABLES REQUIRED <input type="checkbox"/> STD <input checked="" type="checkbox"/> LEVEL II <input type="checkbox"/> LEVEL III <input type="checkbox"/> LEVEL IV <input type="checkbox"/> EDD <input type="checkbox"/> OTHER		DELIVERABLES REQUIRED <input type="checkbox"/> STD <input checked="" type="checkbox"/> LEVEL II <input type="checkbox"/> LEVEL III <input type="checkbox"/> LEVEL IV <input type="checkbox"/> EDD <input type="checkbox"/> OTHER	
MATRIX CODE:	GW=GROUNDWATER SL=SLUDGE	WW=WASTEWATER DW=DRINKING WATER	S=SOIL O=OIL	L=LIQUID WP=WIPE	SD=SOLID W=WASTE
MATRIX	GW	SL	WW	DW	S
YEAR	DATE	TIME	IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES
3/23/23	0440		S46700.01	GW	3
3/23/23	0001		S46700.02	GW	3
3/23/23	0535		S46700.03	GW	3
3/23/23	0652		S46700.04	GW	3
3/23/23	0801		S46700.05	GW	3
3/23/23	0908		S46700.06	GW	3
3/23/23	1000		S46700.07	GW	3
3/23/23	1056		S46700.08	GW	3
3/23/23	1148		S46700.09	GW	3
3/23/23	1250		S46700.10	GW	3
3/23/23	1350		S46700.11	GW	3

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications
 OHIO VAP Drinking Water
 DoD NPDES
 Project Locations
 Detroit New York
 Other _____
 Special Instructions
 *Methanol RL 3,700ppb
 *Ethanol, N-Butanol

190-31353 Chain of Custody

Subcontracted to Eurofins

RELINQUISHED BY: SIGNATURE/ORGANIZATION
 RECEIVED BY: SIGNATURE/ORGANIZATION
 RELINQUISHED BY: SIGNATURE/ORGANIZATION
 RECEIVED BY: SIGNATURE/ORGANIZATION

DATE: 3/27/23 TIME: 1450
 DATE: 3/27/23 TIME: 1500

NOTES: Cold Storage

SEAL NO. INITIALS
 SEAL NO. INITIALS

TEMP. ON ARRIVAL

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

requisitioned by cold storage 190 3/28/23 943am

3/31/2023

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Rev. 5.18.12



Environment Testing
TestAmerica

SDS or Known Hazard Information Supplied by Client
 Discrepancies Client ID: Merit
 Short Hold Work Oder #: 31353
 Rush 24 Hr 2-Day 3-Day 5-Day Other:
Receipt Evaluation Performed by: Initials: JH Date: 3/20/23 Time: 943

Cooler / Sample Receipt

After hours receipt: complete gray areas. Place cooler in walk-in, place form in Receiving box. Date: _____ Time: _____

Method of Shipment:

Walk-In Client Eurofins TA Field/Courier
Other Client / 3rd Party Courier: _____
Fed Ex Tracking #: _____
UPS Tracking #: _____
Other: _____

Shipping Container Type:

Cooler Box
 None Other: _____

Packing Materials:

Plastic Bags Foam
 Bubble Wrap Paper
 Packing Peanuts None
 Other: _____

Custody Seals Intact:

Yes No
 NA (not used or required)

Cooling Materials:

Ice (Solid) Ice (Melted)
 Blue Ice None
 Other: _____

Bacteriological Samples	Temp Corrected (°C)		Frozen?		Rec'd Within 2 Hrs?		Sample Flagged?	
	Yes	No	Yes	No	Yes	No	Yes	No

Received on same day sampled? Yes No Additional Sheets Required? Yes No

Receipt Temperatures

Thermometer ID	Observed (°C)	Corrected (°C)	Temp Blank	Sample Temp	Acceptable	Cooler ID	Affected Samples
<u>CP313207</u>	<u>4.0</u>	<u>4.0</u>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N		
					<input type="checkbox"/> Y <input type="checkbox"/> N		
					<input type="checkbox"/> Y <input type="checkbox"/> N		

Receipt Questions**	Y	N	NA	"No" answers require additional comment
CoC present and ETA receipt signature, date, and time properly documented?	<input checked="" type="checkbox"/>			
Containers and Labels in good condition? (unbroken, not leaking, appropriately filled, labels legible & attached)	<input checked="" type="checkbox"/>			
Appropriate containers used and adequate volume provided?	<input checked="" type="checkbox"/>			Preserved bottles checked for pH?* Yes No pH strip lot # _____
Number of sample containers match CoC?	<input checked="" type="checkbox"/>			
Samples received within hold?	<input checked="" type="checkbox"/>			
Samples submitted for GRO and Volatiles analysis (8260, 624, 524) received without headspace?	<input checked="" type="checkbox"/>			
Was a Trip Blank received with VOA samples?			<input checked="" type="checkbox"/>	
Were the samples free of any questionable physical conformities? (i.e.: field duplicates or multiple bottles of the same sample do not significantly vary in appearance - color, solid proportions, etc.)	<input checked="" type="checkbox"/>			
Were the CoC bottle labels and all other items free of all other discrepancies or issues that would need to be addressed with the Project Manager and/or Client?	<input checked="" type="checkbox"/>			
**May not be applicable if samples are not for compliance testing				*Excludes FOG, VOAs, TOC Vials, HEM

Client Contact Record

Contact Via: Phone Email Other: _____ Person Contacted: _____ Date/Time: _____
 Discrepancy allowance agreement is on record in the client project file

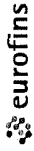
Discussion / Resolution

Any additional documentation and clarification from the client must be noted in the narrative and/or scanned into the CoC directory.

Reviewed by [Signature] Date: 3/28/23

WI-MI-010_020720

Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler	Lab PM: Schafer, Sue	Carrier Tracking No(s):	COC No: 190-35748.1
Client Contact Shipping/Receiving		Phone:	E-Mail: Sue.Schafer@et.eurofins.com	State of Origin: Michigan	Page: Page 1 of 2
Company Eurofins Environment Testing Southeast,		Accreditations Required (See note): 190-31353-1			
Address: 5102 LaRoche Avenue,		Due Date Requested: 4/10/2023			
City: Savannah		TAT Requested (days):			
State/Zip: GA, 31404		PO #:			
Phone: 912-354-7858(Tel) 912-352-0165(Fax)		WO #:			
Email:		Project #: 19001249			
Project Name: S46700		SSOW#:			
Site:					
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=solid, O=organic, A=Air)
S46700 01 (190-31353-1)		3/23/23	04:40 Eastern	Water	Water
S46700 02 (190-31353-2)		3/23/23	00:01 Eastern	Water	Water
S46700 03 (190-31353-3)		3/23/23	05:35 Eastern	Water	Water
S46700 04 (190-31353-4)		3/23/23	06:52 Eastern	Water	Water
S46700 05 (190-31353-5)		3/23/23	08:01 Eastern	Water	Water
S46700 06 (190-31353-6)		3/23/23	09:08 Eastern	Water	Water
S46700 07 (190-31353-7)		3/23/23	10:00 Eastern	Water	Water
S46700 08 (190-31353-8)		3/23/23	10:56 Eastern	Water	Water
S46700 09 (190-31353-9)		3/23/23	11:48 Eastern	Water	Water
<p>Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody if the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.</p>					
Possible Hazard Identification					
Unconfirmed					
Deliverable Requested I, II, III, IV, Other (specify)					
Primary Deliverable Rank: 2					
Date:					
Time:					
Method of Shipment:					
Received by: <i>Jei Hae</i> Company					
Date/Time: 3/26/23 17:00					
Received by: <i>Jei Hae</i> Company					
Date/Time: 03/24/23 10:36					
Received by: <i>Jei Hae</i> Company					
Date/Time: 03/24/23 10:36					
Received by: <i>Jei Hae</i> Company					
Date/Time: 03/24/23 10:36					
Cooler Temperature(s) °C and Other Remarks: 29					
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No					
Custody Seal No.					



Chain of Custody Record

Client Information (Sub Contract Lab)		Sampler	Lab PM	Carrier Tracking No(s)	COC No:
Client Contact: Shipping/Receiving		Schafer, Sue	Schafer, Sue		190-35748.2
Company: Eurofins Environment Testing Southeast,		Phone: Sue.Schafer@et.eurofinsus.com	E-Mail: Sue.Schafer@et.eurofinsus.com	State of Origin: Michigan	Page: Page 2 of 2
Address: 5102 LaRoche Avenue,		Accreditations Required (See note):		Job #:	190-31353-1
City: Savannah	Due Date Requested: 4/10/2023	Analysis Requested		Preservation Codes:	M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - NaHSO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)
State Zip: GA, 31404	TAT Requested (days):	8010_DAL ALCOHOLS w/METHANOL spec limit	Perform MS/MSD (Yes or No)	Field Filtered Sample (Yes or No)	Total Number of Containers
Phone: 912-354-7858(Tel) 912-352-0165(Fax)	PO #:		X	X	3
Email:	WO #:		X		3
Project Name: S46700	Project #: 19001249	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=organic)
Site: S46700	SSOW#:	3/23/23	12:50 Eastern	Water	Water
		3/23/23	13:50 Eastern	Water	Water
Sample Identification - Client ID (Lab ID)		Preservation Code:	Special Instructions/Note:		
S46700 10 (190-31353-10)					
S46700 11 (190-31353-11)					
<p>Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody if the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.</p>					
Possible Hazard Identification					
Unconfirmed					
Deliverable Requested I, II, III, IV, Other (specify) Primary Deliverable Rank: 2					
Empty Kit Relinquished by		Date:		Method of Shipment	
Relinquished by <i>Janice</i>		Date/Time: 3/24/23 1700		Company	
Relinquished by		Date/Time:		Company	
Relinquished by		Date/Time:		Company	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.		Cooler Temperature(s) °C and Other Remarks: 25	

ICOC No:
190-35748

Containers

Count
33

Container Type
Voa Vial 40ml - unpreserved

Preservative
None



ICOC No:
190-35748

Containers

Count
33

Container Type
Voa Vial 40ml - unpreserved

Preservative
None

