RCRA INTERIM WORK PLAN INVESTIGATION REPORT - EASTERN SITE BOUNDARY

FORMER HAYES LEMMERZ SITE
FERNDALE, OAKLAND COUNTY, MICHIGAN
SITE ID NUMBER: MID 041 803 123
WASTE DATA SYSTEM NUMBER: 395519

PREPARED FOR:

Michigan Department of Environment, Great Lakes, and Energy
Hazardous Waste Section, Materials Management Division
Lansing District Office
525 West Allegan Street
Constitution Hall, 1st Floor, South
Lansing, Michigan 48909

PREPARED BY:

Atlas Technical Consultants LLC
46555 Humboldt Drive, Suite 100
Novi, Michigan 48377

April 19, 2022

46555 Humboldt Drive, Suite 100
Novi, Michigan 48377
(248) 669-5140 | oneatlas.com

April 19, 2022

Mr. Joseph Rogers
Geologist Specialist
Hazardous Waste Program – Technical Support Unit
Materials Management Division
Michigan Department of Environment, Great Lakes, and Energy
Lansing District Office
525 West Allegan Street
Constitution Hall, 1st Floor, South
Lansing, Michigan 48909

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Dear Mr. Rogers:

Atlas Technical Consultants LLC (Atlas), on behalf of Axle Holdings 1, LLC, is pleased to present this Resource Conversation and Recovery Act (RCRA) Interim Work Plan Investigation Report for the Eastern Site Boundary located at the Former Hayes Lemmerz Site. The Site is located at the northwestern corner of West Eight Mile Road and Pinecrest Road, Ferndale (Oakland County), Michigan.

If you have any questions, please call us at (248) 669-5140.

Respectfully submitted,
Atlas Technical Consultants LLC

Andrew Stuart
National Program Director

Ryann Scott
Project Geologist

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1. BACKGROUND

Atlas Technical Consultants LLC (Atlas), formerly known as ATC Group Services, LLC (ATC), has been retained by Axle Holdings 1, LLC (Client) to prepare a Resources Conservation and Recovery Act (RCRA) Interim Work Plan Investigation Report for the Eastern Site Boundary in accordance with the RCRA Corrective Action Plan (May, 1994) for the former Hayes Lemmerz Site located on West Eight Mile Road, Ferndale, Oakland County, Michigan (Site). Corrective action will occur via a Corrective Action Consent Order that is being drafted by the Michigan Department of Environment, Great Lakes and Energy (EGLE) and will be negotiated between the two parties.

The Site is a former hazardous waste storage 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.

Based on historical groundwater analytical data obtained from the Site indicating the presence of trichloroethene (TCE) near the Eastern Site Boundary, EGLE, conducted a soil vapor gas investigation along Pinecrest Drive in 2018. On August 29, 2018, EGLE installed six soil vapor points (18VP-1 through 18VP-6) to a depth between 5 and 10 feet bsg in the right-of-way of Pinecrest Drive between West Eight Mile Road and Fielding Street. The soil gas vapor points were installed both in the western right-of-way of Pinecrest Drive (along the eastern property boundary of the Site) and the eastern right-of-way of Pinecrest Drive, near private residences.

Soil gas vapor samples were analyzed by the EGLE Laboratory for TO-15 analysis. Detections were identified in all samples, with concentrations of PCE identified in all but one of the soil gas vapor wells (18VP-2). Detected PCE concentrations did not exceed applicable Tier 1 Volatilization to Indoor Air Inhalation (VIAI) Risk Based Screening Levels (RBSLs). TCE was detected in two of the vapor wells (18VP-1 and 18VP-3) at concentrations exceeding applicable Tier 1 VIAI RBSLs with a maximum detected concentration of 400 ug/M^3.

As presented in Atlas' RCRA Corrective Actions Description of Current Conditions and Interim Measures Report (CCR), dated April 5, 2021, and revised September 21, 2021, submitted to EGLE on behalf of the Client, Atlas set forth a work plan for investigation activities along the Eastern Site Boundary. This work plan was presented to assess potential exposure issues for residents living along Pinecrest Drive, adjacent to the Site's eastern property boundary. The Client agreed to conduct investigation activities along the Eastern Site Boundary prior to commencing Site investigations as outlined in the RCRA Facility Investigation (RFI) Workplan submitted to EGLE by Atlas on February 17, 2022.

2. RECENT ACTIVITIES

Atlas mobilized to the Site multiple times during the period of November 23, 2021 through February 15, 2022. The activities completed were as follows:

- November 23, 2021: Atlas mobilized to the Site to locate underground utilities utilizing ground penetrating radar (GPR)/Electromagnetic (EM) technology. Services were provided by Terra Probe Environmental, Inc. (Terra Probe) to locate utilities located within the proposed soil vapor point locations along the Eastern Site Boundary.

- November 29 and 30, 2021: Atlas provided oversight for the installation of 14 soil vapor points (VP-1 through VP-14) along the Eastern Site Boundary. Drilling/soil vapor point installation was conducted by Terra Probe.

- December 10, 2021: Atlas completed mercury soil vapor screening at VP-1 through VP-14 soil gas points, utilizing a Jerome J505 Atomic Fluorescence Spectroscopy Mercury Analyzer. Additionally, low-flow groundwater samples were collected from ten of the 13 monitoring wells located along the Eastern Site Boundary. Monitoring wells MW-106 through MW-113, MW-119 and MW-121 were sampled. MW-105 was gauged as dry and MW-104 and MW-120 could not be located for sampling during this event, due to snow surface cover.

- January 20, 2022: Atlas located monitoring wells MW-104 and MW-120 and conducted low-flow groundwater sampling. MW-105 was again gauged as dry during this event and was still unable to be sampled.

- February 11 and 15, 2022: Atlas completed soil gas vapor sampling at 13 of the 14 soil vapor points installed along the Eastern Site Boundary. Soil gas samples were collected from VP-1 through VP-11, VP-13 and VP-14 and submitted for TO-15 analysis. VP-12 could not be sampled due to restricted flow caused by groundwater in the soil gas point.

MISS DIG

MISS DIG, Michigan's one-stop underground utility clearance network, was notified of the pending subsurface investigation on Monday, November 15, 2021 (Confirmation Ticket No. B013191245), at least 72 hours prior to commencing the subsurface investigation activities. MISS DIG's markouts only extend to public properties and right-of-ways.

Private Utilities Mark-out

Terra Probe was retained to locate and mark private underground utilities, including any buried utilities that might be present on Site. Atlas and Terra Probe met on-site on November 23, 2021, and conducted a GPR/EM survey and identified and marked the location of buried utilities relative to planned intrusive activities.

Top of Casing Elevation Survey

Atlas contracted PEA Group (PEA) and Core Land Consulting, LLC (Core) to conduct an American Land Title Association (ALTA) survey to adequately depict current land features, monitoring well locations and top of casing elevations for monitoring wells located on the Site, including along the eastern Site boundary. The surveys were performed with designated Site bench marks, elevations being set in feet above mean sea level.

Soil Gas Investigation

Fourteen soil vapor points (VP-1 through VP-14) were advanced along the Eastern Site Boundary on November 29 and 30, 2021. Soil gas points were selected based upon existing known locations of VOC concentrations (especially TCE) in groundwater historically detected along the Eastern Site Boundary. Soil gas vapor point locations were placed approximately every 50 feet along the Eastern Site Boundary, in between locations of existing groundwater monitoring wells.

All soil gas vapor points were installed in accordance with EGLE's May 2013 *Guidance Document for the Vapor Intrusion Pathway*. Consistent with previous EGLE soil gas points installed along the eastern and western right-of-way of Pinecrest Drive, the vapor points were installed approximately five feet below grade (based on the design of the prior points EGLE installed to permit an appropriate data comparison).

The installation of the soil gas vapor points was conducted via a track-mounted Geoprobe unit utilizing direct push technology. Soils were continuously logged and screened with a Rae photoionization detector (PID) in 6-inch intervals. The actual depth of soil vapor point installation was determined based upon visual observation of damp and/or saturated soils. The soil vapor points were installed above the observed damp/wet intervals in each location.

Soil vapor points were constructed with a 3/8-inch inner diameter brass barbed fitting assembly connected to a 4-inch long stainless steel screen. The brass fitting assembly was surrounded by a silicone sleeve. The silicone sleeve was slightly larger than the vapor point to provide a seal between the stainless screen and top of the concrete. The soil gas points were constructed of thermoplastic tubing with six-inch screens (0.10 inch slot size) surrounded by sand filter pack. The remaining well annulus was sealed with bentonite to within one foot of ground surface and the soil gas points were fitted with petcock shut off valves and finished with steel flush-mounted well covers set in concrete pads to protect the vapor point from damage and corrosion.

During the subsurface investigation, PID readings exceeding 0.0 parts per million (ppm) were not observed. Additionally, visually impacted (i.e. stained) soils, fill material and olfactory (i.e. hydrocarbon/solvent) odors were not present. Damp and/or wet soils were observed at an average of 7 feet bsg at each boring location. Therefore, soil gas vapor points were set at 5 feet bsg at each location. Vapor point boring logs are presented in **Appendix A**.

Static Groundwater Elevations

Static groundwater elevation measurements were obtained from the existing Eastern Site Boundary wells on November 29 and 30, 2021, during the soil gas vapor point installation field event and also on December 10, 2021 and January 20, 2022 during low-flow groundwater sampling events. The depth to groundwater was measured in each well relative to the top-of-casing elevation. The elevation of the static water table was then calculated. Static groundwater elevations for each monitoring well during the November 2021, December 2021 and January 2022 field events are presented in **Table 1**.

Static groundwater elevations collected from sampled monitoring wells are presented on **Figure 1 - Groundwater Flow Map**. Predominant groundwater flow direction along the Eastern Site Boundary is due east. Groundwater flow bends to the southeast in the southeastern corner of the Site, which is similar to earlier flow conditions (2020) evaluated on the Site overall.

Groundwater Sampling

Groundwater samples were collected from the following Eastern Site Boundary existing monitoring wells: MW-104, MW-106 through MW-113, and MW-119 though MW-121. MW-105 did not produce a sufficient amount of groundwater volume for sample collection.

The groundwater samples were collected using low-flow (minimal drawdown) sampling procedures. Low-flow groundwater sampling logs are presented in **Appendix B**. Two field duplicate samples, a field blank and a trip 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 Pace Analytical in Mount Juliet, Tennessee (Pace) to be analyzed for the potential constituents of concern (COCs) listed below:

- Volatile Organic Compounds (VOCs) by USEPA Method 8260B;
- 1,4-dioxane by USEPA Method 8260B-SIM;
- Semi-Volatile Organic Compounds (SVOCs) by USEPA Method 8270C
- Polynuclear Aromatic Hydrocarbons (PAHs) by USEPA Method 8270C-SIM;
- Cyanide by USEPA Method 4500CN;
- Michigan Part 201 Metals by USEPA Methods 6010B/6020A; and
- Mercury by USEPA Method 7470A

Groundwater samples were also transported under chain of custody to the Pace Laboratory in West Columbia, South Carolina to be analyzed for Michigan Per- and Polyfluoroalkyl Substances (PFAS) constituents by USEPA Method 8327.

Soil Gas Sampling

Atlas collected soil gas samples from thirteen[1] of the 14 soil gas vapor points on February 11 and 15, 2022. Soil gas vapor sampling sheets are include in **Appendix C**. Soil gas samples were collected using techniques outlined in the EGLE's *Guidance Document for the Vapor Intrusion Pathway*. The samples were collected using a constructed pathway between the soil vapor point and the 1-liter Summa® canister. The pathway was created using plastic and Tygon® tubing, as well as plastic stopcocks allowing for the control of flow direction. A calibrated GEM landfill gas meter was used to collect methane, oxygen and carbon dioxide readings during soil gas sampling.

Before the soil gas sampling was started, two separate QA/QC tests were conducted, the first being a helium shroud test. The helium shroud test uses a large plastic hood to cover the sample train and connections between the vapor point and the Summa® canister. A tracer gas (high-grade helium) was then injected beneath the plastic hood (at a concentration of approximately 20% total hood volume); a grab sample of the air from the tubing located beneath the helium hood was then collected and checked for the presence of helium in the field using a helium detector, thus indicating whether or not a leak was present.

A shut-in test was then conducted. The shut-in test involves the extraction of air from the sample lines that creates a vacuum measured using a mercury (Hg) vacuum gauge to test the tightness

[1] Soil gas vapor point VP-12 could not be sampled in February 2022 due to restricted flow caused by water in the flow line. This vapor point will be purged of water and sampled in future soil gas sampling events.

of the compression fittings on the sample train. Valves to the vapor point and the Summa® canister were shut and air was extracted from the sampling lines, inducing a vacuum of approximately 10.0 inches of Hg. When all external valves were closed, the vacuum within the sample train was measured for two minutes and remained steady.

Once both QA/QC tests were successfully completed, soil gas located within the tubing was then purged and/or evacuated three times the tubing volume allowing for the collection of an undisturbed sample. The Summa® canisters were under negative pressure, so upon completion of the QA/QC tests and evacuation of soil gas within the tubing, the Summa® canisters were opened allowing for soil gas to be drawn in and collected. The soil gas samples were then shipped to Pace in Mount Juliet, Tennessee, for analysis of VOCs in accordance with EPA Compendium Method TO-15. Additionally, helium (tracer gas) was analyzed for each sample submitted.

3. RESULTS

The site geology was observed as part of the November 2021 soil vapor point installation. In general, brown and/or gray fine to medium grained sand was encountered underneath a layer of grass and topsoil to a depth of approximately 5 feet bsg. Within two of the borings, VP-6 and VP-11, a thin layer (approximately 6 inches to 1 foot) of clay was encountered at 2 foot bsg and 4 foot bsg, respectively.

Damp to wet soils were encountered at an average depth of 5 feet bsg, which is consistent with lithology observed during monitoring well installation in March 2020, along the Eastern Site Boundary at MW-108 through MW-112. Wet sand was encountered at approximately 6 feet bsg during monitoring well advancement at these locations. Additionally, gauging data obtained from monitoring wells located along the Eastern Site Boundary during the soil vapor point installation indicated static groundwater elevations at an average depth of approximately 7 feet bsg. To avoid groundwater entering the soil vapor points during seasonal high water table fluctuations, soil vapor points were set at 5 feet bsg.

Soil Gas Field Screening Results

Atlas performed pre- and post-soil gas sampling field screening for the following parameters: barometric pressure, oxygen, carbon dioxide, methane content, and PID response. Additionally, mercury vapor readings were collected from each of the soil gas points. The following detected average values were observed:

- Barometric Pressure: 29.32,
- Average O_2 content: 20.19,
- Average CO_2 content: 1.27,
- Average PID Response: 0.0,
- Average CH_4 content: 0.1, and
- Average detected mercury vapor content 0.000004 ug/M^3

Laboratory Analytical Results

Groundwater and soil gas analytical results were compared to applicable EGLE Residential and Non-Residential Tier 1 RBSL criteria. Due to the location of the adjacent residential properties across Pinecrest Drive, comparison of analytical data took into account the Residential Tier 1 RBSLs, as they are more restrictive and protective of these potentially sensitive receptors. Specifically, groundwater concentrations were compared to Residential Drinking Water, Non-Residential Drinking Water, Groundwater Surfacewater Interface, Residential Volatilization to Indoor Air Pathway (VIAP), Non-Residential VIAP and Water Solubility screening levels. Soil gas analytical results were compared to Residential and Non-Residential VIAP screening levels.

Groundwater

Atlas collected 12 groundwater samples along the Eastern Site Boundary for laboratory analyses in December 2021 and January 2022. Groundwater results are summarized in **Table 2** and criteria exceedances are presented on **Figure 2**. For comparability purposes and to evaluate confirmed presence of detected COCs, groundwater sampling results from samples collected in April 2020 are also presented in **Table 2**. The following detections and exceedances were noted:

- **Metals:** A total of 27 metals were analyzed, of which 21 metals were detected. Aluminum, antimony and/or manganese concentrations exceeded Non-Residential Drinking Water

criteria at MW-107 through MW-112 and MW-121. Prior results from April 2020 sampling could not be used to evaluate for comparability as aluminum, antimony, and manganese were not analyzed in those groundwater samples. Selenium exceeded Groundwater to Surface Water Interface (GSI) criteria at MW-119 and MW-120.

- **VOCs:** A total of 81 VOCs were analyzed, of which 13 VOC constituents were detected in one or more samples. Chloroform was detected above Residential VIAP screening levels at MW-108. Vinyl chloride was detected exceeding Residential VIAP screening levels at MW-110. Neither chloroform nor vinyl chloride were reported as detected in the April 2020 groundwater sampling results. TCE exceeded its Residential VIAP screening levels at MW-106, MW-107, MW-108, MW-109, MW-111, MW-119 and MW-121 and its Non-Residential VIAP screening level at MW-107. TCE was fairly consistently detected in the same wells and relative concentrations in April 2020 as in the most recent sampling.

- **SVOCs:** A total of 75 SVOCs were analyzed, of which only four were detected and three of those were only detected in one sample. Detections included 1,2-dichlorobenzene, 1,4-dichlorobenzene, pyrene and 2-methylnapthalene. No criteria exceedances were observed. None of these SVOCs were detected in April 2020 groundwater samples, but 2-methylnaphthalene was also not analyzed during that event.

- **PFAS:** A total of 29 PFAS compounds were analyzed, of which 12 were detected. PFOA was the only PFAS compound that exceeded its PFAS Drinking Water screening level at MW-104, MW-106 through MW-112, MW-120 and MW-121. PFAS COCs, including PFOA, were consistently detected in the same wells and at similar concentrations in April 2020 as compared to the most recent sample results.

- **Alcohols:** A total of two alcohols were analyzed (methanol and ethanol), of which methanol exceeded Non-Residential Drinking Water criteria at MW-104. Remaining samples were non-detect. Methanol was detected in three wells (MW-119, MW-120, and MW-121) in April 2020 with all concentrations below all criteria. Ethanol was not detected in any samples in either event.

- **Tetraethyl lead:** Each sample was analyzed for tetraethyl lead and all samples were non-detect. This COC was not analyzed for in April 2020 groundwater samples.

- **1,4-dioxane:** All samples were analyzed for 1,4-dioxane and each of the samples were non-detect. This COC was not analyzed for in April 2020 groundwater samples.

Soil Gas

Atlas collected 13 soil gas samples along the Eastern Site Boundary for laboratory analyses. Soil gas results are presented in **Table 3** and on **Figure 3**. The following detections were noted:

- **VOCs**: A total of 74 VOCs were analyzed and 23 were detected. No EGLE Tier 1 Residential and/or Non-Residential RBSL exceedances were observed.

- **Mercury vapor**: Mercury vapor was field measured in all 14 vapor points in February 2022 at the same time the VOC samples were collected with a hand-held detector. Readings ranged from 0.000 to 0.000004 ug/M^3. This was compared to EGLE's Residential and Non-Residential VIAP screening levels which indicated no exceedances were observed.

QA/QC Results

The two field duplicates and field and trip blank results are included in the laboratory analytical data presented in **Appendix D**.

Comparison of field duplicates revealed reasonable comparability between parent and field duplicate samples, particularly in the organic fractions (i.e., VOCs, PFAS, SVOCs). This QAQC tool provides a measure of reproducibility and precision reflecting on the sampling and analysis protocols employed. Acceptable precision and reproducibility levels were attained, with some minor exceptions.

The field and trip blanks had typical low-level metals detections naturally present in water, but not at high enough concentrations to significantly affect the reportability of the corresponding groundwater data except possibly for chloroform. The trip blank and field blank collected on December 10, 2021 had low-level detections of the VOCs bromodichoromethane and chloroform (all less than 6 ug/L), both of which COCs are seen as breakdown or coincidentally present in municipally-chlorinated water for drinking. The source of these blank contaminant detections could be from active leaking municipal water supply lines that run along Pinecrest Drive or even the ice purchased from retail locations placed in sample coolers to complete the required sample preservations prior to sending to the analytical laboratory.

Bromodichloromethane was not detected in any associated groundwater samples. Chloroform was detected in groundwater samples from MW-107, MW-108, and MW-121. The blank concentrations would be high enough to qualify those chloroform detections as non-detected, which would eliminate the only chloroform VIAP exceedance for the Eastern Site Boundary assessment. While this step would eliminate chloroform as a COC, chloroform has been detected at low concentrations in other Site areas, so it will be maintained as an Eastern Site Boundary COC. Further monitoring is necessary to support a decision later to possibly eliminate that COC from the Eastern Boundary.

Helium is used for leak testing for soil vapor sampling. Helium is intentionally introduced into the soil vapor shroud as a QA/QC check on tightness. Helium was added to the analytical list for the soil vapor sampling VOC analyses and results are included in **Table 3**. Helium was detected in three of the 14 vapor point samples with a maximum detection of 0.296% helium by volume, below the target maximum of two percent. This data indicates the shroud methodology employed showed satisfactory tightness.

4. SUMMARY AND CONCLUSIONS

Atlas collected groundwater samples from 12 existing monitoring wells which are all present along the easternmost portion of the Site to assess groundwater affects in that area. Specifically, monitoring wells MW-104, MW-106 through MW-113 and MW-119 through MW-121 were sampled utilizing low-flow techniques on December 10, 2021 and January 20, 2022 (MW-104 and MW-120 only). MW-105 did not produce a sufficient amount of groundwater for sample collection, as it was dry during both sampling events.

Analytical results obtained from the December 2021/January 2022 groundwater sampling event indicated the presence of TCE exceeding Residential VIAP screening levels at monitoring wells MW-106, MW-107, MW-108, MW-109, MW-111, MW-119 and MW-121; and exceeding Non-Residential VIAP screening levels at MW-107. Additionally, chloroform and vinyl chloride were detected exceeding Residential VIAP screening levels at MW-108 (chloroform) and MW-110 (vinyl chloride).

As a result of the prior groundwater assessment findings along the Eastern Site Boundary, Atlas installed 14 soil vapor points (VP-1 through VP-14) along the Eastern Site Boundary on November 29 and 30, 2021. The soil gas points were set at a depth of 5 feet below surface grade (bsg), based upon field observations of damp/wet shallow soils (less than 10 feet bsg) present within the soil vapor point borings. Additionally, groundwater gauging measurements collected from existing monitoring wells near the soil vapor points during the field event exhibiting a groundwater depth of approximately 7 feet bsg, on average. Soil gas vapor samples were collected on February 11 and 15, 2022, and analyzed for TO-15 analysis. Additionally, mercury vapor readings were collected at each soil vapor point on December 10, 2021.

Analytical results obtained from the February 2022 soil gas sampling event did not indicate the presence of VOCs exceeding VIAP screening levels.

Groundwater Conclusions

Based on the results of groundwater analytical data obtained, select constituents including chloroform, methanol, PFOA, TCE, vinyl chloride and select metals (aluminum, antimony, manganese, and selenium) are present within the groundwater at concentrations exceeding one or more applicable cleanup criteria along the Eastern Site Boundary. Note that while groundwater metals and organics detections were compared to Residential Drinking Water criteria, the drinking water scenario for residences in this area is considered incomplete as municipal water supply is available to all locations in this area.

The only metal exceeding a criteria other than Residential Drinking Water was selenium. Selenium exceeded the 5 ug/L GSI criteria in two samples (MW-119 and MW-120) at concentrations of 5.09 ug/L and 5.42 ug/L, respectively. This potential exposure pathway is also considered incomplete as there are no relevant surface water bodies in the area. Additionally, the combined sanitary and storm sewers that could potentially intercept groundwater containing selenium above the GSI standard flows to the municipal authority and does not discharge to a surface water body. Finally, selenium was not detected at a reporting limit of 0.2 ug/L in the corresponding samples collected in these two wells in the April 2020 samples.

Another groundwater issue that will need further evaluation and assessment is related to methanol detections. As can be seen on Table 2, methanol was detected in 2020 groundwater samples in Eastern Site Boundary wells MW-119, MW-120, and MW-121 at concentrations below

all groundwater screening criteria of 1,470 ug/L, 1,350 ug/L, and 1,540 ug/L, respectively. Methanol was detected at 104,000 ug/L in MW-104 in the current sampling event, but was non-detect with a reporting limit of 400 ug/L in April 2020. There has been only one other detection of methanol in groundwater in the Southern Area in well MW-132. Atlas confirmed the sample preservation, preparation and analysis via EPA 8015B does not include or involve methanol and confirmed that the field equipment decontamination procedure does not include any potential sources of methanol. Atlas has no specific explanation of the unusual methanol detections other than as a possible source at the Site. We will continue to monitor for methanol presence in future Site-related investigative work.

Soil Gas Conclusions

Soil gas analytical data did not indicate the presence of COCs analyzed exceeding applicable criteria including TCE and PCE, which were non-detect in the Eastern Site Boundary soil gas samples. Specifically, soil gas results did not align with those obtained by EGLE within the rights-of-way of Pinecrest Drive in 2018. EGLE reported soil gas vapor samples from VP18-1 and VP18-3 exceeded Residential VIAP screening criteria for TCE (at concentrations of 400 ug/M^3 and 180 ug/M^3, respectively) where no corresponding current vapor point sample results from the Eastern Site Boundary had any detections of TCE with reporting limits of 1 ug/M^3.

Atlas will perform one additional round of soil gas sampling of these sample points to further evaluate the onsite concentrations. It is possible that the differences between the current soil gas and EGLE's soil gas results could be the result of seasonality differences or attenuation of the VOCs over time or from downgradient sources beneath Pinecrest Drive. If we do not have exceedances in soil gas following the additional event, additional soil gas sampling in this location will not be recommended.

Overall Conclusions

Groundwater and soil gas analytical results from this sampling event did not indicate a threat to residential properties located to the east of the Site across Pinecrest Drive. However, based upon groundwater exceedances of TCE and PFOA observed by Atlas during the December 2021/January 2022 groundwater sampling event, Atlas plans further groundwater delineation in the down-gradient direction (i.e. east).

5. PROPOSED FUTURE ACTIVITIES

Based on the soil gas and groundwater data, Atlas proposes the following future activities be conducted to address the eastern Site boundary. All proposed work will follow standard operating procedures, analytical methodology references and QA/QC requirements specified in the February 2021 RCRA Facility Investigation Workplan for this Site.

- Installation of additional monitoring wells screened to the top of clay or the base of sand, across Pinecrest Drive, to delineate groundwater concentrations observed along the eastern Site boundary. Specifically, Atlas proposes to install up to five additional monitoring wells in the down-gradient direction (which has been established as predominantly east). Monitoring wells will be placed at the approximate locations shown on **Figure 4** within the public right-of-way of residential streets located to the east of the Site, across Pinecrest Drive.

- Conduct one additional soil vapor gas sampling event at the vapor points installed along the Eastern Site Boundary. The sampling event will occur within the spring/early summer of 2022 to account for seasonal groundwater fluctuations and its potential influence on soil vapor gas concentrations. Soil vapor gas samples will be submitted for TO-15 analysis. If the results of the soil gas sampling event is consistent with our most recent results, we will cease soil gas sampling in these points.

- Conduct two rounds of low-flow groundwater sampling at the newly installed offsite delineation monitoring wells located off-site across Pinecrest Drive, as well as the existing 12 Eastern Site Boundary wells sampled in December 2021. Sampling rounds will be at least 30 days apart. While the December 2021 Eastern Site Boundary wells were analyzed for the baseline suite of COCs as specified in the February 2022 RFI Workplan, future groundwater samples will be submitted only for those COCs with current exceedances in wells and/or soil gas along the Eastern Site Boundary (i.e., chloroform, methanol, PFOA, TCE, PCE, vinyl chloride and dissolved antimony, aluminum, manganese, and selenium).

TABLES

Table 1 - Groundwater Gauging Data
Former Hayes Lemmerz Site
West Eight Mile Road
Ferndale, Oakland County, MI

WELL ID	Installation Date	Total Borehole Depth	Borehole Diameter	Casing Size	Screened Interval	Screen Slot Size	Top of Casing Elevation	STATIC DTW (4/8 - 4/9/20)	GWE (4/8 - 4/9/20)	STATIC DTW (4/23/20)	GWE (4/23/20)	STATIC DTW (11-29-11/30/21)	GWE (11/29-11/30/21)	STATIC DTW (12/10/21; 01/20/22)	GWE (12/10/21; 01/20/22)
		(feet)	(inches)	(inches)	(feet bgs)	(inches)	FAMSL	(feet)	FAMSL	(feet)	FAMSL	(feet)	FAMSL	(feet)	FAMSL
MW-104	3/23/2020	20	2.25	2	15-20'	0.01	664.17	9.57	654.60	--	--	--	--	9.46	654.71
MW-105	3/23/2020	15	2.25	2	9-14'	0.01	664.22	10.72	653.50	--	--	--	--	DRY	--
MW-106	3/25/2020	15	2.25	2	7.5-12.5'	0.01	662.94	7.69	655.25	7.65	655.29	--	--	8.03	654.91
MW-107	3/25/2020	15	2.25	2	7-12'	0.01	662.96	7.21	655.75	--	--	7.10	655.86	7.82	655.14
MW-108	3/25/2020	15	2.25	2	5-10'	0.01	662.41	6.41	656.00	6.46	655.95	7.30	655.11	7.07	655.34
MW-109	3/25/2020	15	2.25	2	5-10'	0.01	670.00	5.66	664.34	5.73	664.27	7.20	662.80	5.75	664.25
MW-110	3/25/2020	15	2.25	2	5-10'	0.01	661.65	5.74	655.91	--	--	--	--	6.46	655.19
MW-111	3/25/2020	15	2.25	2	4-9'	0.01	661.39	5.17	656.22	--	--	--	--	5.91	655.48
MW-112	3/25/2020	15	2.25	2	4-9'	0.01	660.25	4.40	655.85	--	--	--	--	5.03	655.22
MW-113	3/24/2020	15	2.25	2	8-13'	0.01	664.48	7.61	656.87	--	--	--	--	8.32	656.16
MW-119	4/21/2020	10	2.25	2	5-10'	0.01	662.21	--	--	6.42		--	--	6.68	655.53
MW-120	4/21/2020	10	2.25	2	3-8'	0.01	660.25	--	--	3.99	656.26	--	--	4.22	656.03
MW-121	4/21/2020	15	2.25	2	8-13'	0.01	663.62	--	--	9.67	653.95	--	--	9.94	653.68

Notes:

DTW	Depth to Water
GWE	Groundwater Elevation
FAMSL	Feet Above Mean Sea Level

Table 2

Groundwater Analytical Results - April 2020 / December 2021 - January 2022

Former Hayes Lemmerz Site - Eastern Site Boundary

Sample ID			T1 Res DW Cleanup CSL	T1 NRes DW Cleanup CSL	T1 GW SW Interface SL	Res VIAP	NonRes VIAP	T1 W Solubility SL	MW-104	MW-104	MW-106	MW-106	MW-107	MW-107	MW-108	MW-108	MW-109	MW-109	MW-110	MW-110
Date Collected									4/8/2020	01/20/2022	4/8/2020	12/10/2021	4/8/2020	12/10/2021	4/8/2020	12/10/2021	4/8/2020	12/10/2021	4/9/2020	12/10/2021
Method	Analyte	Units																		
METALS, DISSOLVED																				
6020	ALUMINUM	ug/l	50	50	-	-	-	-	NA	<100	NA	<100	NA	<100	NA	<100	NA	<100	NA	<100
6020	ANTIMONY	ug/l	6	6	130	-	-	-	NA	<4.00	NA	<4.00	NA	17.4	NA	<4.00	NA	<4.00	NA	<4.00
6010B	ARSENIC	ug/l	10	10	10	-	-	-	<5.0	<10.0	<5.0	<10.0	<5.0	<10.0	<5.0	<10.0	<5.0	<10.0	<5.0	<10.0
6010B	BARIUM	ug/l	2000	2000	-	-	-	-	<100	84.5	135	35.2	<100	48.5	<100	44.5	<100	26.4	<100	11.4 B
6020	BERYLLIUM	ug/l	4	4	-	-	-	-	NA	<2.00	NA	<2.00	NA	<2.00	NA	<2.00	NA	<2.00	NA	<2.00
6010B	BORON	ug/l	500	500	7200	-	-	-	NA	106	NA	36 J	NA	83 J	NA	153 J	NA	123 J	NA	99.9 J
6020	CADMIUM	ug/l	5	5	-	-	-	-	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
6010B	CALCIUM	ug/l	-	-	-	-	-	-	NA	73000	NA	79800	NA	98800	NA	124000	NA	142000	NA	82900
6010B	CHROMIUM	ug/l	100	100	-	-	-	-	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
6010B	COBALT	ug/l	40	100	100	-	-	-	NA	1.13 J	NA	<10.0	NA	<10.0	NA	<10.0	NA	1.48 J	NA	<10.0
4500CN	CYANIDE	ug/l	200	200	5.2	-	-	-	NA	<5.00	NA	<5.00	NA	<5.00	NA	<5.00	NA	<5.00	NA	<5.00
6010B	IRON	ug/l	300	300	-	-	-	-	NA	22.2 J	NA	<100	NA	49.5 B J	NA	<100	NA	<100	NA	<100
6020	LEAD	ug/l	4	4	-	-	-	-	<3.0	<2.00	<3.0	<2.00	<3.0	2.38	<3.0	2.06	<3.0	<2.00	<3.0	<2.00
6010B	MAGNESIUM	ug/l	400000	1100000	-	-	-	-	NA	11500	NA	12900	NA	17700	NA	24300	NA	25800	NA	12700
6010B	MANGANESE	ug/l	50	50	-	-	-	-	NA	47.4	NA	2.4 B J	NA	<10.0	NA	236	NA	1660	NA	455
7470A	MERCURY	ug/l	2	2	0.0013	0.088	3.7	-	<0.079	<0.200	<0.079	<0.200	<0.079	<0.200	<0.079	<0.200	<0.079	<0.200	<0.079	<0.200
6010B	MOLYBDENUM	ug/l	73	210	3200	-	-	-	NA	14	NA	<5.00	NA	<5.00	NA	<5.00	NA	<5.00	NA	<5.00
6010B	NICKEL	ug/l	100	100	-	-	-	-	NA	<10.0	NA	<10.0	NA	<10.0	NA	1.66 J	NA	<10.0	NA	<10.0
6010B	POTASSIUM	ug/l	-	-	-	-	-	-	NA	7240	NA	2330	NA	5910	NA	5220	NA	2310	NA	1600 J
6020	SELENIUM	ug/l	50	50	5	-	-	-	<5.0	0.686 J	<5.0	0.503 J	<5.0	1.18 J	<5.0	<2.00	<5.0	<2.00	<5.0	<2.00
6020	SILVER	ug/l	34	98	0.2	-	-	-	<0.20	<2.00	<0.20	<2.00	<0.20	<2.00	<0.20	<2.00	<0.20	<2.00	<0.20	<2.00
6010B	SODIUM	ug/l	230000	350000	-	-	-	-	NA	216000	NA	66600	NA	15400	NA	32400	NA	34800	NA	18800
6010B	STRONTIUM	ug/l	4600	13000	21000	-	-	-	NA	248	NA	202	NA	219	NA	247	NA	315	NA	254
6020	THALLIUM	ug/l	2	2	3.7	-	-	-	NA	<2.00	NA	<2.00	NA	<2.00	NA	<2.00	NA	<2.00	NA	<2.00
6020	TITANIUM	ug/l	-	-	-	-	-	-	NA	<20.0	NA	<20.0	NA	<20.0	NA	<20.0	NA	<20.0	NA	<20.0
6020	VANADIUM	ug/l	4.5	62	27	-	-	-	NA	1.09 J	NA	1.17 J	NA	2.19 J	NA	<5.00	NA	<5.00	NA	<5.00
6010B	ZINC	ug/l	2400	5000	-	-	-	-	NA	<50.0	NA	<50.0	NA	7.93 J	NA	9.26 J	NA	12.4 J	NA	13.9 J
PFAS																				
8327	Perfluorooctanesulfonic acid (PFOS)	ng/l	16	16	12	-	-	3,100	<0.38	3.7	<0.40	3.2J	<0.39	<3.5	<0.40	<3.5	<0.40	<3.5	<0.39	2.5J
8327	Perfluorohexanesulfonic acid (PFHxS)	ng/l	51	51	-	-	-	-	10	12	9.5	8.4	2.5	2.7J	<0.38	2.4J	<0.39	1.9J	<0.38	1.5J
8327	Perfluoro-n-undecanoic acid (PFUdA)	ng/l	-	-	-	-	-	-	NA	<3.4	NA	<3.4	NA	<3.5	NA	<3.5	NA	<3.5	NA	<3.5
8327	Perfluoro-n-tridecanoic acid (PFTrDA)	ng/l	-	-	-	-	-	-	<0.43	<3.4	<0.45	<3.4	<0.45	<3.5	<0.45	<3.5	<0.46	<3.5	<0.45	<3.5
8327	Perfluoro-n-tetradecanoic acid (PFTeDA)	ng/l	-	-	-	-	-	-	<0.39	<3.4	<0.41	<3.4	<0.40	<3.5	<0.41	<3.5	<0.42	<3.5	<0.41	<3.5
8327	Perfluoro-n-pentanoic acid (PFPeA)	ng/l	-	-	-	-	-	-	3.2	3.5	8.0	2.7J	5.3	7.7	2.5	4	17	12	4.3	6.8
8327	Perfluoro-n-octanoic acid (PFOA)	ng/l	8	8	12,000	-	-	9.50E+09	6.2	12	16	9.9	11	16	5.0	9.3	19	21	7.4	14
8327	Perfluoro-n-nonanoic acid (PFNA)	ng/l	6	6	-	-	-	-	<0.57	<3.4	<0.59	0.63J	<0.58	<3.5	<0.59	<3.5	<0.60	<3.5	<0.59	<3.5
8327	Perfluoro-n-hexanoic acid (PFHxA)	ng/l	400,000	400,000	-	-	-	-	4.6	4.3	10	3.6	7.2	12	3.3	3.1J	26	15	5.7	6.9
8327	Perfluoro-n-heptanoic acid (PFHpA)	ng/l	-	-	-	-	-	-	3.4	5.1	5.4	3.4	5.1	5.7	<0.45	2.2J	26	12	5.8	5.8
8327	Perfluoro-n-dodecanoic acid (PFDoA)	ng/l	-	-	-	-	-	-	<0.39	<3.4	<0.41	<3.4	<0.40	<3.5	<0.41	<3.5	<0.42	<3.5	<0.41	<3.5
8327	Perfluoro-n-decanoic acid (PFDA)	ng/l	-	-	-	-	-	-	<0.66	<3.4	<0.68	0.54J	<0.67	<3.5	<0.69	<3.5	<0.69	<3.5	<0.68	<3.5
8327	Perfluoroundecanoic acid (PFUnA)	ng/l	-	-	-	-	-	-	<0.54	NA	<0.55	NA	<0.55	NA	<0.56	NA	<0.57	NA	<0.55	NA
8327	Perfluoro-n-butanoic acid (PFBA)	ng/l	-	-	-	-	-	-	8.0	12	11	7.8	8.9	6.4	7.9	15	10	12	5.5	8.2
8327	Perfluoro-1-pentanesulfonic acid (PFPeS)	ng/l	-	-	-	-	-	-	<0.36	0.85J	<0.37	0.95J	<0.37	<0.37	<0.37	0.64J	<0.38	0.73J	<0.37	<3.5
8327	Perfluoro-1-octanesulfonamide (PFOSA)	ng/l	-	-	-	-	-	-	<0.23	<3.4	<0.24	<3.4	<0.24	<0.24	<0.24	<3.5	<0.25	<3.5	<0.24	<3.5
8327	Perfluoro-1-nonanesulfonic acid (PFNS)	ng/l	-	-	-	-	-	-	<0.45	<3.4	<0.46	<3.4	<0.46	<3.5	<0.47	<3.5	<0.47	<3.5	<0.46	<3.5
8327	Perfluoro-1-heptanesulfonic acid (PFHpS)	ng/l	-	-	-	-	-	-	<0.45	<3.4	<0.46	<3.4	<0.46	<3.5	<0.47	<3.5	<0.47	<3.5	<0.46	<3.5
8327	Perfluoro-1-decanesulfonic acid (PFDS)	ng/l	-	-	-	-	-	-	<0.32	<3.4	<0.33	<3.4	<0.33	<3.5	<0.33	<3.5	<0.34	<3.5	<0.33	<3.5
8327	Perfluoro-1-butanesulfonic acid (PFBS)	ng/l	420	420	-	-	-	-	4.8	6.8	5.8	5.3	3.9	3.5	3.5	5.5	4.3	5.7	4.3	5.6
8327	N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	ng/l	-	-	-	-	-	-	<0.43	<6.8	<0.45	<6.8	<0.44	<6.9	<0.45	<7.0	<0.46	<6.9	<0.45	<7.0
8327	N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	ng/l	-	-	-	-	-	-	<0.90	<6.8	<0.93	<6.8	<0.92	<6.9	<0.94	<7.0	<0.95	<6.9	<0.93	<7.0
8327	Hexafluoropropylene oxide dimer acid (GenX)	ng/l	370	370	-	-	-	-	NA	<6.8	NA	<6.8	NA	<6.9	NA	<7.0	NA	<6.9	NA	<7.0
8327	9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	ng/l	-	-	-	-	-	-	NA	<6.8	NA	<6.8	NA	<6.9	NA	<7.0	NA	<6.9	NA	<7.0
8327	4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ng/l	-	-	-	-	-	-	NA	<6.8	NA	<6.8	NA	<6.9	NA	<7.0	NA	<6.9	NA	<7.0
8327	1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	ng/l	-	-	-	-	-	-	<0.57	<6.8	<0.59	<6.8	<0.58	<6.9	<0.59	<7.0	<0.60	<6.9	<0.59	<7.0
8327	1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	ng/l	-	-	-	-	-	-	<0.91	<6.8	<0.94	3.5J	<0.94	<6.9	<0.95	<7.0	120	<6.9	3.1	<7.0
8327	1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	ng/l	-	-	-	-	-	-	<0.75	<6.8	<0.77	<6.8	<0.77	<6.9	<0.78	<7.0	<0.79	<6.9	<0.77	<7.0
8327	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS	ng/l	-	-	-	-	-	-	NA	<6.8	NA	<6.8	NA	<6.9	NA	<7.0	NA	<6.9	NA	<7.0

Table 2

Groundwater Analytical Results - April 2020 / December 2021 - January 2022

Former Hayes Lemmerz Site - Eastern Site Boundary

Sample ID			T1 Res DW Cleanup CSL	T1 NRes DW Cleanup CSL	T1 GW SW Interface SL	Res VIAP	NonRes VIAP	T1 W Solubility SL	MW-104	MW-104	MW-106	MW-106	MW-107	MW-107	MW-108	MW-108	MW-109	MW-109	MW-110	MW-110
Date Collected									4/8/2020	01/20/2022	4/8/2020	12/10/2021	4/8/2020	12/10/2021	4/8/2020	12/10/2021	4/8/2020	12/10/2021	4/9/2020	12/10/2021
Method	Analyte	Units																		
VOLATILE ORGANIC COMPOUNDS																				
8260B	1,1,1,2-TETRACHLOROETHANE	ug/l	77	320	-	3.1	210	1100000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	1,1,1-TRICHLOROETHANE	ug/l	200	200	89	180	19000	1330000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	1,1,2,2-TETRACHLOROETHANE	ug/l	8.5	35	78	2.4	170	2970000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	1,1,2-TRICHLOROETHANE	ug/l	5	5	330	0.47	20	4420000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	1,1-DICHLOROETHANE	ug/l	880	2500	740	4.7	40	5060000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	1,1-DICHLOROETHENE	ug/l	7	7	130	18	250	2250000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	1,2,3-TRICHLOROBENZENE	ug/l	-	-	-	58	2600	-	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00
8260B	1,2,3-TRICHLOROPROPANE	ug/l	42	120	-	1.9	84	-	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA
8260B	1,2,3-TRIMETHYLBENZENE	ug/l	-	-	-	43	1800	-	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
8260B	1,2,4-TRICHLOROBENZENE	ug/l	70	70	99	3.8	160	300000	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00
8260B	1,2,4-TRIMETHYLBENZENE	ug/l	63	63	17	25	990	55900	<1.0	<1.00 J4	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	1,2-DIBROMO-3-CHLOROPROPANE	ug/l	-	-	-	-	-	-	<0.25	NA	<0.25	NA	<0.25	NA	<0.25	NA	<0.25	NA	<0.25	NA
8260B	1,2-DIBROMOETHANE (EDB)	ug/l	600	600	13	0.13	8.9	156000	<0.23	NA	<0.23	NA	<0.23	NA	<0.23	NA	<0.23	NA	<0.23	NA
8260B	1,2-DICHLOROBENZENE	ug/l	600	600	13	370	950	156000	<1.0	<1.00 J3	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	6.1	<1.0	<1.00
8260B	1,2-DICHLOROETHANE	ug/l	5	5	360	1.4	5.1	8520000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	1,2-DICHLOROPROPANE	ug/l	5	5	230	2.6	8.9	2800000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	0.632 J	<1.0	<1.00	<1.0	<1.00
8260B	1,3,5-TRIMETHYLBENZENE	ug/l	72	72	45	18	690	61200	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	1,3-DICHLOROBENZENE	ug/l	6.6	19	28	2.6	7.9	111000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	1,3-DICHLOROPROPANE	ug/l	-	-	-	3.3	20	-	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00
8260B	1,4-DICHLOROBENZENE	ug/l	75	75	17	5.9	28	73800	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	1.98	<1.0	<1.00
8260B	1-METHYLNAPHTHALENE	ug/l	-	-	-	-	-	-	NA	<10.0	NA	<10.0 J4	NA	<10.0 J4	NA	<10.0 J4	NA	<10.0 J4	NA	<10.0 J4
8260B	2-BUTANONE (MEK)	ug/l	13000	38000	2200	2600	4300000	240000000	<25.0	<10.0	<25.0	<10.0	<25.0	<10.0	<25.0	<10.0	<25.0	<10.0	<25.0	<10.0
8260B	2-HEXANONE	ug/l	1000	2900	-	660	29000	16000000	<50.0	NA	<50.0	NA	<50.0	NA	<50.0	NA	<50.0	NA	<50.0	NA
8260B	2-METHYLNAPHTHALENE	ug/l	260	750	19	66	2900	24600	<5.0	<10.0	<5.0	<10.0 J4	<5.0	<10.0 J4	<5.0	<10.0 J4	<5.0	<10.0 J4	<5.0	<10.0 J4
8260B	3,3-DIMETHYL-1-BUTANOL	ug/l	-	-	-	-	-	-	NA	<100	NA	<100	NA	<100	NA	<100	NA	<100	NA	<100
8260B	4-METHYL-2-PENTANONE (MIBK)	ug/l	1800	5200	-	200	330000	20000000	<50.0	<10.0	<50.0	<10.0	<50.0	<10.0	<50.0	<10.0	<50.0	<10.0	<50.0	<10.0
8260B	ACETONE	ug/l	730	2100	1700	50000	40000000	1E+09	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0
8260B	ACRYLONITRILE	ug/l	2.6	11	2.0; 1.2	4.6	330	75000000	<2.0	NA	<2.0	NA	<2.0	NA	<2.0	NA	<2.0	NA	<2.0	NA
8260B	BENZENE	ug/l	5	5	200	1	66	1750000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	BROMOBENZENE	ug/l	18	50	-	62	2700	-	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA
8260B	BROMOCHLOROMETHANE	ug/l	-	-	-	-	-	-	<0.59	NA	<0.59	NA	<0.59	NA	<0.59	NA	<0.22	NA	<0.22	NA
8260B	BROMODICHLOROMETHANE	ug/l	80	80	-	1.2	73	6740000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	BROMOFORM	ug/l	80	80	-	89	6200	3100000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	BROMOMETHANE	ug/l	10	29	5	2.1	80	14500000	<5.0	<5.00 J3	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00
8260B	CARBON DISULFIDE	ug/l	800	2300	-	92	3100	1190000	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00
8260B	CARBON TETRACHLORIDE	ug/l	5	5	38	0.41	18	793000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	CHLOROBENZENE	ug/l	100	100	25	33	1400	472000	<1.0	<1.00	8.3	15.8	<1.0	0.362 J	<1.0	0.119 J	<1.0	<1.00	<1.0	0.84 J
8260B	CHLOROETHANE	ug/l	430	1700	1100	620	2200	5740000	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00
8260B	CHLOROFORM	ug/l	80	80	350	0.49	32	7920000	<1.0	<5.00	<1.0	<5.00	<1.0	0.479 J	<1.0	1.33 J	<1.0	<5.00	<1.0	<5.00
8260B	CHLOROMETHANE	ug/l	260	1100	-	15	560	6340000	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
8260B	CIS-1,2-DICHLOROETHENE	ug/l	70	70	620	3.4	14	3500000	<1.0	<1.00	<1.0	<1.00	<1.0	0.185 J	<1.0	<1.00	<1.0	<1.00	<1.0	0.186 J
8260B	CIS-1,3-DICHLOROPROPENE	ug/l	-	-	-	-	-	-	<100	<1.00	<100	<1.00	<100	<1.00	<100	<1.00	<100	<1.00	<100	<1.00
8260B	CYCLOHEXANE	ug/l	-	-	-	290	8100	-	<10.0	<1.00	<10.0	<1.00	<10.0	<1.00	<10.0	<1.00	<10.0	<1.00	<10.0	<1.00
8260B	DIBROMOCHLOROMETHANE	ug/l	80	80	-	0.78	130	2600000	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
8260B	DIBROMOMETHANE	ug/l	80	230	-	8.8	380	-	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
8260B	DICHLORODIFLUOROMETHANE	ug/l	1700	4800	-	13	410	300000	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
8260B	DIETHYL ETHER (ETHYL ETHER)	ug/l	10	10	-	1200	53000	61000000	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
8260B	DI-ISOPROPYL ETHER	ug/l	30	86	-	36	710	8040	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00
8260B	ETHANOL	ug/l	1900000	3800000	-	100000	230000000	1E+09	<1000	<100 J3	<1000	<100	<1000	<100	<1000	<100	<1000	<100	<1000	<100
8260B	ETHYL TERT-BUTYL ETHER	ug/l	49	49	-	22	580	5630000	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00
8260B	ETHYLBENZENE	ug/l	74	74	18	2.8	170	169000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	HEXACHLORO-1,3-BUTADIENE	ug/l	15	42	0.053	-	-	3230	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00
8260B	HEXACHLOROETHANE	ug/l	7.3	21	7	1.5	100	50000	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
8260B	IODOMETHANE	ug/l	-	-	-	-	-	-	<0.45	NA	<0.45	NA	<0.45	NA	<0.45	NA	<0.51	NA	<0.51	NA
8260B	ISOPROPYLBENZENE	ug/l	800	2300	28	0.6	36	56000	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00
8260B	METHYL TERT-BUTYL ETHER	ug/l	40	40	7100	250	17000	46800000	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00
8260B	METHYLENE CHLORIDE	ug/l	5	5	1500	79	12000	17000000	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00
8260B	NAPHTHALENE	ug/l	520	1500	11	4.2	300	31000	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00
8260B	N-BUTANOL	ug/l	950	2700	9800	98000	4300000	74000000	<800	NA	<800	NA	<800	NA	<800	NA	<800	NA	<800	NA

Table 2

Groundwater Analytical Results - April 2020 / December 2021 - January 2022

Former Hayes Lemmerz Site - Eastern Site Boundary

Sample ID			T1 Res DW Cleanup CSL	T1 NRes DW Cleanup CSL	T1 GW SW Interface SL	Res VIAP	NonRes VIAP	T1 W Solubility SL	MW-104	MW-104	MW-106	MW-106	MW-107	MW-107	MW-108	MW-108	MW-109	MW-109	MW-110	MW-110
Date Collected									4/8/2020	01/20/2022	4/8/2020	12/10/2021	4/8/2020	12/10/2021	4/8/2020	12/10/2021	4/8/2020	12/10/2021	4/9/2020	12/10/2021
Method	Analyte	Units																		
8260B	N-BUTYLBENZENE	ug/l	80	230	-	44	1600	-	<1.00	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00	NA
8260B	N-HEXANE	ug/l	3000	8600	-	29	1000	12000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8260B	N-PROPYLBENZENE	ug/l	80	230	-	43	6100	-	<100	NA	<100	NA	<100	NA	<100	NA	<100	NA	<100	NA
8260B	P-ISOPROPYLTOLUENE	ug/l	-	-	-	-	-	-	<0.28	NA	<0.28	NA	<0.28	NA	<0.28	NA	<0.11	NA	<0.11	NA
8260B	SEC-BUTYLBENZENE	ug/l	80	230	-	270	12000	-	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA
8260B	STYRENE	ug/l	100	100	80	33	2300	310000	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
8260B	T-AMYL ALCOHOL	ug/l	-	-	-	-	-	-	NA	<50.0	NA	<50.0	NA	<50.0	NA	<50.0	NA	<50.0	NA	<50.0
8260B	TERT-AMYL METHYL ETHER	ug/l	190	190	-	82	210	2640000	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00
8260B	TERT-BUTYL ALCOHOL	ug/l	3900	11000	-	17000	26000	1E+09	<50.0	<5.00	<50.0	<5.00	<50.0	<5.00	<50.0	<5.00	<50.0	<5.00	<50.0	<5.00
8260B	TERT-BUTYL FORMATE	ug/l	-	-	-	-	-	-	NA	<20.0	NA	<20.0	NA	<20.0	NA	<20.0	NA	<20.0	NA	<20.0
8260B	TERT-BUTYLBENZENE	ug/l	80	230	-	0.077	2.6	-	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA
8260B	TETRACHLOROETHENE	ug/l	5	5	60	1.5	130	200000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	TETRAHYDROFURAN	ug/l	95	270	11000	45000	200000	1E+09	<90.0	NA	<90.0	NA	<90.0	NA	<90.0	NA	<90.0	NA	<90.0	NA
8260B	TOLUENE	ug/l	790	790	270	300	5900	526000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	TRANS-1,2-DICHLOROETHENE	ug/l	100	100	1500	16	110	6300000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	TRANS-1,3-DICHLOROPROPENE	ug/l	-	-	-	-	-	-	<100	<1.00 J3 J4	<100	<1.00	<100	<1.00	<100	<1.00	<100	<1.00	<100	<1.00
8260B	TRANS-1,4-DICHLORO-2-BUTENE	ug/l	-	-	-	-	-	-	<0.82	NA	<0.82	NA	<0.82	NA	<0.82	NA	<0.40	NA	<0.40	NA
8260B	TRICHLOROETHENE	ug/l	5	5	200	0.073	10	1100000	<1.0	<1.00	<1.0	0.256 J	18.5	10.7	<1.0	0.558 J	<1.0	0.454 J	<1.0	<1.00
8260B	TRICHLOROFLUOROMETHANE	ug/l	2600	7300	-	22	560	1100000	2.3	NA	<1.0	NA	4.5	NA	1.5 J	NA	<1.0	NA	<1.0	NA
8260B	VINYL ACETATE	ug/l	640	1800	-	690	13000	20000000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8260B	VINYL CHLORIDE	ug/l	2	2	13	0.12	18	2760000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	1.59
8260B	XYLENES, TOTAL	ug/l	280	280	49	75	3000	186000	<1.00	<3.00	<1.00	<3.00	<1.00	<3.00	<1.00	<3.00	<1.00	<3.00	<1.00	<3.00
1,4-DIOXANE																				
8260B-SIM	1,4-DIOXANE	ug/l	7.2	350	280	1900	130000	900000000	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00
ALCOHOLS																				
8015M	METHANOL	ug/l	3700	10000	590000	120000	230000000	29000000	<400	104000	<400	<50000	<400	<50000	<400	<50000	<400	<50000	<400	<50000
8015M	ETHANOL	ug/l	1900000	3800000	-	100000	230000000	1E+09	<1000	<10000	<1000	<50000	<1000	<50000	<1000	<50000	<1000	<50000	<1000	<50000
SEMI-VOLATILE ORGANIC COMPOUNDS																				
8270C	ACENAPHTHENE	ug/l	1300	3800	38	4200	4200	4240	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00
8270C	ACENAPHTHYLENE	ug/l	52	150	-	3900	3900	3930	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00
8270C	ANTHRACENE	ug/l	43	43	-	43	43	43.4	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00
8270C	BENZIDINE	ug/l	0.3	0.3	0.3	-	-	520000	NA	<10.0 J4	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	BENZO(A)ANTHRACENE	ug/l	2.1	8.5	-	-	-	9.4	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8270C	BENZO(B)FLUORANTHENE	ug/l	1.5	1.5	-	-	-	1.5	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8270C	BENZO(K)FLUORANTHENE	ug/l	1	1	-	-	-	0.8	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8270C	BENZO(G,H,I)PERYLENE	ug/l	1	1	-	-	-	0.26	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8270C	BENZO(A)PYRENE	ug/l	5	5	-	-	-	1.62	<0.20	<1.00	<0.20	<1.00	<0.20	<1.00	<0.20	<1.00	<0.20	<1.00	<0.20	<1.00
8270C	BIS(2-CHLORETHOXY)METHANE	ug/l	-	-	-	-	-	-	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	BIS(2-CHLOROETHYL)ETHER	ug/l	2	8.3	1	38000	210000	17200000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	2,2-OXYBIS(1-CHLOROPROPANE)	ug/l	-	-	-	-	-	-	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	4-BROMOPHENYL-PHENYLETHER	ug/l	-	-	-	-	-	-	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	2-CHLORONAPHTHALENE	ug/l	1800	5200	-	-	-	6740	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00
8270C	4-CHLOROPHENYL-PHENYLETHER	ug/l	-	-	-	-	-	-	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	CHRYSENE	ug/l	1.6	1.6	-	-	-	1.6	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8270C	DIBENZ(A,H)ANTHRACENE	ug/l	2	2	-	-	-	2.49	<2.0	<1.00	<2.0	<1.00	<2.0	<1.00	<2.0	<1.00	<2.0	<1.00	<2.0	<1.00
8270C	1,2-DICHLOROBENZENE	ug/l	600	600	13	370	950	156000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	3.42 J	NA	<10.0
8270C	1,3-DICHLOROBENZENE	ug/l	6.6	19	28	2.6	7.9	111000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	1,4-DICHLOROBENZENE	ug/l	75	75	17	5.9	28	73800	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	1.01 J	NA	<10.0
8270C	3,3-DICHLOROBENZIDINE	ug/l	1.1	4.3	0.3	-	-	3110	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	2,4-DINITROTOLUENE	ug/l	7.7	32	-	-	-	270000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	2,6-DINITROTOLUENE	ug/l	-	-	-	-	-	-	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	FLUORANTHENE	ug/l	210	210	1.6	210	210	206	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8270C	FLUORENE	ug/l	880	2000	12	2000	2000	1980	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00
8270C	HEXACHLOROBENZENE	ug/l	1	1	0.2	440	3000	6200	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00
8270C	HEXACHLORO-1,3-BUTADIENE	ug/l	15	42	0.053	1600	3200	3230	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	HEXACHLOROCYCLOPENTADIENE	ug/l	50	50		130	420	1800	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	HEXACHLOROETHANE	ug/l	7.3	21	6.7	27000	50000	50000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	INDENO(1,2,3-CD)PYRENE	ug/l	2	2	-	-	-	0.022	<2.0	<1.00	<2.0	<1.00	<2.0	<1.00	<2.0	<1.00	<2.0	<1.00	<2.0	<1.00
8270C	ISOPHORONE	ug/l	770	3100	1300	-	-	12000000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	NAPHTHALENE	ug/l	520	1500	11	31000	31000	31000	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00

Table 2

Groundwater Analytical Results - April 2020 / December 2021 - January 2022

Former Hayes Lemmerz Site - Eastern Site Boundary

Sample ID			T1 Res DW Cleanup CSL	T1 NRes DW Cleanup CSL	T1 GW SW Interface SL	Res VIAP	NonRes VIAP	T1 W Solubility SL	MW-104	MW-104	MW-106	MW-106	MW-107	MW-107	MW-108	MW-108	MW-109	MW-109	MW-110	MW-110
Date Collected									4/8/2020	01/20/2022	4/8/2020	12/10/2021	4/8/2020	12/10/2021	4/8/2020	12/10/2021	4/8/2020	12/10/2021	4/9/2020	12/10/2021
Method	Analyte	Units																		
8270C	NITROBENZENE	ug/l	3.4	9.6	180	280000	550000	2090000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	N-NITROSODIMETHYLAMINE	ug/l	-	-	-	-	-	-	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	N-NITROSODIPHENYLAMINE	ug/l	270	1100	-	-	-	35100	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	N-NITROSODI-N-PROPYLAMINE	ug/l	5	5	-	-	-	9890000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	PHENANTHRENE	ug/l	52	150	2	1000	1000	1000	<2.0	<1.00	<2.0	<1.00	<2.0	<1.00	<2.0	<1.00	<2.0	<1.00	<2.0	<1.00
8270C	BENZYLBUTYL PHTHALATE	ug/l	1200	2700	67	-	-	2690	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00
8270C	BIS(2-ETHYLHEXYL)PHTHALATE	ug/l	6	6	14	-	-	340	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00
8270C	DI-N-BUTYL PHTHALATE	ug/l	880	2500	9.7	-	-	11200	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00
8270C	DIETHYL PHTHALATE	ug/l	5500	16000	110	-	-	1080000	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00
8270C	DIMETHYL PHTHALATE	ug/l	73000	210000	-	-	-	4190000	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00
8270C	DI-N-OCTYL PHTHALATE	ug/l	130	380	-	22	22	3000	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00
8270C	PYRENE	ug/l	140	140	-	140	140	135	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00
8270C	1,2,4-TRICHLOROBENZENE	ug/l	70	70	99	300000	300000	300000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	4-CHLORO-3-METHYLPHENOL	ug/l	150	420	7.4	-	-	3900000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	2-CHLOROPHENOL	ug/l	45	130	18	490000	1100000	22000000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	2,4-DICHLOROPHENOL	ug/l	73	210	11	-	-	4500000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	2,4-DIMETHYLPHENOL	ug/l	370	1000	380	-	-	7870000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	4,6-DINITRO-2-METHYLPHENOL	ug/l	20	20	-	-	-	200000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	2,4-DINITROPHENOL	ug/l	-	-	-	-	-		NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	2-NITROPHENOL	ug/l	20	58	-	-	-	2500000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	4-NITROPHENOL	ug/l	-	-	-	-	-	-	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	PENTACHLOROPHENOL	ug/l	1	1	-	-	-	1850000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	PHENOL	ug/l	4400	13000	450	-	-	82800000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	2,4,6-TRICHLOROPHENOL	ug/l	120	470	5	-	-	800000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C-SIM	ANTHRACENE	ug/l	43	43	-	43	43	43.4	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500
8270C-SIM	ACENAPHTHENE	ug/l	1300	3800	38	4200	4200	4240	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500
8270C-SIM	ACENAPHTHYLENE	ug/l	52	150	-	3900	3900	3930	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500
8270C-SIM	BENZO(A)ANTHRACENE	ug/l	2.1	8.5	-	-	-	9.4	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500
8270C-SIM	BENZO(A)PYRENE	ug/l	5	5	-	-	-	1.62	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500
8270C-SIM	BENZO(B)FLUORANTHENE	ug/l	1.5	1.5	-	-	-	1.5	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500
8270C-SIM	BENZO(G,H,I)PERYLENE	ug/l	1	1	-	-	-	0.26	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500
8270C-SIM	BENZO(K)FLUORANTHENE	ug/l	1	1	-	-	-	0.8	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500
8270C-SIM	CHRYSENE	ug/l	1.6	1.6	-	-	-	1.6	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500
8270C-SIM	DIBENZ(A,H)ANTHRACENE	ug/l	2	2	-	-	-	2.49	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500
8270C-SIM	FLUORANTHENE	ug/l	210	210	1.6	210	210	206	NA	<0.100	NA	<0.100	NA	<0.100	NA	<0.100	NA	<0.100	NA	<0.100
8270C-SIM	FLUORENE	ug/l	880	2000	12	2000	2000	1980	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500
8270C-SIM	INDENO(1,2,3-CD)PYRENE	ug/l	2	2	-	-	-	0.022	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500
8270C-SIM	NAPHTHALENE	ug/l	520	1500	11	31000	31000	31000	NA	<0.250	NA	<0.250	NA	<0.250	NA	<0.250	NA	<0.250	NA	<0.250
8270C-SIM	PHENANTHRENE	ug/l	52	150	2	1000	1000	1000	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500
8270C-SIM	PYRENE	ug/l	140	140	-	140	140	135	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	0.633
8270C-SIM	1-METHYLNAPHTHALENE	ug/l	-	-	-	-	-	-	NA	<0.250	NA	<0.250	NA	<0.250	NA	<0.250	NA	<0.250	NA	<0.250
8270C-SIM	2-METHYLNAPHTHALENE	ug/l	260	750	19	25000	25000	24600	NA	<0.250	NA	<0.250	NA	<0.250	NA	<0.250	NA	<0.250	NA	<0.250
8270C-SIM	2-CHLORONAPHTHALENE	ug/l	1800	5200	-	-	-	6740	NA	<0.250	NA	<0.250	NA	<0.250	NA	<0.250	NA	<0.250	NA	<0.250
TETRAETHYL LEAD																				
8270C-SIM	TETRAETHYLLEAD	ug/l	-	-	-	-	-	-	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500

Qualifiers:

B: The same analyte is found in the associated blank.
J: The identification of the analyte is acceptable; the reported value is an estimate.
J1: Surrogate recovery limits have been exceeded; values are outside upper control limits.
J3: The associated batch QC was outside the established quality control range for precision.
J4: The associated batch QC was outside the established quality control range for accuracy

Notes:

NA = Not analyzed.
- = No criteria developed for analyte.
SIM - Selective Ion Monitoring
Detected constituents are shaded grey
Results exceeding the respective Risk Based Screening Level (RBSL) criteria are shaded corresponding to the color of each criteria.
Well MW-105 was not sampled in December 2021 as the well was dry.

Table 2

Groundwater Analytical Results - April 2020 / December 2021 - January 2022

Former Hayes Lemmerz Site - Eastern Site Boundary

Sample ID			T1 Res DW Cleanup CSL	T1 NRes DW Cleanup CSL	T1 GW SW Interface SL	Res VIAP	NonRes VIAP	T1 W Solubility SL	MW-111	MW-111	MW-112	MW-112	MW-113	MW-113	MW-119	MW-119	MW-120	MW-120	MW-121	MW-121
Date Collected									4/9/2020	12/10/2021	4/9/2020	12/10/2021	4/9/2020	12/10/2021	4/23/2020	12/10/2021	4/23/2020	01/20/2022	4/23/2020	12/10/2021
Method	Analyte	Units																		
METALS, DISSOLVED																				
6020	ALUMINUM	ug/l	50	50	-	-	-	-	NA	<100	NA	26.5 J	NA	<100	NA	<100	NA	33.6 J	NA	342
6020	ANTIMONY	ug/l	6	6	130	-	-	-	NA	<4.00	NA	<4.00	NA	<4.00	NA	<4.00	NA	<4.00	NA	<4.00
6010B	ARSENIC	ug/l	10	10	10	-	-	-	<5.0	<10.0	<5.0	<10.0	<5.0	<10.0	<5.0	<10.0	<5.0	<10.0	<5.0	<10.0
6010B	BARIUM	ug/l	2000	2000	-	-	-	-	<100	11.8 B	<100	26.6	<100	22.3	<100	19.1	<100	34.5	<100	42.7
6020	BERYLLIUM	ug/l	4	4	-	-	-	-	NA	<2.00	NA	<2.00	NA	<2.00	NA	<2.00	NA	0.777 J	NA	<2.00
6010B	BORON	ug/l	500	500	7200	-	-	-	NA	91.3 J	NA	338	NA	131 J	NA	99.4 J	NA	277	NA	266
6020	CADMIUM	ug/l	5	5	-	-	-	-	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
6010B	CALCIUM	ug/l	-	-	-	-	-	-	NA	74900	NA	156000	NA	130000	NA	59800	NA	186000	NA	114000
6010B	CHROMIUM	ug/l	100	100	-	-	-	-	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	2.84 B J	<10.0	<10.0	<10.0	2.6 B J
6010B	COBALT	ug/l	40	100	100	-	-	-	NA	<10.0	NA	0.859 J	NA	<10.0	NA	<10.0	NA	0.869 J	NA	<10.0
4500CN	CYANIDE	ug/l	200	200	5.2	-	-	-	NA	<5.00	NA	<5.00	NA	<5.00	NA	<5.00	NA	<5.00 J3 J6	NA	<5.00
6010B	IRON	ug/l	300	300	-	-	-	-	NA	<100	NA	<100	NA	<100	NA	<100	NA	58 J	NA	19.9 B J
6020	LEAD	ug/l	4	4	-	-	-	-	<3.0	<2.00	<3.0	<2.00	<3.0	<2.00	<3.0	<2.00	<3.0	<2.00	<3.0	<2.00
6010B	MAGNESIUM	ug/l	400000	1100000	-	-	-	-	NA	12400	NA	42400	NA	22500	NA	20500	NA	39100	NA	19500
6010B	MANGANESE	ug/l	50	50	-	-	-	-	NA	135	NA	112	NA	14.9 B	NA	<10.0	NA	6.16 J	NA	0.964 J
7470A	MERCURY	ug/l	2	2	0.0013	0.088	3.7	-	<0.079	<0.200	<0.079	<0.200	<0.079	<0.200	<5.0	<0.200	<5.0	<0.200	<5.0	<0.200
6010B	MOLYBDENUM	ug/l	73	210	3200	-	-	-	NA	1.6 J	NA	7.82	NA	3.65 J	NA	4.44 J	NA	10.9	NA	7.45
6010B	NICKEL	ug/l	100	100	-	-	-	-	NA	<10.0	NA	<10.0	NA	<10.0	NA	1.92 J	NA	1.61 J	NA	3.17 J
6010B	POTASSIUM	ug/l	-	-	-	-	-	-	NA	1410 J	NA	664 J	NA	3140	NA	3090	NA	1010 J	NA	8500
6020	SELENIUM	ug/l	50	50	5	-	-	-	<5.0	<2.00	<5.0	0.419 J	<5.0	3.88	<0.20	5.09	<0.20	5.42	<0.20	0.351 J
6020	SILVER	ug/l	34	98	0.2	-	-	-	<0.20	<2.00	<0.20	<2.00	<0.20	<2.00	<0.079	<2.00	<0.079	<2.00	<0.079	<2.00
6010B	SODIUM	ug/l	230000	350000	-	-	-	-	NA	20500	NA	21700	NA	8110	NA	3840	NA	10400	NA	38700
6010B	STRONTIUM	ug/l	4600	13000	21000	-	-	-	NA	301	NA	532	NA	624	NA	867	NA	1460	NA	320
6020	THALLIUM	ug/l	2	2	3.7	-	-	-	NA	<2.00	NA	<2.00	NA	<2.00	NA	<2.00	NA	0.213 J	NA	<2.00
6020	TITANIUM	ug/l	-	-	-	-	-	-	NA	<20.0	NA	<20.0	NA	<20.0	NA	<20.0	NA	<20.0	NA	<20.0
6020	VANADIUM	ug/l	4.5	62	27	-	-	-	NA	<5.00	NA	0.936 J	NA	0.688 J	NA	<5.00	NA	2.88 J	NA	<5.00
6010B	ZINC	ug/l	2400	5000	-	-	-	-	NA	7.02 J	NA	14.3 J	NA	6.93 J	NA	<50.0	NA	<50.0	NA	7.12 J
PFAS																				
8327	Perfluorooctanesulfonic acid (PFOS)	ng/l	16	16	12	-	-	3,100	<0.38	<3.6	7.7	7.8	<0.38	<3.5	<0.39	<3.5	<0.40	<3.4	<0.39	3.6
8327	Perfluorohexanesulfonic acid (PFHxS)	ng/l	51	51	-	-	-	-	<0.37	1.8J	3.9	4.2	<0.37	2.4J	<0.37	<3.5	<0.38	1.7J	5.9	7.4
8327	Perfluoro-n-undecanoic acid (PFUdA)	ng/l	-	-	-	-	-	-	NA	<3.6	NA	<3.6	NA	<3.5	NA	<3.5	NA	<3.4	NA	<3.4
8327	Perfluoro-n-tridecanoic acid (PFTrDA)	ng/l	-	-	-	-	-	-	<0.44	<3.6	<0.44	<3.6	<0.44	<3.5	<0.44	<3.5	<0.45	<3.4	<0.44	<3.4
8327	Perfluoro-n-tetradecanoic acid (PFTeDA)	ng/l	-	-	-	-	-	-	<0.39	<3.6	<0.40	<3.6	<0.39	<3.5	<0.40	<3.5	<0.41	<3.4	<0.40	<3.4
8327	Perfluoro-n-pentanoic acid (PFPeA)	ng/l	-	-	-	-	-	-	<0.26	1.4J	2.7	3.5J	<0.26	<3.5	<0.26	<3.5	<0.27	<3.4	18	12
8327	Perfluoro-n-octanoic acid (PFOA)	ng/l	8	8	12,000	-	-	9.50E+09	4.9	8.7	42	69	<0.42	<3.5	<0.42	<3.5	6.4	18	32	37
8327	Perfluoro-n-nonanoic acid (PFNA)	ng/l	6	6	-	-	-	-	<0.57	<3.6	<0.58	<3.6	<0.57	<3.5	<0.57	<3.5	<0.59	<3.4	<0.58	2.7J
8327	Perfluoro-n-hexanoic acid (PFHxA)	ng/l	400,000	400,000	-	-	-	-	<0.36	1.9J	3.8	4.8	<0.36	<0.36	<0.36	<3.5	<0.37	1.2J	22	16
8327	Perfluoro-n-heptanoic acid (PFHpA)	ng/l	-	-	-	-	-	-	<0.44	1.5J	2.8	3.3J	<0.44	<3.5	<0.44	<3.5	<0.45	0.83J	12	13
8327	Perfluoro-n-dodecanoic acid (PFDoA)	ng/l	-	-	-	-	-	-	<0.39	<3.6	<0.40	<3.6	<0.39	<3.5	<0.40	<3.5	<0.41	<3.4	<0.40	<3.4
8327	Perfluoro-n-decanoic acid (PFDA)	ng/l	-	-	-	-	-	-	<0.66	<3.6	<0.67	<3.6	<0.66	<3.5	<0.66	<3.5	<0.68	<3.4	<0.67	<3.4
8327	Perfluoroundecanoic acid (PFUnA)	ng/l	-	-	-	-	-	-	<0.54	NA	<0.55	NA	<0.54	NA	<0.54	NA	<0.56	NA	<0.55	NA
8327	Perfluoro-n-butanoic acid (PFBA)	ng/l	-	-	-	-	-	-	3	3.1J	19	20	<0.30	1.1J	<0.30	<3.5	7.2	8.5	12	7.1
8327	Perfluoro-1-pentanesulfonic acid (PFPeS)	ng/l	-	-	-	-	-	-	<0.36	<3.6	<0.36	1.6J	<0.36	<0.36	<0.36	<3.5	<0.37	<0.37	<0.37	1.2J
8327	Perfluoro-1-octanesulfonamide (PFOSA)	ng/l	-	-	-	-	-	-	<0.23	<3.6	<0.24	<3.6	<0.23	<0.23	<0.23	<3.5	<0.24	<0.24	<0.24	<3.4
8327	Perfluoro-1-nonanesulfonic acid (PFNS)	ng/l	-	-	-	-	-	-	<0.45	<3.6	<0.46	<3.6	<0.45	<3.5	<0.45	<3.5	<0.47	<3.4	<0.46	<3.4
8327	Perfluoro-1-heptanesulfonic acid (PFHpS)	ng/l	-	-	-	-	-	-	<0.45	<3.6	<0.46	<3.6	<0.45	<3.5	<0.45	<3.5	<0.47	<3.4	<0.46	<3.4
8327	Perfluoro-1-decanesulfonic acid (PFDS)	ng/l	-	-	-	-	-	-	<0.32	<3.6	<0.32	<3.6	<0.32	<0.32	<0.32	<3.5	<0.33	<3.4	<0.33	<3.4
8327	Perfluoro-1-butanesulfonic acid (PFBS)	ng/l	420	420	-	-	-	-	3.5	2.7J	7.0	8.6	<0.20	0.75J	<0.20	<3.5	3.1	1.9J	3.9	3.7
8327	N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	ng/l	-	-	-	-	-	-	<0.43	<7.1	<0.44	<7.3	<0.43	<7.0	<0.44	<7.0	<0.45	<6.8	<0.44	<6.8
8327	N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	ng/l	-	-	-	-	-	-	<0.90	<7.1	<0.92	<7.3	<0.90	<7.0	<0.91	<7.0	<0.94	<6.8	<0.92	<6.8
8327	Hexafluoropropylene oxide dimer acid (GenX)	ng/l	370	370	-	-	-	-	NA	<7.1	NA	<7.3	NA	<7.0	NA	<7.0	NA	<6.8	NA	<6.8
8327	9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	ng/l	-	-	-	-	-	-	NA	<7.1	NA	<7.3	NA	<7.0	NA	<7.0	NA	<6.8	NA	<6.8
8327	4,8-dioxa-3H-perfluorononanoic acid (ADONA)	ng/l	-	-	-	-	-	-	NA	<7.1	NA	<7.3	NA	<7.0	NA	<7.0	NA	<6.8	NA	<6.8
8327	1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	ng/l	-	-	-	-	-	-	<0.57	<7.1	<0.58	<7.3	<0.57	<7.0	<0.57	<7.0	<0.59	<6.8	<0.58	<6.8
8327	1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	ng/l	-	-	-	-	-	-	<0.92	<7.1	5.5	<7.3	<0.92	<7.0	<0.92	<7.0	<0.95	<6.8	3.3	<6.8
8327	1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	ng/l	-	-	-	-	-	-	<0.75	<7.1	<0.76	<7.3	<0.75	<7.0	<0.75	<7.0	<0.78	<6.8	<0.77	<6.8
8327	11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS	ng/l	-	-	-	-	-	-	NA	<7.1	NA	<7.3	NA	<7.0	NA	<7.0	NA	<6.8	NA	<6.8

Table 2

Groundwater Analytical Results - April 2020 / December 2021 - January 2022

Former Hayes Lemmerz Site - Eastern Site Boundary

Sample ID			T1 Res DW Cleanup CSL	T1 NRes DW Cleanup CSL	T1 GW SW Interface SL	Res VIAP	NonRes VIAP	T1 W Solubility SL	MW-111	MW-111	MW-112	MW-112	MW-113	MW-113	MW-119	MW-119	MW-120	MW-120	MW-121	MW-121
Date Collected									4/9/2020	12/10/2021	4/9/2020	12/10/2021	4/9/2020	12/10/2021	4/23/2020	12/10/2021	4/23/2020	01/20/2022	4/23/2020	12/10/2021
Method	Analyte	Units																		
VOLATILE ORGANIC COMPOUNDS																				
8260B	1,1,1,2-TETRACHLOROETHANE	ug/l	77	320	-	3.1	210	1100000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	1,1,1-TRICHLOROETHANE	ug/l	200	200	89	180	19000	1330000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	0.416 J
8260B	1,1,2,2-TETRACHLOROETHANE	ug/l	8.5	35	78	2.4	170	2970000	<1.0	0.373 J	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	1,1,2-TRICHLOROETHANE	ug/l	5	5	330	0.47	20	4420000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	1,1-DICHLOROETHANE	ug/l	880	2500	740	4.7	40	5060000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	1,1-DICHLOROETHENE	ug/l	7	7	130	18	250	2250000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	1,2,3-TRICHLOROBENZENE	ug/l	-	-	-	58	2600	-	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00
8260B	1,2,3-TRICHLOROPROPANE	ug/l	42	120	-	1.9	84	-	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA
8260B	1,2,3-TRIMETHYLBENZENE	ug/l	-	-	-	43	1800	-	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
8260B	1,2,4-TRICHLOROBENZENE	ug/l	70	70	99	3.8	160	300000	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00
8260B	1,2,4-TRIMETHYLBENZENE	ug/l	63	63	17	25	990	55900	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00 J4	<1.0	<1.00
8260B	1,2-DIBROMO-3-CHLOROPROPANE	ug/l	-	-	-	-	-	-	<0.25	NA	<0.25	NA	<0.25	NA	<0.25	NA	<0.25	NA	<0.25	NA
8260B	1,2-DIBROMOETHANE (EDB)	ug/l	600	600	13	0.13	8.9	156000	<0.23	NA	<0.23	NA	<0.23	NA	<0.23	NA	<0.23	NA	<0.23	NA
8260B	1,2-DICHLOROBENZENE	ug/l	600	600	13	370	950	156000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00 J3	<1.0	<1.00
8260B	1,2-DICHLOROETHANE	ug/l	5	5	360	1.4	5.1	8520000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	1,2-DICHLOROPROPANE	ug/l	5	5	230	2.6	8.9	2800000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	1,3,5-TRIMETHYLBENZENE	ug/l	72	72	45	18	690	61200	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	1,3-DICHLOROBENZENE	ug/l	6.6	19	28	2.6	7.9	111000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	1,3-DICHLOROPROPANE	ug/l	-	-	-	3.3	20	-	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00
8260B	1,4-DICHLOROBENZENE	ug/l	75	75	17	5.9	28	73800	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	1-METHYLNAPHTHALENE	ug/l	-	-	-	-	-	-	NA	<10.0 J4	NA	<10.0 J4	NA	<10.0 J4	NA	<10.0 J4	NA	<10.0	NA	<10.0 J4
8260B	2-BUTANONE (MEK)	ug/l	13000	38000	2200	2600	4300000	240000000	<25.0	<10.0	<25.0	<10.0	<25.0	<10.0	<25.0	<10.0	<25.0	<10.0	<25.0	<10.0
8260B	2-HEXANONE	ug/l	1000	2900	-	660	29000	16000000	<50.0	NA	<50.0	NA	<50.0	NA	<50.0	NA	<50.0	NA	<50.0	NA
8260B	2-METHYLNAPHTHALENE	ug/l	260	750	19	66	2900	24600	<5.0	<10.0 J4	<5.0	<10.0 J4	<5.0	<10.0 J4	<5.0	<10.0 J4	<5.0	<10.0	<5.0	<10.0 J4
8260B	3,3-DIMETHYL-1-BUTANOL	ug/l	-	-	-	-	-	-	NA	<100	NA	<100	NA	<100	NA	<100	NA	<100	NA	<100
8260B	4-METHYL-2-PENTANONE (MIBK)	ug/l	1800	5200	-	200	330000	20000000	<50.0	<10.0	<50.0	<10.0	<50.0	<10.0	<50.0	<10.0	<50.0	<10.0	<50.0	<10.0
8260B	ACETONE	ug/l	730	2100	1700	50000	40000000	1E+09	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0
8260B	ACRYLONITRILE	ug/l	2.6	11	2.0; 1.2	4.6	330	75000000	<2.0	NA	<2.0	NA	<2.0	NA	<2.0	NA	<2.0	NA	<2.0	NA
8260B	BENZENE	ug/l	5	5	200	1	66	1750000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	BROMOBENZENE	ug/l	18	50	-	62	2700	-	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA
8260B	BROMOCHLOROMETHANE	ug/l	-	-	-	-	-	-	<0.22	NA	<0.22	NA	<0.22	NA	<0.59	NA	<0.59	NA	<0.59	NA
8260B	BROMODICHLOROMETHANE	ug/l	80	80	-	1.2	73	6740000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	BROMOFORM	ug/l	80	80	-	89	6200	3100000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	BROMOMETHANE	ug/l	10	29	5	2.1	80	14500000	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00 J3	<5.0	<5.00
8260B	CARBON DISULFIDE	ug/l	800	2300	-	92	3100	1190000	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00
8260B	CARBON TETRACHLORIDE	ug/l	5	5	38	0.41	18	793000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	CHLOROBENZENE	ug/l	100	100	25	33	1400	472000	<1.0	0.178 J	<1.0	0.146 J	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	CHLOROETHANE	ug/l	430	1700	1100	620	2200	5740000	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00
8260B	CHLOROFORM	ug/l	80	80	350	0.49	32	7920000	<1.0	<5.00	<1.0	<5.00	<1.0	<5.00	<1.0	<5.00	<1.0	<5.00	<1.0	0.177 J
8260B	CHLOROMETHANE	ug/l	260	1100	-	15	560	6340000	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
8260B	CIS-1,2-DICHLOROETHENE	ug/l	70	70	620	3.4	14	3500000	<1.0	0.892 J	<1.0	0.273 J	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	CIS-1,3-DICHLOROPROPENE	ug/l	-	-	-	-	-	-	<100	<1.00	<100	<1.00	<100	<1.00	<100	<1.00	<100	<1.00	<100	<1.00
8260B	CYCLOHEXANE	ug/l	-	-	-	290	8100	-	<10.0	<1.00	<10.0	<1.00	<10.0	<1.00	<10.0	<1.00	<10.0	<1.00	<10.0	<1.00
8260B	DIBROMOCHLOROMETHANE	ug/l	80	80	-	0.78	130	2600000	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
8260B	DIBROMOMETHANE	ug/l	80	230	-	8.8	380	-	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
8260B	DICHLORODIFLUOROMETHANE	ug/l	1700	4800	-	13	410	300000	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
8260B	DIETHYL ETHER (ETHYL ETHER)	ug/l	10	10	-	1200	53000	61000000	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
8260B	DI-ISOPROPYL ETHER	ug/l	30	86	-	36	710	8040	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00
8260B	ETHANOL	ug/l	1900000	3800000	-	100000	230000000	1E+09	<1000	<100	<1000	<100	<1000	<100	<1000	<100	<1000	<100 J3	<1000	<100
8260B	ETHYL TERT-BUTYL ETHER	ug/l	49	49	-	22	580	5630000	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00
8260B	ETHYLBENZENE	ug/l	74	74	18	2.8	170	169000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	HEXACHLORO-1,3-BUTADIENE	ug/l	15	42	0.053	-	-	3230	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00
8260B	HEXACHLOROETHANE	ug/l	7.3	21	7	1.5	100	50000	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA	<5.0	NA
8260B	IODOMETHANE	ug/l	-	-	-	-	-	-	<0.51	NA	<0.51	NA	<0.51	NA	<0.45	NA	<0.45	NA	<0.45	NA
8260B	ISOPROPYLBENZENE	ug/l	800	2300	28	0.6	36	56000	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00
8260B	METHYL TERT-BUTYL ETHER	ug/l	40	40	7100	250	17000	46800000	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00
8260B	METHYLENE CHLORIDE	ug/l	5	5	1500	79	12000	17000000	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00
8260B	NAPHTHALENE	ug/l	520	1500	11	4.2	300	31000	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00	<5.0	<5.00
8260B	N-BUTANOL	ug/l	950	2700	9800	98000	4300000	74000000	<800	NA	<800	NA	<800	NA	<800	NA	<800	NA	<800	NA

Table 2

Groundwater Analytical Results - April 2020 / December 2021 - January 2022

Former Hayes Lemmerz Site - Eastern Site Boundary

Sample ID			T1 Res DW Cleanup CSL	T1 NRes DW Cleanup CSL	T1 GW SW Interface SL	Res VIAP	NonRes VIAP	T1 W Solubility SL	MW-111	MW-111	MW-112	MW-112	MW-113	MW-113	MW-119	MW-119	MW-120	MW-120	MW-121	MW-121
Date Collected									4/9/2020	12/10/2021	4/9/2020	12/10/2021	4/9/2020	12/10/2021	4/23/2020	12/10/2021	4/23/2020	01/20/2022	4/23/2020	12/10/2021
Method	Analyte	Units																		
8260B	N-BUTYLBENZENE	ug/l	80	230	-	44	1600	-	<1.00	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00	NA
8260B	N-HEXANE	ug/l	3000	8600	-	29	1000	12000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8260B	N-PROPYLBENZENE	ug/l	80	230	-	43	6100	-	<100	NA	<100	NA	<100	NA	<100	NA	<100	NA	<100	NA
8260B	P-ISOPROPYLTOLUENE	ug/l	-	-	-	-	-	-	<0.11	NA	<0.11	NA	<0.11	NA	<0.28	NA	<0.28	NA	<0.28	NA
8260B	SEC-BUTYLBENZENE	ug/l	80	230	-	270	12000	-	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA
8260B	STYRENE	ug/l	100	100	80	33	2300	310000	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
8260B	T-AMYL ALCOHOL	ug/l	-	-	-	-	-	-	NA	<50.0	NA	<50.0	NA	<50.0	NA	<50.0	NA	<50.0	NA	<50.0
8260B	TERT-AMYL METHYL ETHER	ug/l	190	190	-	82	210	2640000	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00
8260B	TERT-BUTYL ALCOHOL	ug/l	3900	11000	-	17000	26000	1E+09	<50.0	<5.00	<50.0	<5.00	<50.0	<5.00	<50.0	<5.00	<50.0	<5.00	<50.0	<5.00
8260B	TERT-BUTYL FORMATE	ug/l	-	-	-	-	-	-	NA	<20.0	NA	<20.0	NA	<20.0	NA	<20.0	NA	<20.0	NA	<20.0
8260B	TERT-BUTYLBENZENE	ug/l	80	230	-	0.077	2.6	-	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA
8260B	TETRACHLOROETHENE	ug/l	5	5	60	1.5	130	200000	<1.0	0.398 J	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	TETRAHYDROFURAN	ug/l	95	270	11000	45000	200000	1E+09	<90.0	NA	<90.0	NA	<90.0	NA	<90.0	NA	<90.0	NA	<90.0	NA
8260B	TOLUENE	ug/l	790	790	270	300	5900	526000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	TRANS-1,2-DICHLOROETHENE	ug/l	100	100	1500	16	110	6300000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	TRANS-1,3-DICHLOROPROPENE	ug/l	-	-	-	-	-	-	<100	<1.00	<100	<1.00	<100	<1.00	<100	<1.00	<100	<1.00 J3 J4	<100	<1.00
8260B	TRANS-1,4-DICHLORO-2-BUTENE	ug/l	-	-	-	-	-	-	<0.40	NA	<0.40	NA	<0.40	NA	<0.82	NA	<0.82	NA	<0.82	NA
8260B	TRICHLOROETHENE	ug/l	5	5	200	0.073	10	1100000	2.7	1.52	<1.0	<1.00	<1.0	<1.00	<1.0	0.259 J	<1.0	<1.00	<1.0	0.97 J
8260B	TRICHLOROFLUOROMETHANE	ug/l	2600	7300	-	22	560	1100000	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA	<1.0	NA
8260B	VINYL ACETATE	ug/l	640	1800	-	690	13000	20000000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8260B	VINYL CHLORIDE	ug/l	2	2	13	0.12	18	2760000	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8260B	XYLENES, TOTAL	ug/l	280	280	49	75	3000	186000	<1.00	<3.00	<1.00	<3.00	<1.00	<3.00	<1.00	<3.00	<1.00	<3.00	<1.00	<3.00
1,4-DIOXANE																				
8260B-SIM	1,4-DIOXANE	ug/l	7.2	350	280	1900	130000	900000000	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00
ALCOHOLS																				
8015M	METHANOL	ug/l	3700	10000	590000	120000	230000000	29000000	<400	<50000	<400	<50000	<400	<50000	1470 J	<50000	1350 J	<10000	1540 J	<50000
8015M	ETHANOL	ug/l	1900000	3800000	-	100000	230000000	1E+09	<1000	<50000	<1000	<50000	<1000	<50000	<1000	<50000	<1000	<10000	<1000	<50000
SEMI-VOLATILE ORGANIC COMPOUNDS																				
8270C	ACENAPHTHENE	ug/l	1300	3800	38	4200	4200	4240	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00
8270C	ACENAPHTHYLENE	ug/l	52	150	-	3900	3900	3930	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00
8270C	ANTHRACENE	ug/l	43	43	-	43	43	43.4	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00
8270C	BENZIDINE	ug/l	0.3	0.3	0.3	-	-	520000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0 J4	NA	<10.0
8270C	BENZO(A)ANTHRACENE	ug/l	2.1	8.5	-	-	-	9.4	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8270C	BENZO(B)FLUORANTHENE	ug/l	1.5	1.5	-	-	-	1.5	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8270C	BENZO(K)FLUORANTHENE	ug/l	1	1	-	-	-	0.8	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8270C	BENZO(G,H,I)PERYLENE	ug/l	1	1	-	-	-	0.26	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8270C	BENZO(A)PYRENE	ug/l	5	5	-	-	-	1.62	<0.20	<1.00	<0.20	<1.00	<0.20	<1.00	<0.20	<1.00	<0.20	<1.00	<0.20	<1.00
8270C	BIS(2-CHLORETHOXY)METHANE	ug/l	-	-	-	-	-	-	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	BIS(2-CHLOROETHYL)ETHER	ug/l	2	8.3	1	38000	210000	17200000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	2,2-OXYBIS(1-CHLOROPROPANE)	ug/l	-	-	-	-	-	-	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	4-BROMOPHENYL-PHENYLETHER	ug/l	-	-	-	-	-	-	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	2-CHLORONAPHTHALENE	ug/l	1800	5200	-	-	-	6740	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00
8270C	4-CHLOROPHENYL-PHENYLETHER	ug/l	-	-	-	-	-	-	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	CHRYSENE	ug/l	1.6	1.6	-	-	-	1.6	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8270C	DIBENZ(A,H)ANTHRACENE	ug/l	2	2	-	-	-	2.49	<2.0	<1.00	<2.0	<1.00	<2.0	<1.00	<2.0	<1.00	<2.0	<1.00	<2.0	<1.00
8270C	1,2-DICHLOROBENZENE	ug/l	600	600	13	370	950	156000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	1,3-DICHLOROBENZENE	ug/l	6.6	19	28	2.6	7.9	111000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	1,4-DICHLOROBENZENE	ug/l	75	75	17	5.9	28	73800	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	3,3-DICHLOROBENZIDINE	ug/l	1.1	4.3	0.3	-	-	3110	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	2,4-DINITROTOLUENE	ug/l	7.7	32	-	-	-	270000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	2,6-DINITROTOLUENE	ug/l	-	-	-	-	-	-	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	FLUORANTHENE	ug/l	210	210	1.6	210	210	206	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00	<1.0	<1.00
8270C	FLUORENE	ug/l	880	2000	12	2000	2000	1980	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00
8270C	HEXACHLOROBENZENE	ug/l	1	1	0.2	440	3000	6200	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00	NA	<1.00
8270C	HEXACHLORO-1,3-BUTADIENE	ug/l	15	42	0.053	1600	3200	3230	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	HEXACHLOROCYCLOPENTADIENE	ug/l	50	50		130	420	1800	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	HEXACHLOROETHANE	ug/l	7.3	21	6.7	27000	50000	50000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	INDENO(1,2,3-CD)PYRENE	ug/l	2	2	-	-	-	0.022	<2.0	<1.00	<2.0	<1.00	<2.0	<1.00	<2.0	<1.00	<2.0	<1.00	<2.0	<1.00
8270C	ISOPHORONE	ug/l	770	3100	1300	-	-	12000000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	NAPHTHALENE	ug/l	520	1500	11	31000	31000	31000	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00

Table 2

Groundwater Analytical Results - April 2020 / December 2021 - January 2022

Former Hayes Lemmerz Site - Eastern Site Boundary

Sample ID			T1 Res DW Cleanup CSL	T1 NRes DW Cleanup CSL	T1 GW SW Interface SL	Res VIAP	NonRes VIAP	T1 W Solubility SL	MW-111	MW-111	MW-112	MW-112	MW-113	MW-113	MW-119	MW-119	MW-120	MW-120	MW-121	MW-121
Date Collected									4/9/2020	12/10/2021	4/9/2020	12/10/2021	4/9/2020	12/10/2021	4/23/2020	12/10/2021	4/23/2020	01/20/2022	4/23/2020	12/10/2021
Method	Analyte	Units																		
8270C	NITROBENZENE	ug/l	3.4	9.6	180	280000	550000	2090000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	N-NITROSODIMETHYLAMINE	ug/l	-	-	-	-	-	-	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	N-NITROSODIPHENYLAMINE	ug/l	270	1100	-	-	-	35100	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	N-NITROSODI-N-PROPYLAMINE	ug/l	5	5	-	-	-	9890000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	PHENANTHRENE	ug/l	52	150	2	1000	1000	1000	<2.0	<1.00	<2.0	<1.00	<2.0	<1.00	<2.0	<1.00	<2.0	<1.00	<2.0	<1.00
8270C	BENZYLBUTYL PHTHALATE	ug/l	1200	2700	67	-	-	2690	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00
8270C	BIS(2-ETHYLHEXYL)PHTHALATE	ug/l	6	6	14	-	-	340	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00
8270C	DI-N-BUTYL PHTHALATE	ug/l	880	2500	9.7	-	-	11200	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00
8270C	DIETHYL PHTHALATE	ug/l	5500	16000	110	-	-	1080000	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00
8270C	DIMETHYL PHTHALATE	ug/l	73000	210000	-	-	-	4190000	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00
8270C	DI-N-OCTYL PHTHALATE	ug/l	130	380	-	22	22	3000	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00	NA	<3.00
8270C	PYRENE	ug/l	140	140	-	140	140	135	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00	<5.0	<1.00
8270C	1,2,4-TRICHLOROBENZENE	ug/l	70	70	99	300000	300000	300000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	4-CHLORO-3-METHYLPHENOL	ug/l	150	420	7.4	-	-	3900000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	2-CHLOROPHENOL	ug/l	45	130	18	490000	1100000	22000000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	2,4-DICHLOROPHENOL	ug/l	73	210	11	-	-	4500000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	2,4-DIMETHYLPHENOL	ug/l	370	1000	380	-	-	7870000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	4,6-DINITRO-2-METHYLPHENOL	ug/l	20	20	-	-	-	200000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	2,4-DINITROPHENOL	ug/l	-	-	-	-	-		NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	2-NITROPHENOL	ug/l	20	58	-	-	-	2500000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	4-NITROPHENOL	ug/l	-	-	-	-	-	-	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	PENTACHLOROPHENOL	ug/l	1	1	-	-	-	1850000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	PHENOL	ug/l	4400	13000	450	-	-	82800000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C	2,4,6-TRICHLOROPHENOL	ug/l	120	470	5	-	-	800000	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0	NA	<10.0
8270C-SIM	ANTHRACENE	ug/l	43	43	-	43	43	43.4	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500
8270C-SIM	ACENAPHTHENE	ug/l	1300	3800	38	4200	4200	4240	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500
8270C-SIM	ACENAPHTHYLENE	ug/l	52	150	-	3900	3900	3930	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500
8270C-SIM	BENZO(A)ANTHRACENE	ug/l	2.1	8.5	-	-	-	9.4	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500
8270C-SIM	BENZO(A)PYRENE	ug/l	5	5	-	-	-	1.62	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500
8270C-SIM	BENZO(B)FLUORANTHENE	ug/l	1.5	1.5	-	-	-	1.5	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500
8270C-SIM	BENZO(G,H,I)PERYLENE	ug/l	1	1	-	-	-	0.26	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500
8270C-SIM	BENZO(K)FLUORANTHENE	ug/l	1	1	-	-	-	0.8	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500
8270C-SIM	CHRYSENE	ug/l	1.6	1.6	-	-	-	1.6	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500
8270C-SIM	DIBENZ(A,H)ANTHRACENE	ug/l	2	2	-	-	-	2.49	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500
8270C-SIM	FLUORANTHENE	ug/l	210	210	1.6	210	210	206	NA	<0.100	NA	<0.100	NA	<0.100	NA	<0.100	NA	<0.100	NA	<0.100
8270C-SIM	FLUORENE	ug/l	880	2000	12	2000	2000	1980	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500
8270C-SIM	INDENO(1,2,3-CD)PYRENE	ug/l	2	2	-	-	-	0.022	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500
8270C-SIM	NAPHTHALENE	ug/l	520	1500	11	31000	31000	31000	NA	<0.250	NA	<0.250	NA	<0.250	NA	<0.250	NA	<0.250	NA	<0.250
8270C-SIM	PHENANTHRENE	ug/l	52	150	2	1000	1000	1000	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500
8270C-SIM	PYRENE	ug/l	140	140	-	140	140	135	NA	<0.0500	NA	0.0178 J	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500
8270C-SIM	1-METHYLNAPHTHALENE	ug/l	-	-	-	-	-	-	NA	<0.250	NA	<0.250	NA	<0.250	NA	<0.250	NA	<0.250	NA	<0.250
8270C-SIM	2-METHYLNAPHTHALENE	ug/l	260	750	19	25000	25000	24600	NA	<0.250	NA	<0.250	NA	<0.250	NA	<0.250	NA	0.0679 J	NA	<0.250
8270C-SIM	2-CHLORONAPHTHALENE	ug/l	1800	5200	-	-	-	6740	NA	<0.250	NA	<0.250	NA	<0.250	NA	<0.250	NA	<0.250	NA	<0.250
TETRAETHYL LEAD																				
8270C-SIM	TETRAETHYLLEAD	ug/l	-	-	-	-	-	-	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500	NA	<0.0500

Qualifiers:

B: The same analyte is found in the associated blank.
J: The identification of the analyte is acceptable; the reported value is an estimate.
J1: Surrogate recovery limits have been exceeded; values are outside upper control limits.
J3: The associated batch QC was outside the established quality control range for precision.
J4: The associated batch QC was outside the established quality control range for accuracy

Notes:

NA = Not analyzed.
- = No criteria developed for analyte.
SIM - Selective Ion Monitoring
Detected constituents are shaded grey
Results exceeding the respective Risk Based Screening Level (RBSL) criteria are shaded corresponding to the color of each criteria.
Well MW-105 was not sampled in December 2021 as the well was dry.

Table 3 - Soil Gas Anaytical Data
Former Hayes Lemmerz Site
Ferndale, Oakland County, MI

	Sample ID		Residential VIAP Soil Gas	Non-Residential VIAP Soil Gas	VP-1	VP-2	VP-3	VP-4	VP-5	VP-6	VP-7	VP-8	VP-9	VP-10	VP-11	VP-13	VP-14
	Date Collected				02/11/2022	02/11/2022	02/11/2022	02/11/2022	02/11/2022	02/11/2022	02/11/2022	02/15/2022	02/15/2022	02/15/2022	02/15/2022	02/15/2022	02/15/2022
Method	Analyte	Units															
	HELIUM	%	-	-	<0.100	<0.100	<0.100	<0.100	0.298	0.155	<0.100	<0.100	0.171	<0.100	<0.100	<0.100	<0.100
	VOLATILE ORGANIC COMPOUNDS																
TO-15	ACETONE	ug/m3	1,000,000	1,000,000	<2.97	29.2	4.71	3.37	27.6	6.8	7.13	5.99	4.56	9.86	3.8	<2.97	6.61
TO-15	ALLYL CHLORIDE	ug/m3	-	-	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626
TO-15	BENZENE	ug/m3	110	260	<0.639	0.939	<0.639	<0.639	<0.639	<0.639	0.655	0.664	<0.639	<0.639	<0.639	<0.639	0.661
TO-15	BENZYL CHLORIDE	ug/m3	-	-	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04
TO-15	BROMODICHLOROMETHANE	ug/m3	-	-	<1.34	<1.34	<1.34	<1.34	<1.34	<1.34	<1.34	<1.34	<1.34	<1.34	<1.34	<1.34	<1.34
TO-15	BROMOFORM	ug/m3	-	-	<6.21	<6.21	<6.21	<6.21	<6.21	<6.21	<6.21	<6.21	<6.21	<6.21	<6.21	<6.21	<6.21
TO-15	BROMOMETHANE	ug/m3	-	-	<0.776	<0.776	<0.776	<0.776	<0.776	<0.776	<0.776	<0.776	<0.776	<0.776	<0.776	<0.776	<0.776
TO-15	1,3-BUTADIENE	ug/m3	-	-	<4.43	<4.43	<4.43	<4.43	<4.43	<4.43	<4.43	<4.43	<4.43	<4.43	<4.43	<4.43	<4.43
TO-15	CARBON DISULFIDE	ug/m3	24,000	36,000	<0.622	<0.622	<0.622	<0.622	<0.622	<0.622	<0.622	0.672	<0.622	0.654	0.644	<0.622	<0.622
TO-15	CARBON TETRACHLORIDE	ug/m3	150	360	<1.26	<1.26	<1.26	<1.26	<1.26	<1.26	<1.26	<1.26	<1.26	<1.26	<1.26	<1.26	<1.26
TO-15	CHLOROBENZENE	ug/m3	1,700	2,600	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924
TO-15	CHLOROETHANE	ug/m3	140,000	200,000	<0.528	<0.528	<0.528	<0.528	<0.528	<0.528	<0.528	<0.528	<0.528	<0.528	<0.528	<0.528	<0.528
TO-15	CHLOROFORM	ug/m3	37	87	<0.973	<0.973	<0.973	<0.973	<0.973	<0.973	<0.973	<0.973	<0.973	<0.973	<0.973	<0.973	<0.973
TO-15	CHLOROMETHANE	ug/m3	3,100	4,600	<0.413	<0.413	<0.413	<0.413	0.448	<0.413	<0.413	<0.413	0.49	<0.413	<0.413	<0.413	<0.413
TO-15	2-CHLOROTOLUENE	ug/m3	-	-	<1.03	<1.03	<1.03	<1.03	<1.03	<1.03	<1.03	<1.03	<1.03	<1.03	<1.03	<1.03	<1.03
TO-15	CYCLOHEXANE	ug/m3	210,000	310,000	<0.689	<0.689	0.902	0.802	0.761	<0.689	0.775	0.792	<0.689	<0.689	<0.689	<0.689	<0.689
TO-15	CHLORODIBROMOMETHANE	ug/m3	-	-	<1.70	<1.70	<1.70	<1.70	<1.70	<1.70	<1.70	<1.70	<1.70	<1.70	<1.70	<1.70	<1.70
TO-15	1,2-DIBROMOETHANE	ug/m3	-	-	<1.54	<1.54	<1.54	<1.54	<1.54	<1.54	<1.54	<1.54	<1.54	<1.54	<1.54	<1.54	<1.54
TO-15	1,2-DICHLOROBENZENE	ug/m3	10,000	15,000	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20
TO-15	1,3-DICHLOROBENZENE	ug/m3	-	-	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20
TO-15	1,4-DICHLOROBENZENE	ug/m3	220	510	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20
TO-15	1,2-DICHLOROETHANE	ug/m3	33	77	<0.810	<0.810	<0.810	<0.810	<0.810	<0.810	<0.810	<0.810	<0.810	<0.810	<0.810	<0.810	<0.810
TO-15	1,1-DICHLOROETHANE	ug/m3	530	1,200	<0.802	<0.802	<0.802	<0.802	<0.802	<0.802	<0.802	<0.802	<0.802	<0.802	<0.802	<0.802	<0.802
TO-15	1,1-DICHLOROETHENE	ug/m3	-	-	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793
TO-15	CIS-1,2-DICHLOROETHENE	ug/m3	280	410	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793
TO-15	TRANS-1,2-DICHLOROETHENE	ug/m3	-	-	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793
TO-15	1,2-DICHLOROPROPANE	ug/m3	-	-	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924
TO-15	CIS-1,3-DICHLOROPROPENE	ug/m3	-	-	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908
TO-15	TRANS-1,3-DICHLOROPROPENE	ug/m3	-	-	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908
TO-15	1,4-DIOXANE	ug/m3	170	400	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721
TO-15	ETHANOL	ug/m3	630,000	630,000	6.96	22.6	154	7.77	21.3	14.2	19	12.8	15.8	47.5	4.62	10.5	30.9
TO-15	ETHYLBENZENE	ug/m3	340	800	4.15	4.38	5.55	4.55	4.01	3.91	5.55	3.92	2.76	4.86	4.99	2.87	4.03
TO-15	4-ETHYLTOLUENE	ug/m3	-	-	2.03	0.987	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	1.97	<0.982
TO-15	TRICHLOROFLUOROMETHANE	ug/m3	15,000	22,000	1.22	1.3	1.56	1.62	<1.12	<1.12	2.78	<1.12	<1.12	<1.12	<1.12	<1.12	<1.12
TO-15	DICHLORODIFLUOROMETHANE	ug/m3	11,000	17,000	1.61	1.53	1.47	1.44	1.44	1.44	1.54	1.47	1.66	1.22	1.18	1.36	1.51
TO-15	1,1,2-TRICHLOROTRIFLUOROETHANE	ug/m3	-	-	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53
TO-15	1,2-DICHLOROTETRAFLUOROETHANE	ug/m3	-	-	<1.40	<1.40	<1.40	<1.40	<1.40	<1.40	<1.40	<1.40	<1.40	<1.40	<1.40	<1.40	<1.40
TO-15	HEPTANE	ug/m3	-	-	<0.818	<0.818	<0.818	<0.818	<0.818	<0.818	0.826	1.08	<0.818	<0.818	<0.818	<0.818	<0.818
TO-15	HEXACHLORO-1,3-BUTADIENE	ug/m3	-	-	<6.73	<6.73	<6.73	<6.73	<6.73	<6.73	<6.73	<6.73	<6.73	<6.73	<6.73	<6.73	<6.73
TO-15	N-HEXANE	ug/m3	24,000	36,000	<2.22	<2.22	<2.22	<2.22	<2.22	<2.22	<2.22	<2.22	<2.22	<2.22	<2.22	<2.22	<2.22
TO-15	ISOPROPYLBENZENE	ug/m3	81	190	<0.983	<0.983	<0.983	<0.983	<0.983	<0.983	<0.983	<0.983	<0.983	<0.983	<0.983	<0.983	<0.983
TO-15	METHYLENE CHLORIDE	ug/m3	21,000	31,000	<0.694	<0.694	<0.694	<0.694	<0.694	<0.694	<0.694	<0.694	<0.694	<0.694	<0.694	<0.694	<0.694
TO-15	METHYL BUTYL KETONE	ug/m3	-	-	<5.11	<5.11	<5.11	<5.11	<5.11	<5.11	<5.11	<5.11	<5.11	<5.11	<5.11	<5.11	<5.11
TO-15	2-BUTANONE (MEK)	ug/m3	170,000	170,000	3.77	6.34	<3.69	<3.69	<3.69	<3.69	4.01	<3.69	<3.69	4.22	<3.69	<3.69	<3.69
TO-15	4-METHYL-2-PENTANONE (MIBK)	ug/m3	-	-	<5.12	<5.12	<5.12	<5.12	<5.12	<5.12	<5.12	<5.12	<5.12	<5.12	<5.12	<5.12	<5.12
TO-15	METHYL METHACRYLATE	ug/m3	-	-	<0.819	<0.819	<0.819	<0.819	0.987	<0.819	<0.819	<0.819	<0.819	<0.819	<0.819	<0.819	<0.819

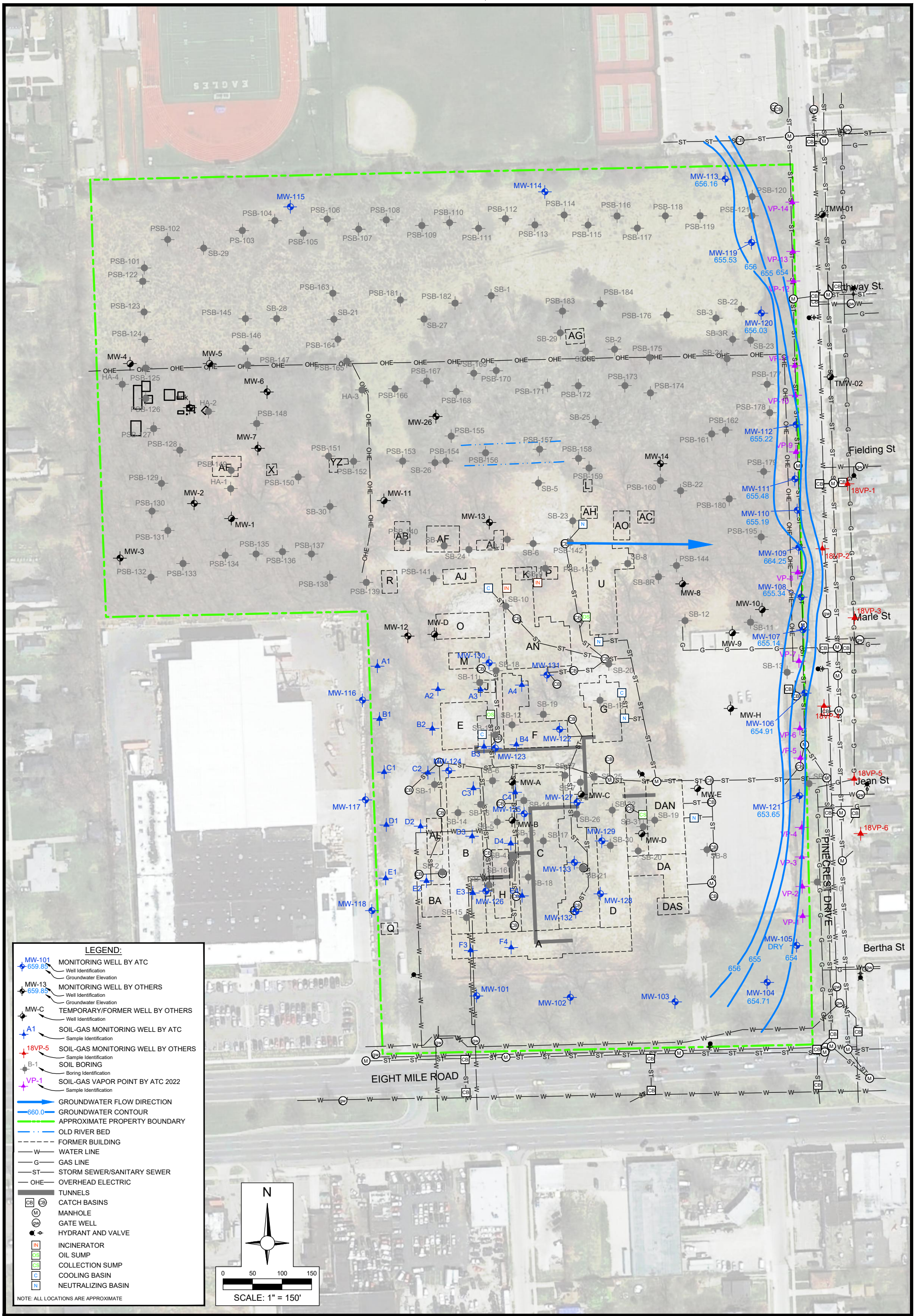
Table 3 - Soil Gas Anaytical Data
Former Hayes Lemmerz Site
Ferndale, Oakland County, MI

	Sample ID		Residential VIAP Soil Gas	Non-Residential VIAP Soil Gas	VP-1	VP-2	VP-3	VP-4	VP-5	VP-6	VP-7	VP-8	VP-9	VP-10	VP-11	VP-13	VP-14
	Date Collected				02/11/2022	02/11/2022	02/11/2022	02/11/2022	02/11/2022	02/11/2022	02/11/2022	02/15/2022	02/15/2022	02/15/2022	02/15/2022	02/15/2022	02/15/2022
Method	Analyte	Units															
TO-15	METHYL TERT-BUTYL ETHER	ug/m3	-	-	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721
TO-15	NAPHTHALENE	ug/m3	25	59	<3.30	<3.30	<3.30	<3.30	<3.30	<3.30	<3.30	<3.30	<3.30	<3.30	<3.30	<3.30	<3.30
TO-15	2-PROPANOL	ug/m3	-	-	<3.07	<3.07	<3.07	<3.07	103	<3.07	<3.07	3.81	<3.07	13.8	<3.07	<3.07	3.81
TO-15	PROPENE	ug/m3	-	-	<2.15	<2.15	<2.15	<2.15	<2.15	<2.15	<2.15	<2.15	<2.15	<2.15	<2.15	<2.15	<2.15
TO-15	STYRENE	ug/m3	1,500	3,500	4.98	6.98	9.32	7.83	6.47	6.98	9.06	6.34	3.93	7.19	6.72	1.77	6
TO-15	1,1,2,2-TETRACHLOROETHANE	ug/m3	-	-	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37
TO-15	TETRACHLOROETHENE	ug/m3	1,400	1,400	<1.36	<1.36	<1.36	<1.36	<1.36	<1.36	<1.36	<1.36	<1.36	<1.36	<1.36	<1.36	<1.36
TO-15	TETRAHYDROFURAN	ug/m3	70,000	100,000	<0.590	<0.590	<0.590	<0.590	<0.590	<0.590	<0.590	<0.590	<0.590	<0.590	<0.590	<0.590	<0.590
TO-15	TOLUENE	ug/m3	170,000	250,000	41.1	38	47.5	40.3	36.8	31.6	47.1	44.8	26.4	47.5	54.6	9.72	39.2
TO-15	1,2,4-TRICHLOROBENZENE	ug/m3	-	-	<4.66	<4.66	<4.66	<4.66	<4.66	<4.66	<4.66	<4.66	<4.66	<4.66	<4.66	<4.66	<4.66
TO-15	1,1,1-TRICHLOROETHANE	ug/m3	170,000	230,000	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09
TO-15	1,1,2-TRICHLOROETHANE	ug/m3	-	-	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09
TO-15	TRICHLOROETHENE	ug/m3	67	67	<1.07	<1.07	<1.07	<1.07	<1.07	<1.07	<1.07	<1.07	<1.07	<1.07	<1.07	<1.07	<1.07
TO-15	1,2,4-TRIMETHYLBENZENE	ug/m3	2,100	3,100	2.43	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	1.83	<0.982
TO-15	1,3,5-TRIMETHYLBENZENE	ug/m3	2,100	3,100	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982
TO-15	2,2,4-TRIMETHYLPENTANE	ug/m3	120,000	180,000	<0.934	<0.934	<0.934	<0.934	<0.934	<0.934	<0.934	<0.934	<0.934	<0.934	<0.934	<0.934	<0.934
TO-15	VINYL CHLORIDE	ug/m3	-	-	<0.511	<0.511	<0.511	<0.511	<0.511	<0.511	<0.511	<0.511	<0.511	<0.511	<0.511	<0.511	<0.511
TO-15	VINYL BROMIDE	ug/m3	-	-	<0.875	<0.875	<0.875	<0.875	<0.875	<0.875	<0.875	<0.875	<0.875	<0.875	<0.875	<0.875	<0.875
TO-15	VINYL ACETATE	ug/m3	-	-	<0.704	<0.704	<0.704	<0.704	<0.704	<0.704	<0.704	<0.704	<0.704	<0.704	<0.704	<0.704	<0.704
TO-15	M&P-XYLENE	ug/m3	7,600	11,000	15.8	17.1	21.5	17.9	15.6	15.9	21.4	15.3	10.2	17.3	17.2	7.02	15
TO-15	O-XYLENE	ug/m3	7,600	11,000	5.38	5.98	7.33	6.11	5.29	5.38	7.2	5.25	3.51	5.9	5.94	2.27	5.12
TO-15	TPH (GC/MS) LOW FRACTION	ug/m3	-	-	<826	<826	859	<826	<826	<826	892	<826	<826	<826	<826	<826	<826
TO-15	1,1-DIFLUOROETHANE	ug/m3	-	-	4.81	8.21	21.8	4.86	11.7	9.51	6.75	7.67	6.29	5.27	3.7	4.19	9.21
TO-15	1,2,3-TRIMETHYLBENZENE	ug/m3	2,100	3,100	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982
TO-15	CHLORODIFLUOROMETHANE	ug/m3	-	-	<0.708	<0.708	<0.708	<0.708	<0.708	<0.708	<0.708	<0.708	<0.708	<0.708	<0.708	<0.708	<0.708
TO-15	ETHYL ACETATE	ug/m3	2,400	3,600	<0.720	<0.720	<0.720	<0.720	<0.720	<0.720	<0.720	4.18	<0.720	<0.720	<0.720	<0.720	<0.720
TO-15	METHYL CYCLOHEXANE	ug/m3	-	-	1.18	1.12	1.51	1.38	1.39	1.13	1.7	1.22	<0.803	1.18	1.31	<0.803	0.98
TO-15	TERT-AMYL ETHYL ETHER	ug/m3	2,200	3,200	<0.951	<0.951	<0.951	<0.951	<0.951	<0.951	<0.951	<0.951	<0.951	<0.951	<0.951	<0.951	<0.951
Jerome J505 Mercury Analyzer	Mercury Vapor (max/average) (field screening results - 12/10/21)	ug/m^3	10 ug/m^3	15 ug/m^3	0.000/0.000	0.000004/ 0.000004	0.000/0.000	0.000/0.000	0.000/0.000	0.000/0.000	0.000/0.000	0.000/0.000	0.000/0.000	0.000/0.000	0.000/0.000	0.000004/ 0.000004	0.000/0.000

Notes:
- = No criteria developed for analyte.
Detected constituents are shaded grey
Results exceeding the respective Risk Based Screening Level (RBSL) criteria are shaded corresponding to the color of each criteria.
VIAP - Vapor Intrusion Air Pathway

FIGURES

H:\2022\1 OTHER OFFICES\MICHIGAN\CASH CLIENT-CENTRAL REGION\DETRIOT AXLE\RFI WORK PLAN\NPDAX19001-GW FLOW.DWG, FIG1



LEGEND:

- MW-101 659.85 — MONITORING WELL BY ATC (Well Identification, Groundwater Elevation)
- MW-13 659.85 — MONITORING WELL BY OTHERS (Well Identification, Groundwater Elevation)
- MW-C — TEMPORARY/FORMER WELL BY OTHERS (Well Identification)
- A1 — SOIL-GAS MONITORING WELL BY ATC (Sample Identification)
- 18VP-5 — SOIL-GAS MONITORING WELL BY OTHERS (Sample Identification)
- B-1 — SOIL BORING (Boring Identification)
- VP-1 — SOIL-GAS VAPOR POINT BY ATC 2022 (Sample Identification)
- GROUNDWATER FLOW DIRECTION
- 660.0 — GROUNDWATER CONTOUR
- APPROXIMATE PROPERTY BOUNDARY
- OLD RIVER BED
- FORMER BUILDING
- W — WATER LINE
- G — GAS LINE
- ST — STORM SEWER/SANITARY SEWER
- OHE — OVERHEAD ELECTRIC
- TUNNELS
- CB — CATCH BASINS
- M — MANHOLE
- gw — GATE WELL
- HYDRANT AND VALVE
- IN — INCINERATOR
- OS — OIL SUMP
- CS — COLLECTION SUMP
- C — COOLING BASIN
- N — NEUTRALIZING BASIN

NOTE: ALL LOCATIONS ARE APPROXIMATE

Figure: 1

Scale: AS SHOWN

Drn. By: PH

Ckd. By: RS

Date: 03/17/2022

Project Number: NPDAX19001

EASTERN MARGIN (DECEMBER 2021 AND JANUARY 2022) GROUNDWATER FLOW MAP

FORMER HAYES LEMMERZ SITE
WEST EIGHT MILE ROAD
FERNDALE, MICHIGAN

ATLAS

H:\2022\1 OTHER OFFICES\MICHIGAN\CASH CLIENT-CENTRAL REGION\DETRIOT AXLE\RFI WORK PLAN\NPDAX19001-GW ANALYTICAL.DWG, FIG2

MW-113	
12/10/21	
8'-13'	
NO EXCEEDANCES	

MW-119	
12/10/21	
5'-10'	
Selenium	5.09
Trichloroethene	**0.259 J**

MW-120	
1/20/2022	
3'-8'	
Selenium	5.42
PFOA	18

MW-112	
12/10/21	
4'-9'	
Manganese	112
PFOA	69

MW-111	
12/10/21	
4'-9'	
Manganese	135
PFOA	8.7
Trichloroethene	**1.52**

MW-110	
12/10/21	
5'-10'	
Manganese	455
PFOA	14
Vinyl Chloride	**1.59**

MW-109	
12/10/21	
5'-10'	
Manganese	1,660
PFOA	21
Trichloroethene	**0.454 J**

MW-108	
12/10/21	
5'-10'	
Manganese	236
PFOA	9.3
Chloroform	**1.33 J**
Trichloroethene	**0.558 J**

MW-107	
12/10/21	
7'-12'	
Antimony	17.4
PFOA	16
Trichloroethene	**10.7**

MW-106	
12/10/21	
7.5'-12.5'	
PFOA	9.9
Trichloroethene	**0.256 J**

MW-121	
12/10/21	
3'-8'	
Aluminum	342
PFOA	37
Trichloroethene	**0.97 J**

MW-105
9'-14'
DRY - NOT SAMPLED

MW-104	
1/20/2022	
15'-20'	
PFOA	12
Methanol	104,000

LEGEND:

- VP-1 — SOIL-GAS VAPOR POINT BY ATC 2022 (Sample Identification)
- MW-101 — MONITORING WELL BY ATC (Well Identification)
- MW-1 — MONITORING WELL BY OTHERS (Well Identification)
- MW-C — TEMPORARY/FORMER WELL BY OTHERS (Well Identification)
- A1 — SOIL-GAS MONITORING WELL BY ATC (Sample Identification)
- 18VP-5 — SOIL-GAS MONITORING WELL BY OTHERS (Sample Identification)
- B-1 — SOIL BORING (Boring Identification)
- APPROXIMATE PROPERTY BOUNDARY
- OLD RIVER BED
- FORMER BUILDING
- W — WATER LINE
- G — GAS LINE
- ST — STORM SEWER/SANITARY SEWER
- OHE — OVERHEAD ELECTRIC
- TUNNELS
- CB — CATCH BASINS
- M — MANHOLE
- gw — GATE WELL
- HYDRANT AND VALVE
- IN — INCINERATOR
- OS — OIL SUMP
- CS — COLLECTION SUMP
- C — COOLING BASIN
- N — NEUTRALIZING BASIN

NOTE: ALL LOCATIONS ARE APPROXIMATE

N

0 50 100 150

SCALE: 1" = 150'

GROUNDWATER METALS

Aluminum
Antimony
Manganese
Selenium

PFAS

PFOA-perfluoro-n-octanoic acid

VOCs

Chloroform
Trichloroethene
Vinyl Chloride

ALCOHOLS

Methanol

NOTES:

MW-113	Well Identification
12/10/21	Date of Sample
8'-13'	Screened Interval
10	Analyte exceeds nonresidential drinking water protection criteria
10	Analyte exceeds groudwater surface water interface protection criteria
10	Analyte exceeds residential volatilization to indoor air pathway screening levels (VIAP)
0.088	Analyte exceeds nonresidential volatilization to indoor air pathway screening levels (VIAP)

PFAS are shown in ng/L, remaining compounds are shown in ug/L.
Metals were analyzed by EPA Method 6010 or 6020. Mercury analyzed by EPA Method 7470A.
Volatile Organic Compounds (VOC) analyzed by EPA Method 8260B.
Perfluorinated compounds were analyzed using an isotope dilution based on Department of Defense (DoD) Quality Systems Manual (QSM) 5.1.1.
EGLE Michigan Department of Environment, Great Lakes, and Energy.
VIAP screening levels based on shallow groundwater (< 10 feet below ground surface) for residential; groundwater not in contact
Notes in parentheses and standard abbreviations from Part 201 Rules 299.1 through 299.50, dated June 25, 2018; VIAP screening levels, dated September 4, 2020

Figure: 2

Scale: AS SHOWN

Drn. By: PH

Ckd. By: RS

Date: 03/17/2022

Project Number: NPDAX19001

EASTERN MARGIN (DECEMBER 2021 AND JANUARY 2022) GROUNDWATER ANALYTICAL EXCEEDANCES

FORMER HAYES LEMMERZ SITE
WEST EIGHT MILE ROAD
FERNDALE, MICHIGAN

ATLAS

H:\2022\1 OTHER OFFICES\MICHIGAN\CASH CLIENT-CENTRAL REGION\DETRIOT AXLE\RFI WORK PLAN\NPDAX19001-SOIL ANALYTICAL.DWG, FIG3

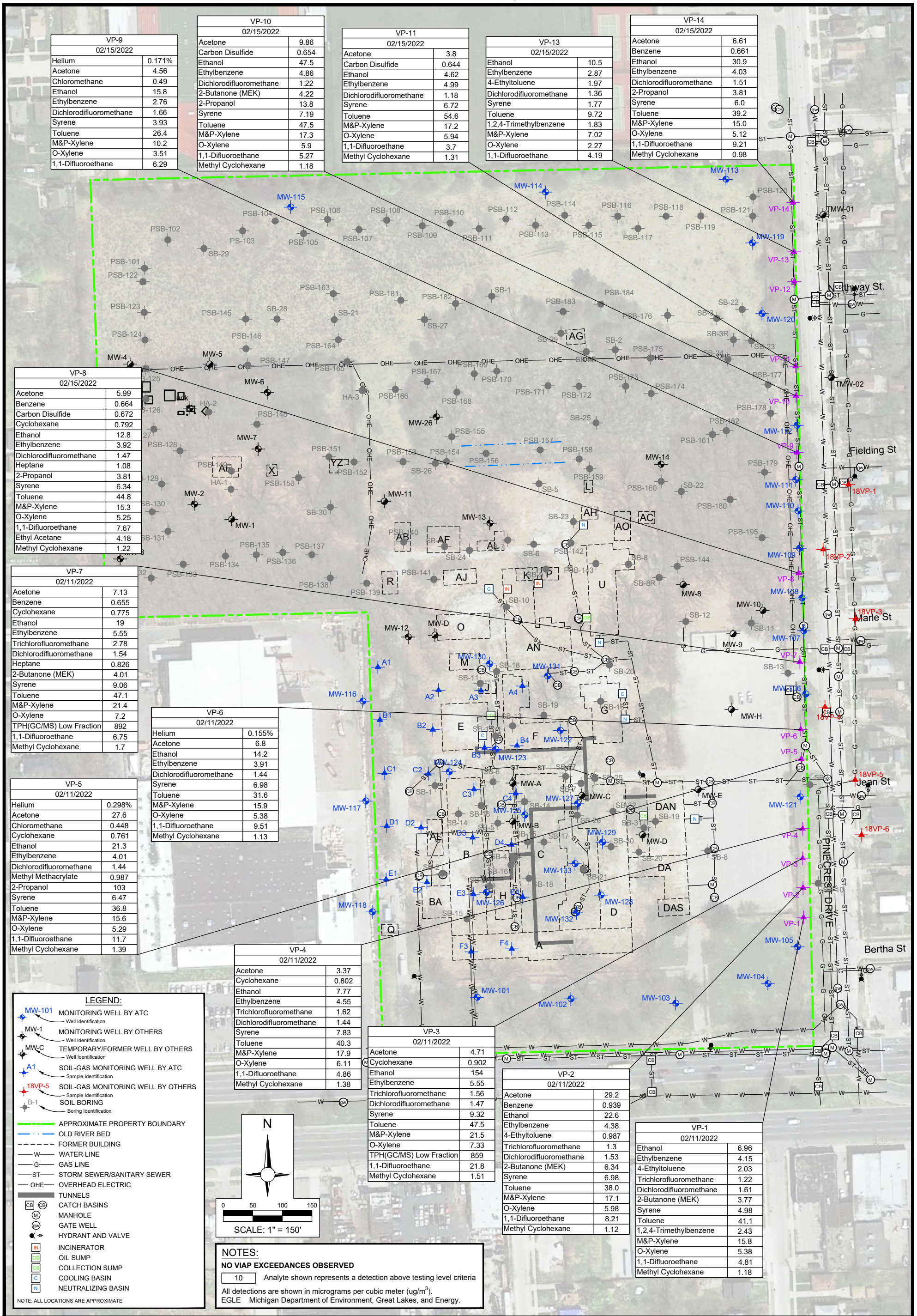


Figure:	3
Scale:	AS SHOWN
Drn. By:	PH
Ckd. By:	RS
Date:	03/18/2022
Project Number:	NPDAX19001

EASTERN MARGIN (DECEMBER 2021 AND JANUARY 2022) SOIL GAS DETECTIONS

FORMER HAYES LEMMERZ SITE
WEST EIGHT MILE ROAD
FERNDALE, MICHIGAN

ATLAS

H:\2022\1 OTHER OFFICES\MICHIGAN\CASH CLIENT-CENTRAL REGION\DETRIOT AXLE\RFI WORK PLAN\NPDAX19001-PRO DELINEATION WELLS.DWG, FIG4

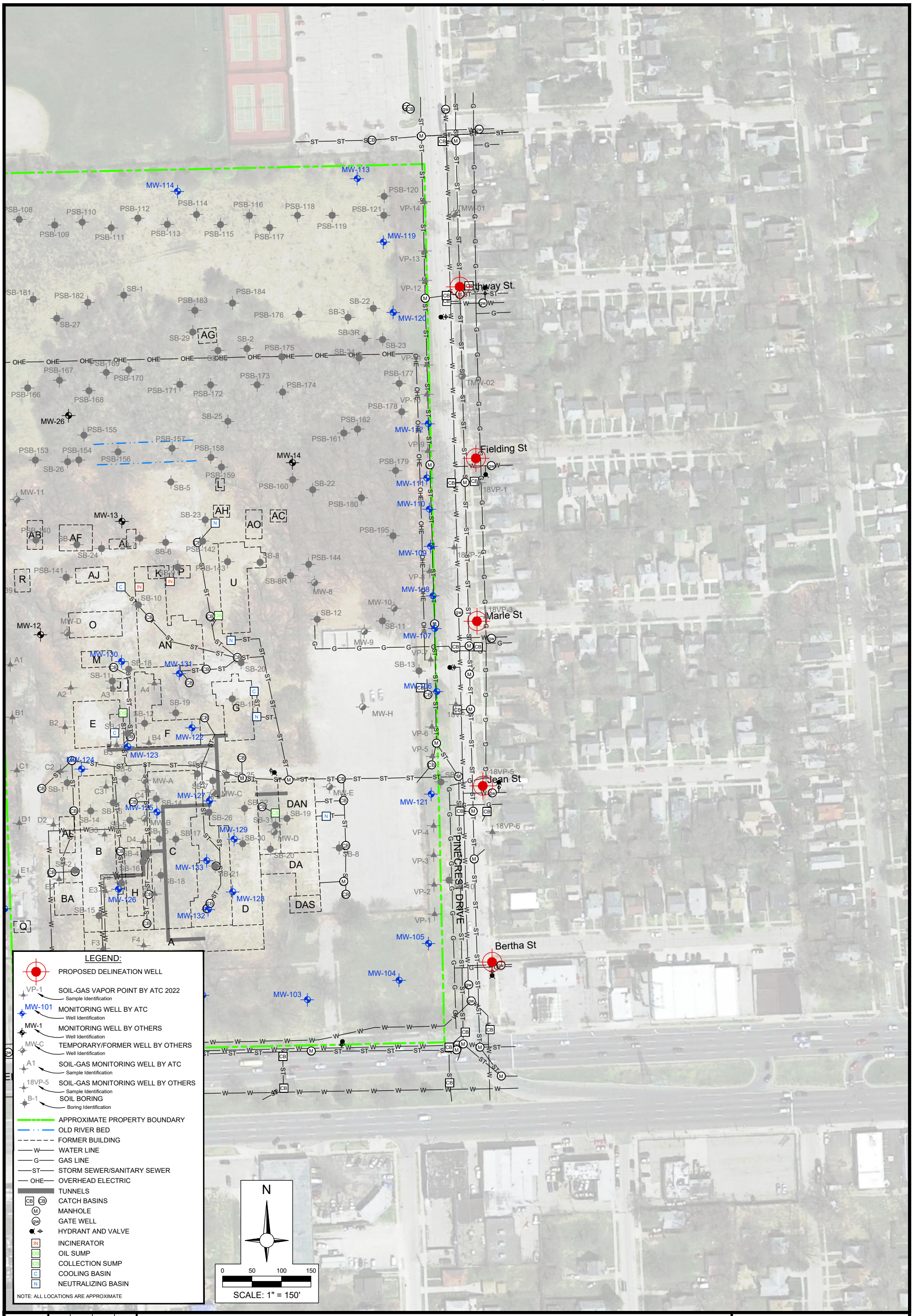


Figure: 4

Scale: AS SHOWN

Drn. By: PH

Ckd. By: RS

Date: 03/17/2022

Project Number: NPDAX19001

PROPOSED DELINEATION WELLS

FORMER HAYES LEMMERZ SITE
WEST EIGHT MILE ROAD
FERNDALE, MICHIGAN

ATLAS

APPENDIX A
BORING LOGS

Soil Gas Vapor Point

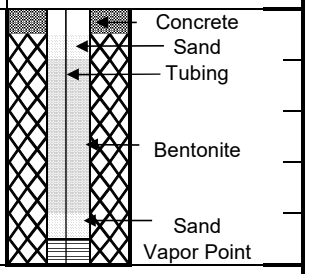
46555 Humboldt Drive
Suite 100
Novi, MI 48377
Phone: (248) 669-5140

Project Number: NPDAX19001
Project Name: Former Hayes Lemmerz Site
Site Location: W. 8 Mile Road
City: Ferndale, Michigan
Boring Diameter: 4" HA
Drilling Method: Hand Auger/Direct Push

Boring ID: VP-1 **Page:** 1 of 1
Start Date: 11/29/21 **End Date:** 11/29/21
Casing: NA
Casing Diameter: NA **Length:** NA
Screen Slot Size: NA
Screen Diameter: NA **Length:** NA

FEET (bgs)	SAMPLE TYPE	SAMPLE INTERVAL (bgs)	SAMPLE TIME	Recovery	USCS	Graphic	LITHOLOGY DESCRIPTION	PID (PPMV)	Well Construction
0									
1				12"			Grass/Topsoil	0.0	
2				12"			SAND - very fine grained, brown, moist	0.0	
3				12"			SAND - fine grained, brown, moist	0.0	
4				12"				0.0	
5				12"			SAND - fine to medium grained, brown, moist to damp	0.0	

EOB 5'



(HA) = HAND AUGER (DS) = DISTURBED SAMPLE
(AK) = AIR KNIFE (GS) = GeoSonic
(SS) = SPLIT SPOON bpf = blows per foot
(qP) = Penetrometer Unconfined Compressive Strength

Borehole Observations After Drilling
Immediately after:
Hrs. after:
Backfill : Vapor Point Materials

(Rec.) = RECOVERY (EOB) = END OF BORING
(bgs) = Below Ground Surface
(NR) = NO RECOVERY
(NA) = NOT APPLICABLE

Logged by: Robert Allor
Drawn by: Robert Allor
Checked by: Ryann Scott

Drilling Co.: Terra Probe
Drill Rig Type: 6610DT

Driller: Ron
Assistant

Soil Gas Vapor Point

46555 Humboldt Drive
Suite 100
Novi, MI 48377
Phone: (248) 669-5140

Project Number: NPDAX19001 **Boring ID:** VP-2 **Page:** 1 of 1
Project Name: Former Hayes Lemmerz Site **Start Date:** 11/29/21 **End Date:** 11/29/21
Site Location: W. 8 Mile Road **Casing:** NA
City: Ferndale, Michigan **Casing Diameter:** NA **Length:** NA
Boring Diameter: 4" HA **Screen Slot Size:** NA
Drilling Method: Hand Auger/Direct Push **Screen Diameter:** NA **Length:** NA

FEET (bgs)	SAMPLE TYPE	SAMPLE INTERVAL (bgs)	SAMPLE TIME	Recovery	USCS	Graphic	LITHOLOGY DESCRIPTION	PID (PPMV)	Well Construction
0									
1				12"			Grass/Topsoil	0.0	Concrete
2				12"			SAND - fine grained, gray, moist	0.0	Sand, Tubing
3				12"			SAND - fine grained, brown, moist	0.0	Bentonite
4				12"				0.0	
5				12"			SAND - fine to medium grained, gray, moist/damp	0.0	Sand, Vapor Point

EOB 5'

(HA) = HAND AUGER (DS) = DISTURBED SAMPLE
(AK) = AIR KNIFE (GS) = GeoSonic
(SS) = SPLIT SPOON bpf = blows per foot
(qP) = Penetrometer Unconfined Compressive Strength

Borehole Observations After Drilling
Immediately after:
Hrs. after:
Backfill : Vapor Point Materials

(Rec.) = RECOVERY (EOB) = END OF BORING
(bgs) = Below Ground Surface
(NR) = NO RECOVERY
(NA) = NOT APPLICABLE

Logged by: Robert Allor
Drawn by: Robert Allor
Checked by: Ryann Scott

Drilling Co.: Terra Probe **Driller:** Ron
Drill Rig Type: 6610DT **Assistant**

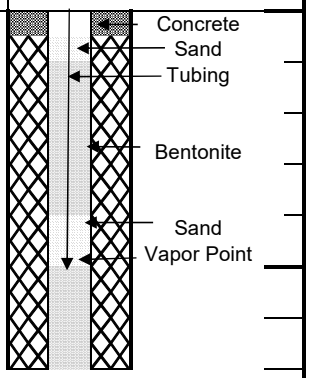
Soil Gas Vapor Point

ATLAS
46555 Humboldt Drive
Suite 100
Novi, MI 48377
Phone: (248) 669-5140

Project Number: NPDAX19001
Project Name: Former Hayes Lemmerz Site
Site Location: W. 8 Mile Road
City: Ferndale, Michigan
Boring Diameter: 4" HA
Drilling Method: Hand Auger/Direct Push

Boring ID: VP-3 **Page:** 1 of 1
Start Date: 11/29/21 **End Date:** 11/29/21
Casing: NA
Casing Diameter: NA **Length:** NA
Screen Slot Size: NA
Screen Diameter: NA **Length:** NA

FEET (bgs)	SAMPLE TYPE	SAMPLE INTERVAL (bgs)	SAMPLE TIME	Recovery	USCS	Graphic	LITHOLOGY DESCRIPTION	PID (PPMV)
0								
1				12"			Grass/Topsoil	0.0
2				12"			SAND - fine to medium grained, brown, moist to damp.	0.0
3				12"				0.0
4				12"				0.0
5				12"				0.0
6				12"				0.0
7				12"				0.0
							EOB 7'	



(HA) = HAND AUGER (DS) = DISTURBED SAMPLE
(AK) = AIR KNIFE (GS) = GeoSonic
(SS) = SPLIT SPOON bpf = blows per foot
(qP) = Penetrometer Unconfined Compressive Strength

Borehole Observations After Drilling
Immediately after:
Hrs. after:
Backfill : Vapor Point Materials

(Rec.) = RECOVERY (EOB) = END OF BORING
(bgs) = Below Ground Surface
(NR) = NO RECOVERY
(NA) = NOT APPLICABLE

Logged by: Robert Allor
Drawn by: Robert Allor
Checked by: Ryann Scott

Drilling Co.: Terra Probe
Drill Rig Type: 6610DT

Driller: Ron
Assistant

Soil Gas Vapor Point

ATLAS
46555 Humboldt Drive
Suite 100
Novi, MI 48377
Phone: (248) 669-5140

Project Number: NPDAX19001
Project Name: Former Hayes Lemmerz Site
Site Location: W. 8 Mile Road
City: Ferndale, Michigan
Boring Diameter: 4" HA
Drilling Method: Hand Auger/Direct Push

Boring ID: VP-4 **Page:** 1 of 1
Start Date: 11/29/21 **End Date:** 11/29/21
Casing: NA
Casing Diameter: NA **Length:** NA
Screen Slot Size: NA
Screen Diameter: NA **Length:** NA

FEET (bgs)	SAMPLE TYPE	SAMPLE INTERVAL (bgs)	SAMPLE TIME	Recovery	USCS	Graphic	LITHOLOGY DESCRIPTION	PID (PPMV)
0								
1				12"			Grass/Topsoil	0.0
2				12"			SAND - fine grained, brown, moist.	0.0
3				12"			SAND - fine to medium grained, light brown, moist.	0.0
4				12"				0.0
5				12"			SAND - fine to medium grained, brown, moist/damp.	0.0

EOB 5'

Well Construction: Concrete; Sand; Tubing; Bentonite; Sand; Vapor Point

(HA) = HAND AUGER (DS) = DISTURBED SAMPLE
(AK) = AIR KNIFE (GS) = GeoSonic
(SS) = SPLIT SPOON bpf = blows per foot
(qP) = Penetrometer Unconfined Compressive Strength

Borehole Observations After Drilling
Immediately after:
Hrs. after:
Backfill : Vapor Point Materials

(Rec.) = RECOVERY (EOB) = END OF BORING
(bgs) = Below Ground Surface
(NR) = NO RECOVERY
(NA) = NOT APPLICABLE

Logged by: Robert Allor
Drawn by: Robert Allor
Checked by: Ryann Scott

Drilling Co.: Terra Probe
Drill Rig Type: 6610DT

Driller: Ron
Assistant

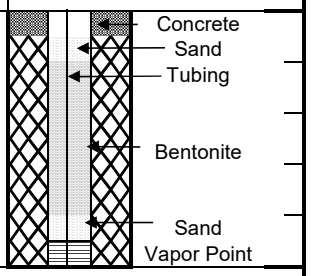
Soil Gas Vapor Point

ATLAS
46555 Humboldt Drive
Suite 100
Novi, MI 48377
Phone: (248) 669-5140

Project Number: NPDAX19001
Project Name: Former Hayes Lemmerz Site
Site Location: W. 8 Mile Road
City: Ferndale, Michigan
Boring Diameter: 4" HA
Drilling Method: Hand Auger/Direct Push

Boring ID: VP-5 **Page:** 1 of 1
Start Date: 11/29/21 **End Date:** 11/29/21
Casing: NA
Casing Diameter: NA **Length:** NA
Screen Slot Size: NA
Screen Diameter: NA **Length:** NA

FEET (bgs)	SAMPLE TYPE	SAMPLE INTERVAL (bgs)	SAMPLE TIME	Recovery	USCS	Graphic	LITHOLOGY DESCRIPTION	PID (PPMV)	Well Construction
0									
1				12"			Grass/Topsoil	0.0	
2				12"			SAND - fine to medium grained, light brown, moist. Damp/wet at end of boring.	0.0	
3				12"				0.0	
4				12"				0.0	
5				12"				0.0	



EOB 5'

(HA) = HAND AUGER (DS) = DISTURBED SAMPLE
(AK) = AIR KNIFE (GS) = GeoSonic
(SS) = SPLIT SPOON bpf = blows per foot
(qP) = Penetrometer Unconfined Compressive Strength

Borehole Observations After Drilling
Immediately after:
Hrs. after:
Backfill : Vapor Point Materials

(Rec.) = RECOVERY (EOB) = END OF BORING
(bgs) = Below Ground Surface
(NR) = NO RECOVERY
(NA) = NOT APPLICABLE

Logged by: Robert Allor
Drawn by: Robert Allor
Checked by: Ryann Scott

Drilling Co.: Terra Probe
Drill Rig Type: 6610DT

Driller: Ron
Assistant

Soil Gas Vapor Point

46555 Humboldt Drive
Suite 100
Novi, MI 48377
Phone: (248) 669-5140

Project Number: NPDAX19001 **Boring ID:** VP-6 **Page:** 1 of 1
Project Name: Former Hayes Lemmerz Site **Start Date:** 11/29/21 **End Date:** 11/29/21
Site Location: W. 8 Mile Road **Casing:** NA
City: Ferndale, Michigan **Casing Diameter:** NA **Length:** NA
Boring Diameter: 4" HA **Screen Slot Size:** NA
Drilling Method: Hand Auger/Direct Push **Screen Diameter:** NA **Length:** NA

FEET (bgs)	SAMPLE TYPE	SAMPLE INTERVAL (bgs)	SAMPLE TIME	Recovery	USCS	Graphic	LITHOLOGY DESCRIPTION	PID (PPMV)	Well Construction
0				12"			Grass/Topsoil	0.0	Concrete
1				12"			SAND - fine to medium grained, brown, moist	0.0	Sand
2				12"			SANDY CLAY - brown, moist, semi-plastic	0.0	Tubing
3				12"				0.0	Bentonite
4				12"			SAND - fine to medium grained, brown, moist/damp.	0.0	Sand Vapor Point
5							EOB 5'		

(HA) = HAND AUGER (DS) = DISTURBED SAMPLE
(AK) = AIR KNIFE (GS) = GeoSonic
(SS) = SPLIT SPOON bpf = blows per foot
(qP) = Penetrometer Unconfined Compressive Strength

Borehole Observations After Drilling
Immediately after:
Hrs. after:
Backfill : Vapor Point Materials

(Rec.) = RECOVERY (EOB) = END OF BORING
(bgs) = Below Ground Surface
(NR) = NO RECOVERY
(NA) = NOT APPLICABLE

Logged by: Robert Allor
Drawn by: Robert Allor
Checked by: Ryann Scott

Drilling Co.: Terra Probe **Driller:** Ron
Drill Rig Type: 6610DT **Assistant**

Soil Gas Vapor Point

46555 Humboldt Drive
Suite 100
Novi, MI 48377
Phone: (248) 669-5140

Project Number: NPDAX19001 **Boring ID:** VP-7 **Page:** 1 of 1
Project Name: Former Hayes Lemmerz Site **Start Date:** 11/29/21 **End Date:** 11/29/21
Site Location: W. 8 Mile Road **Casing:** NA
City: Ferndale, Michigan **Casing Diameter:** NA **Length:** NA
Boring Diameter: 4" HA **Screen Slot Size:** NA
Drilling Method: Hand Auger/Direct Push **Screen Diameter:** NA **Length:** NA

FEET (bgs)	SAMPLE TYPE	SAMPLE INTERVAL (bgs)	SAMPLE TIME	Recovery	USCS	Graphic	LITHOLOGY DESCRIPTION	PID (PPMV)	Well Construction
0				12"			Grass/Topsoil	0.0	Concrete
1				12"			SAND - fine to medium grained, brown, moist	0.0	Sand, Tubing
2				12"			SAND - fine grained, brown, moist	0.0	Bentonite
3				12"				0.0	
4				12"			SAND - gray/brown, fine to medium grained. Moist/damp.	0.0	Sand Vapor Point
5							EOB 5'		

(HA) = HAND AUGER (DS) = DISTURBED SAMPLE
(AK) = AIR KNIFE (GS) = GeoSonic
(SS) = SPLIT SPOON bpf = blows per foot
(qP) = Penetrometer Unconfined Compressive Strength

Borehole Observations After Drilling
Immediately after:
Hrs. after:
Backfill : Vapor Point Materials

(Rec.) = RECOVERY (EOB) = END OF BORING
(bgs) = Below Ground Surface
(NR) = NO RECOVERY
(NA) = NOT APPLICABLE

Logged by: Robert Allor
Drawn by: Robert Allor
Checked by: Ryann Scott

Drilling Co.: Terra Probe **Driller:** Ron
Drill Rig Type: 6610DT **Assistant**

Soil Gas Vapor Point

46555 Humboldt Drive
Suite 100
Novi, MI 48377
Phone: (248) 669-5140

Project Number: NPDAX19001
Project Name: Former Hayes Lemmerz Site
Site Location: W. 8 Mile Road
City: Ferndale, Michigan
Boring Diameter: 4" HA
Drilling Method: Hand Auger/Direct Push

Boring ID: VP-8 **Page:** 1 of 1
Start Date: 11/30/21 **End Date:** 11/30/21
Casing: NA
Casing Diameter: NA **Length:** NA
Screen Slot Size: NA
Screen Diameter: NA **Length:** NA

FEET (bgs)	SAMPLE TYPE	SAMPLE INTERVAL (bgs)	SAMPLE TIME	Recovery	USCS	Graphic	LITHOLOGY DESCRIPTION	PID (PPMV)	Well Construction
0									
1				12"			Grass/Topsoil	0.0	Concrete, Sand, Tubing
2				12"			SAND - fine to medium grained, brown, moist	0.0	
3				12"				0.0	Bentonite
4				12"			TOPSOIL horizon, moist	0.0	Sand, Vapor Point
5				12"				0.0	
6				12"			SAND - fine to medium grained, brown, damp	0.0	Bentonite
7							EOB 7'		

(HA) = HAND AUGER (DS) = DISTURBED SAMPLE
(AK) = AIR KNIFE (GS) = GeoSonic
(SS) = SPLIT SPOON bpf = blows per foot
(qP) = Penetrometer Unconfined Compressive Strength

Borehole Observations After Drilling
Immediately after:
Hrs. after:
Backfill : Vapor Point Materials

(Rec.) = RECOVERY (EOB) = END OF BORING
(bgs) = Below Ground Surface
(NR) = NO RECOVERY
(NA) = NOT APPLICABLE

Logged by: Robert Allor
Drawn by: Robert Allor
Checked by: Ryann Scott

Drilling Co.: Terra Probe
Drill Rig Type: 6610DT

Driller: Ron
Assistant

Soil Gas Vapor Point

ATLAS
46555 Humboldt Drive
Suite 100
Novi, MI 48377
Phone: (248) 669-5140

Project Number: NPDAX19001
Project Name: Former Hayes Lemmerz Site
Site Location: W. 8 Mile Road
City: Ferndale, Michigan
Boring Diameter: 4" HA
Drilling Method: Hand Auger/Direct Push

Boring ID: VP-9 **Page:** 1 of 1
Start Date: 11/30/21 **End Date:** 11/30/21
Casing: NA
Casing Diameter: NA **Length:** NA
Screen Slot Size: NA
Screen Diameter: NA **Length:** NA

FEET (bgs)	SAMPLE TYPE	SAMPLE INTERVAL (bgs)	SAMPLE TIME	Recovery	USCS	Graphic	LITHOLOGY DESCRIPTION	PID (PPMV)	Well Construction
0				12"			Grass/Topsoil	0.0	Concrete
1				12"			SAND - fine to medium grained, brown, moist	0.0	Sand, Tubing
2				12"				0.0	
3				12"			SAND - fine grained, light brown, moist/damp	0.0	Bentonite
4				12"				0.0	Sand, Vapor Point
5							EOB 5'		

(HA) = HAND AUGER (DS) = DISTURBED SAMPLE
(AK) = AIR KNIFE (GS) = GeoSonic
(SS) = SPLIT SPOON bpf = blows per foot
(qP) = Penetrometer Unconfined Compressive Strength

Borehole Observations After Drilling
Immediately after:
Hrs. after:
Backfill : Vapor Point Materials

(Rec.) = RECOVERY (EOB) = END OF BORING
(bgs) = Below Ground Surface
(NR) = NO RECOVERY
(NA) = NOT APPLICABLE

Logged by: Robert Allor
Drawn by: Robert Allor
Checked by: Ryann Scott

Drilling Co.: Terra Probe
Drill Rig Type: 6610DT

Driller: Ron
Assistant

Soil Gas Vapor Point

46555 Humboldt Drive
Suite 100
Novi, MI 48377
Phone: (248) 669-5140

Project Number: NPDAX19001
Project Name: Former Hayes Lemmerz Site
Site Location: W. 8 Mile Road
City: Ferndale, Michigan
Boring Diameter: 4" HA
Drilling Method: Hand Auger/Direct Push

Boring ID: VP-10 **Page:** 1 of 1
Start Date: 11/30/21 **End Date:** 11/30/21
Casing: NA
Casing Diameter: NA **Length:** NA
Screen Slot Size: NA
Screen Diameter: NA **Length:** NA

FEET (bgs)	SAMPLE TYPE	SAMPLE INTERVAL (bgs)	SAMPLE TIME	Recovery	USCS	Graphic	LITHOLOGY DESCRIPTION	PID (PPMV)	Well Construction
0				12"			Grass/Topsoil	0.0	Concrete
1				12"			SAND - fine to medium grained, light brown, moist	0.0	Sand, Tubing
2				12"				0.0	
3				12"			TOPSOIL horizon, moist	0.0	Bentonite
4				12"				0.0	Sand, Vapor Point
5							SAND - fine grained, brown, moist/damp EOB 5'		

(HA) = HAND AUGER (DS) = DISTURBED SAMPLE
(AK) = AIR KNIFE (GS) = GeoSonic
(SS) = SPLIT SPOON bpf = blows per foot
(qP) = Penetrometer Unconfined Compressive Strength

Borehole Observations After Drilling
Immediately after:
Hrs. after:
Backfill : Vapor Point Materials

(Rec.) = RECOVERY (EOB) = END OF BORING
(bgs) = Below Ground Surface
(NR) = NO RECOVERY
(NA) = NOT APPLICABLE

Logged by: Robert Allor
Drawn by: Robert Allor
Checked by: Ryann Scott

Drilling Co.: Terra Probe
Drill Rig Type: 6610DT

Driller: Ron
Assistant

Soil Gas Vapor Point

46555 Humboldt Drive
Suite 100
Novi, MI 48377
Phone: (248) 669-5140

Project Number: NPDAX19001
Project Name: Former Hayes Lemmerz Site
Site Location: W. 8 Mile Road
City: Ferndale, Michigan
Boring Diameter: 4" HA
Drilling Method: Hand Auger/Direct Push

Boring ID: VP-11 **Page:** 1 of 1
Start Date: 11/30/21 **End Date:** 11/30/21
Casing: NA
Casing Diameter: NA **Length:** NA
Screen Slot Size: NA
Screen Diameter: NA **Length:** NA

FEET (bgs)	SAMPLE TYPE	SAMPLE INTERVAL (bgs)	SAMPLE TIME	Recovery	USCS	Graphic	LITHOLOGY DESCRIPTION	PID (PPMV)	Well Construction
0									
1				12"			Grass/Topsoil	0.0	
2				12"				0.0	
3				12"			SAND - fine grained, light brown, moist	0.0	
4				12"				0.0	
5				12"			CLAY - brown, wet, plastic, some sand	0.0	

EOB 5'

Concrete
Sand
Tubing
Bentonite
Sand
Vapor Point

(HA) = HAND AUGER (DS) = DISTURBED SAMPLE
(AK) = AIR KNIFE (GS) = GeoSonic
(SS) = SPLIT SPOON bpf = blows per foot
(qP) = Penetrometer Unconfined Compressive Strength

Borehole Observations After Drilling
Immediately after:
Hrs. after:
Backfill : Vapor Point Materials

(Rec.) = RECOVERY (EOB) = END OF BORING
(bgs) = Below Ground Surface
(NR) = NO RECOVERY
(NA) = NOT APPLICABLE

Logged by: Robert Allor
Drawn by: Robert Allor
Checked by: Ryann Scott

Drilling Co.: Terra Probe
Drill Rig Type: 6610DT

Driller: Ron
Assistant

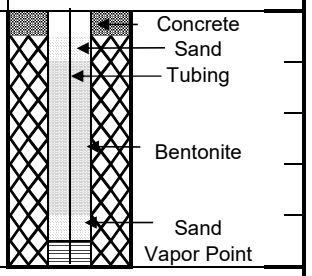
Soil Gas Vapor Point

46555 Humboldt Drive
Suite 100
Novi, MI 48377
Phone: (248) 669-5140

Project Number: NPDAX19001
Project Name: Former Hayes Lemmerz Site
Site Location: W. 8 Mile Road
City: Ferndale, Michigan
Boring Diameter: 4" HA
Drilling Method: Hand Auger/Direct Push

Boring ID: VP-12 **Page:** 1 of 1
Start Date: 11/30/21 **End Date:** 11/30/21
Casing: NA
Casing Diameter: NA **Length:** NA
Screen Slot Size: NA
Screen Diameter: NA **Length:** NA

FEET (bgs)	SAMPLE TYPE	SAMPLE INTERVAL (bgs)	SAMPLE TIME	Recovery	USCS	Graphic	LITHOLOGY DESCRIPTION	PID (PPMV)	Well Construction
0									
1				12"			Grass/Topsoil	0.0	
2				12"			SAND - fine grained, light brown, moist; Damp at 5'	0.0	
3				12"				0.0	
4				12"				0.0	
5				12"				0.0	



EOB 5'

(HA) = HAND AUGER (DS) = DISTURBED SAMPLE
(AK) = AIR KNIFE (GS) = GeoSonic
(SS) = SPLIT SPOON bpf = blows per foot
(qP) = Penetrometer Unconfined Compressive Strength

Borehole Observations After Drilling
Immediately after:
Hrs. after:
Backfill : Vapor Point Materials

(Rec.) = RECOVERY (EOB) = END OF BORING
(bgs) = Below Ground Surface
(NR) = NO RECOVERY
(NA) = NOT APPLICABLE

Logged by: Robert Allor
Drawn by: Robert Allor
Checked by: Ryann Scott

Drilling Co.: Terra Probe
Drill Rig Type: 6610DT

Driller: Ron
Assistant

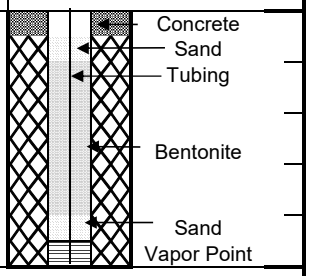
Soil Gas Vapor Point

46555 Humboldt Drive
Suite 100
Novi, MI 48377
Phone: (248) 669-5140

Project Number: NPDAX19001
Project Name: Former Hayes Lemmerz Site
Site Location: W. 8 Mile Road
City: Ferndale, Michigan
Boring Diameter: 4" HA
Drilling Method: Hand Auger/Direct Push

Boring ID: VP-13 **Page:** 1 of 1
Start Date: 11/30/21 **End Date:** 11/30/21
Casing: NA
Casing Diameter: NA **Length:** NA
Screen Slot Size: NA
Screen Diameter: NA **Length:** NA

FEET (bgs)	SAMPLE TYPE	SAMPLE INTERVAL (bgs)	SAMPLE TIME	Recovery	USCS	Graphic	LITHOLOGY DESCRIPTION	PID (PPMV)	Well Construction
0									
1				12"			Grass/Topsoil	0.0	
2				12"			SAND - fine grained, light brown, moist	0.0	
3				12"				0.0	
4				12"				0.0	
5				12"				0.0	



EOB 5'

(HA) = HAND AUGER (DS) = DISTURBED SAMPLE
(AK) = AIR KNIFE (GS) = GeoSonic
(SS) = SPLIT SPOON bpf = blows per foot
(qP) = Penetrometer Unconfined Compressive Strength

Borehole Observations After Drilling
Immediately after:
Hrs. after:
Backfill : Vapor Point Materials

(Rec.) = RECOVERY (EOB) = END OF BORING
(bgs) = Below Ground Surface
(NR) = NO RECOVERY
(NA) = NOT APPLICABLE

Logged by: Robert Allor
Drawn by: Robert Allor
Checked by: Ryann Scott

Drilling Co.: Terra Probe
Drill Rig Type: 6610DT

Driller: Ron
Assistant

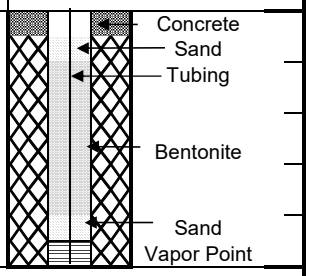
Soil Gas Vapor Point

46555 Humboldt Drive
Suite 100
Novi, MI 48377
Phone: (248) 669-5140

Project Number: NPDAX19001
Project Name: Former Hayes Lemmerz Site
Site Location: W. 8 Mile Road
City: Ferndale, Michigan
Boring Diameter: 4" HA
Drilling Method: Hand Auger/Direct Push

Boring ID: VP-14 **Page:** 1 of 1
Start Date: 11/30/21 **End Date:** 11/30/21
Casing: NA
Casing Diameter: NA **Length:** NA
Screen Slot Size: NA
Screen Diameter: NA **Length:** NA

FEET (bgs)	SAMPLE TYPE	SAMPLE INTERVAL (bgs)	SAMPLE TIME	Recovery	USCS	Graphic	LITHOLOGY DESCRIPTION	PID (PPMV)	Well Construction
0									
1				12"			Grass/Topsoil	0.0	
2				12"			SAND - fine grained, light brown, moist	0.0	
3				12"				0.0	
4				12"				0.0	
5				12"				0.0	



EOB 5'

(HA) = HAND AUGER (DS) = DISTURBED SAMPLE
(AK) = AIR KNIFE (GS) = GeoSonic
(SS) = SPLIT SPOON bpf = blows per foot
(qP) = Penetrometer Unconfined Compressive Strength

Borehole Observations After Drilling
Immediately after:
Hrs. after:
Backfill : Vapor Point Materials

(Rec.) = RECOVERY (EOB) = END OF BORING
(bgs) = Below Ground Surface
(NR) = NO RECOVERY
(NA) = NOT APPLICABLE

Logged by: Robert Allor
Drawn by: Robert Allor
Checked by: Ryann Scott

Drilling Co.: Terra Probe
Drill Rig Type: 6610DT

Driller: Ron
Assistant

APPENDIX B
VAPOR/SOIL GAS ASSESSMENT SAMPLING DATA SHEETS

Novi Office
46555 Humboldt Drive, Suite 100
Novi, Michigan 48377
Telephone 248-669-5140

ATLAS

VAPOR /SOIL GAS ASSESSMENT SAMPLING DATA SHEET

Field Sheet

Sample Point ID: VP-1

Date: 2/11/22

Site Name: Detroit Axle

Site Address: 1600 W. 8 mile Rd Ferndale, MI

Consultant Co. Name: _____ Samplers Name: Madelyn Haas/Nick Provens

Project #: _____ Project Account #: _____

MDEQ PM: _____ District: _____

Suspected COC's: Petroleum_____ Solvent X Drycleaner_____ Other_____

Point Information

Name of Point/Well VP-1 Location of Point/Well: _____

Date of Point/Well installation_____ Time of Installation: _____

Subslab _____ Soil Gas Probe X Depth: 5 ft Volume ~~40~~ 107 ml

Exterior Point size (volume):_____ml

Permanent: X Temporary: _____ Probe Material: stainless steel _____ Teflon X PVC_____

Weather Conditions: Temp. 36° Rain Event: Y / N? Amount of rain: _____ Date: _____

Surface Type: Asphalt____ Concrete____ Grass X Surface Thickness: _____inches

Surface Staining: Y / (N?) Comments_____

Pressure Reading of Point/Well: _____ (in/H20) or (in/Hg) 0.00 mBar

Moisture Check: Evident with syringe: Y / (N?) Evident with pump: Y / (N?)

Low Permeability Soil Check: Evident with Syringe: Y / (N?) Evident with pump: Y / (N?)

Initial Field Readings: Where? VP-1 O2 21.3 %, CO2 0.6 %, CH4 0.1 %

Relative humidity: 86% in/Hg, Barometric Pressure: 28.86 in/Hg, Meter used GEM5000

Initial PID Reading: 0.0 ppm, Instrument used: MiniRAELite, Calibration Date: 2/11/22

DUP
start - 21 1050

ATLAS

Leak Detection

Bottle Vac #:_____, Regulator #: 10377

Sample Summa Canister #: ~~20294~~ 20294 (1L or 6L?) Duplicate Summa Canister #: 20293 1L or 6L?

Tubing Type: Teflon_____, Polyethylene_____, Master Flex X, Nylon / Other X

Tubing Diam: 1/4 inches ID, Tubing Length: 5 per foot, Moisture trap: (Y) / N? Volume: 107 ml

Tubing certified clean: (Y) / N? Field purged with Nitrogen: Y / (N?)

Shut In Test completed for Sample Train: (Y) / N? -6 (pressure) in/Hg held for 5 minutes

Leak Test performed on vapor point/soil gas point: (Y) / N?

Tracer Gas utilized: (Y) / N? Helium X, IPA_____, Other_____

Shroud Type filled with tracer gas: (Y) / N? Pressurized: Y / (N?) (Not part of MDEQ SOP)

Total volume of tubing: 107 ml X 3 = 321 Tubing Purge Volume (ml)

Pump used: (Y) / N? Pump Flow Rate: 200 ml/min Syringe used: Y / (N?) _____pulls

Evidence of leakage: Y / N? Regulator Gauge Baseline Reading: 0 in/Hg

Sample container: Bottle Vac or Summa Canister ?

Initial Pressure Reading: -20 **in/Hg, Shroud Helium:** 420 **% Start Time:** 1034

2nd Pressure Reading: -24 **in/Hg, Shroud Helium:** _____ **% Time:** 1035

3rd Pressure Reading: -16 **in/Hg, Shroud Helium:** _____ **% Time:** 1036

4th Pressure Reading: -8 **in/Hg, Shroud Helium:** _____ **% Time:** 1037

Final Pressure Reading: -3 **in/Hg, Shroud Helium:** _____ **% End Time:** 1038

Final Field Readings: **Time:** 1040 Evidence of Moisture in Bottle Vac: Y / N?

PID 0.0 ppm, O2 21.9 %, CO2 0.6 %, CH4 0.1 %

Additional Notes:

Other Potential Ambient sources of VOC's on-site? _____

Other Potential Ambient sources of VOC's off-site? _____

Sample storage_____ Sample Shipping method_____

Photo documentation of well point included? Y / N

Sampler's Signature: Madelyn Hansen Date: 2/11/22

Attachments: Purge Volume Calculation form, Boring Log & Photograph

PURGE VOLUME CALCULATIONS

THIS FORM TO BE USED ONLY INCONJUCTION WITH ATLAS VAPOR SOILGAS ASSESSMENT SAMPLING DATA SHEET

Site Name: Detroit Axle
Vapor Point ID: VP-1
Location of Vapor Point: ~~Interior~~ / Exterior: X
Site Location: Ferndale, MI

Volume for Atlas' Standard Tubing Sizes (per foot) Black Nylon Tubing OD 1/4" and 1/4" Lab Tubing from Pace/Esc		
Tubing Size	*Volume/ft.*	*Volume/ft*
(inches ID)*	*(liters)*	*(mL)**
3/16"	0.005	5

Volume for Atlas' Exterior Sampling Point (1" x 6" 10 slot PVC)		
Tubing Size	*Volume/ft.*	*Volume/ft*
(inches ID)*	*(liters)*	*(mL)*
1	0.082	82

Calulations for Interior Point & Exterior Point Vapor Implant

Length of tubing	_____	feet (include above and below ground)
Thickness of Interior Concrete	_____	feet
Volume per foot of tubing	5	mL/ft
Volume of tubing =	_____	(legth of tubing (ft)+ Concrete Thickness (ft))*Volume per foot of tubing mL/ft
Purge Volume =		Volume of tubing *3

Calulations for Exterior Point with Atlas Exterior Sampling Point

Length of tubing	5	feet (include above and below ground)
Volume per foot of tubing	5	mL/ft
Volume of tubing =	25	length of tubing (feet)*Volume per foot of tubing mL/ft
Volume of point	82	mL/ft
Purge Volume =	321	(Volume of tubing+ Volume of Point) *3

* = 1 mL = 1 cc
These purge volumes do not include the sand and betonite pack for exterior points.
These calculations are to be used as with stated tubing and points, any deviation from this must be approved by Project Manager

Version 1.1 (5/2016)

Novi Office
46555 Humboldt Drive, Suite 100
Novi, Michigan 48377
Telephone 248-669-5140

ATLAS

VAPOR /SOIL GAS ASSESSMENT SAMPLING DATA SHEET

Field Sheet

Sample Point ID: VP-2

Date: 2/11/22

Site Name: 1600 W. 8 mile Ferndale, MI

Site Address: _____

Consultant Co. Name: _____ Samplers Name: Madelyn Haas

Project #: _____ Project Account #: _____

MDEQ PM: _____ District: _____

Suspected COC's: Petroleum_____ Solvent X Drycleaner_____ Other_____

Point Information

Name of Point/Well VP-2 Location of Point/Well: _____

Date of Point/Well installation_____ Time of Installation: _____

Subslab _____ Soil Gas Probe X Depth: 5 ft Volume ~~40ml~~ 107 ml

Exterior Point size (volume):_____ml

Permanent: X Temporary: _____ Probe Material: stainless steel _____ Teflon X PVC_____

Weather Conditions: Temp. 30° Rain Event: Y / N? Amount of rain: _____ Date: _____

Surface Type: Asphalt____ Concrete____ Grass X Surface Thickness: _____inches

Surface Staining: Y / (N?) Comments_____

Pressure Reading of Point/Well: _____ (in/H20) or (in/Hg) -.04 mBar

Moisture Check: Evident with syringe: Y / (N?) Evident with pump: Y / (N?)

Low Permeability Soil Check: Evident with Syringe: Y / (N?) Evident with pump: Y / (N?)

Initial Field Readings: Where? VP-2 O2 21.4 %, CO2 0.4 %, CH4 0.1 %

Relative humidity: 83% in/Hg, Barometric Pressure: 28.86 in/Hg, Meter used GEM5000

Initial PID Reading: 0.0 ppm, Instrument used: MiniRAELite, Calibration Date: 2/11/22

Leak Detection

Bottle Vac #:_____, Regulator #: 9532

Sample Summa Canister #: 20309 (1L or 6L?) Duplicate Summa Canister #:_____ 1L or 6L?

Tubing Type: Teflon_____, Polyethylene_____, Master Flex X, Nylon / Other X

Tubing Diam: 1/4 inches ID, Tubing Length: 5 per foot, Moisture trap: Y / N? Volume: 107 ml

Tubing certified clean: (Y) / N? Field purged with Nitrogen: Y / (N?)

Shut In Test completed for Sample Train (Y) / N? -7 (pressure) in/Hg held for 5 minutes

Leak Test performed on vapor point/soil gas point: (Y) / N?

Tracer Gas utilized: (Y) / N? Helium X, IPA_____, Other_____

Shroud Type filled with tracer gas: (Y) / N? Pressurized: Y / (N?) (Not part of MDEQ SOP)

Total volume of tubing: 107 ml X 3 = 321 Tubing Purge Volume (ml)

Pump used: (Y) / N? Pump Flow Rate: 200 mL/min Syringe used: Y / (N?) _____pulls

Evidence of leakage: Y / (N?) Regulator Gauge Baseline Reading: 0 in/Hg

Sample container: Bottle Vac or Summa Canister ?

Initial Pressure Reading: -27 **in/Hg, Shroud Helium:** 24 **%** **Start Time:** 1117

2nd Pressure Reading: -24 **in/Hg, Shroud Helium:** _____ **%** **Time:** 1118

3rd Pressure Reading: -16 **in/Hg, Shroud Helium:** _____ **%** **Time:** 1119

4th Pressure Reading: -8 **in/Hg, Shroud Helium:** _____ **%** **Time:** 1121

Final Pressure Reading: -3 **in/Hg, Shroud Helium:** _____ **%** **End Time:** 1123

Final Field Readings: **Time:** 1125 Evidence of Moisture in Bottle Vac: Y / N?

PID 0.0 ppm, O2 21.5 %, CO2 0.4 %, CH4 0.1 %

Additional Notes:

Other Potential Ambient sources of VOC's on-site? _____

Other Potential Ambient sources of VOC's off-site? _____

Sample storage_____ Sample Shipping method_____

Photo documentation of well point included? Y / N

Sampler's Signature: Madelyn Adams Date: 2/16/22

Attachments: Purge Volume Calculation form, Boring Log & Photograph

PURGE VOLUME CALCULATIONS

THIS FORM TO BE USED ONLY INCONJUCTION WITH
ATLAS VAPOR SOILGAS ASSESSMENT SAMPLING DATA SHEET

Site Name: Detroit Axle
Vapor Point ID VP-2
Location of Vapor Point Interior _____ Exterior X

Site Location: Ferndale, MI

Volume for Atlas' Standard Tubing Sizes (per foot) Black Nylon Tubing OD 1/4" and 1/4" Lab Tubing from Pace/Esc		
Tubing Size	*Volume/ft.*	*Volume/ft*
(inches ID)*	*(liters)*	*(mL)**
3/16"	0.005	5

Volume for Atlas' Exterior Sampling Point (1" x 6" 10 slot PVC)		
Tubing Size	*Volume/ft.*	*Volume/ft*
(inches ID)*	*(liters)*	*(mL)*
1	0.082	82

Calulations for Interior Point & Exterior Point Vapor Implant

Length of tubing	_____	feet (include above and below ground)
Thickness of Interior Concrete	_____	feet
Volume per foot of tubing	5	mL/ft
Volume of tubing =	_____	(legth of tubing (ft)+ Concrete Thickness (ft))*Volume per foot of tubing mL/ft
Purge Volume =		Volume of tubing *3

Calulations for Exterior Point with Atlas Exterior Sampling Point

Length of tubing	5	feet (include above and below ground)
Volume per foot of tubing	5	mL/ft
Volume of tubing =	25	length of tubing (feet)*Volume per foot of tubing mL/ft
Volume of point	82	mL/ft
Purge Volume =	321	(Volume of tubing+ Volume of Point) *3

* = 1 mL = 1 cc
These purge volumes do not include the sand and betonite pack for exterior points.
These calculations are to be used as with stated tubing and points, any deviation from this must be approved by Project Manager

Version 1.1 (5/2016)

Novi Office
46555 Humboldt Drive, Suite 100
Novi, Michigan 48377
Telephone 248-669-5140

ATLAS

VAPOR /SOIL GAS ASSESSMENT SAMPLING DATA SHEET

Field Sheet

Sample Point ID: VP-3

Date: 2/11/22

Site Name: Detroit Axle

Site Address: 1600 W. 8 mile Rd Ferndale, MI

Consultant Co. Name: _____ Samplers Name: _____

Project #: _____ Project Account #: Madelyn Haas

MDEQ PM: _____ District: _____

Suspected COC's: Petroleum_____ Solvent X Drycleaner_____ Other_____

Point Information

Name of Point/Well VP-3 Location of Point/Well: _____

Date of Point/Well installation_____ Time of Installation: _____

Subslab _____ Soil Gas Probe X Depth: 5 ft Volume ~~RAN 107~~ ml

Exterior Point size (volume):_____ml

Permanent: X Temporary: _____ Probe Material: stainless steel _____ Teflon X PVC_____

Weather Conditions: Temp. 36° Rain Event: Y / (N) Amount of rain: _____ Date: 12/11/22

Surface Type: Asphalt____ Concrete____ Grass X Surface Thickness: _____inches

Surface Staining: Y / (N?) Comments_____

Pressure Reading of Point/Well: _____ (in/H20) or (in/Hg) .008 mBar

Moisture Check: Evident with syringe: Y / (N?) Evident with pump: Y / (N?)

Low Permeability Soil Check: Evident with Syringe: Y / (N?) Evident with pump: Y / (N?)

Initial Field Readings: Where? VP-3 O2 22.1 %, CO2 0.1 %, CH4 0.1 %

Relative humidity: 83% in/Hg, Barometric Pressure: 28.89 in/Hg, Meter used GEM2000

Initial PID Reading: 0.0 ppm, Instrument used: MiniRAE Lite, Calibration Date: 2/11/22

Leak Detection

Bottle Vac #:_____, Regulator #: 10388

Sample Summa Canister #: 20250 1L or 6L? Duplicate Summa Canister #:_____ 1L or 6L?

Tubing Type: Teflon_____, Polyethylene_____, Master Flex X, Nylon, Other X

Tubing Diam: 1/4 inches ID, Tubing Length: 5 per foot, Moisture trap: Y / N? Volume: 107 ml

Tubing certified clean: Y / N? Field purged with Nitrogen: Y / N?

Shut In Test completed for Sample Train: Y / N? -9 (pressure) in/Hg held for 4 minutes

Leak Test performed on vapor point/soil gas point: Y / N?

Tracer Gas utilized: Y / N? Helium X, IPA_____, Other_____

Shroud Type filled with tracer gas: Y / N? Pressurized: Y / N? (Not part of MDEQ SOP)

Total volume of tubing: 107 ml X 3 = 321 Tubing Purge Volume (ml)

Pump used: Y / N? Pump Flow Rate: 200 mL/min Syringe used: Y /N? _____pulls

Evidence of leakage: Y / N? Regulator Gauge Baseline Reading: 0 in/Hg

Sample container: Bottle Vac or Summa Canister ?

Initial Pressure Reading: -21 **in/Hg, Shroud Helium:** 20 **% Start Time:** 1154

2nd Pressure Reading: -24 **in/Hg, Shroud Helium:** _____ **% Time:** 1154

3rd Pressure Reading: -16 **in/Hg, Shroud Helium:** _____ **% Time:** 1156

4th Pressure Reading: -8 **in/Hg, Shroud Helium:** _____ **% Time:** 1158

Final Pressure Reading: -3 **in/Hg, Shroud Helium:** _____ **% End Time:** 1159

Final Field Readings: **Time:** 1202 Evidence of Moisture in Bottle Vac: Y / N?

PID 0.0 ppm, O2 22.2 %, CO2 0.1 %, CH4 0.1 %

Additional Notes:

Other Potential Ambient sources of VOC's on-site? _____

Other Potential Ambient sources of VOC's off-site? _____

Sample storage_____ Sample Shipping method_____

Photo documentation of well point included? Y / N

Sampler's Signature: Madelyn Haas Date: 2/11/22

Attachments: Purge Volume Calculation form, Boring Log & Photograph

PURGE VOLUME CALCULATIONS

THIS FORM TO BE USED ONLY INCONJUCTION WITH
ATLAS VAPOR SOILGAS ASSESSMENT SAMPLING DATA SHEET

Site Name: Detroit Axle
Vapor Point ID: VP-3
Location of Vapor Point: Interior _____ Exterior X
Site Location: Ferndale, MI

Volume for Atlas' Standard Tubing Sizes (per foot) Black Nylon Tubing OD 1/4" and 1/4" Lab Tubing from Pace/Esc		
Tubing Size	*Volume/ft.*	*Volume/ft*
(inches ID)*	*(liters)*	*(mL)**
3/16"	0.005	5

Volume for Atlas' Exterior Sampling Point (1" x 6" 10 slot PVC)		
Tubing Size	*Volume/ft.*	*Volume/ft*
(inches ID)*	*(liters)*	*(mL)*
1	0.082	82

Calulations for Interior Point & Exterior Point Vapor Implant

Length of tubing	_____	feet (include above and below ground)
Thickness of Interior Concrete	_____	feet
Volume per foot of tubing	5	mL/ft
Volume of tubing =	_____	(legth of tubing (ft)+ Concrete Thickness (ft))*Volume per foot of tubing mL/ft
Purge Volume =		Volume of tubing *3

Calulations for Exterior Point with Atlas Exterior Sampling Point

Length of tubing	5	feet (include above and below ground)
Volume per foot of tubing	5	mL/ft
Volume of tubing =	25	length of tubing (feet)*Volume per foot of tubing mL/ft
Volume of point	82	mL/ft
Purge Volume =	321	(Volume of tubing+ Volume of Point) *3

* = 1 mL = 1 cc
These purge volumes do not include the sand and betonite pack for exterior points.
These calculations are to be used as with stated tubing and points, any deviation from this must be approved by Project Manager

Version 1.1 (5/2016)

Novi Office
46555 Humboldt Drive, Suite 100
Novi, Michigan 48377
Telephone 248-669-5140

ATLAS

VAPOR /SOIL GAS ASSESSMENT SAMPLING DATA SHEET

Field Sheet

Sample Point ID: VP-4

Date: 2/11/22

Site Name: Detroit Axle

Site Address: 1600 W. 8 Mile Rd Ferndale

Consultant Co. Name: _____ Samplers Name: Madelyn Haas

Project #: _____ Project Account #: _____

MDEQ PM: _____ District: _____

Suspected COC's: Petroleum_____ Solvent X Drycleaner_____ Other_____

Point Information

Name of Point/Well VP-4 Location of Point/Well: _____

Date of Point/Well installation_____ Time of Installation: _____

Subslab _____ Soil Gas Probe X Depth: 5 ft Volume _____ml

Exterior Point size (volume):_____ml

Permanent: X Temporary: _____ Probe Material: stainless steel _____ Teflon X PVC_____

Weather Conditions: Temp. 36° Rain Event: Y / N? Amount of rain: _____ Date: _____

Surface Type: Asphalt____ Concrete____ Grass X Surface Thickness: _____inches

Surface Staining: Y / (N?) Comments_____

Pressure Reading of Point/Well: _____ (in/H20) or (in/Hg) 0.00 mBAR

Moisture Check: Evident with syringe: Y / (N?) Evident with pump: Y / (N?)

Low Permeability Soil Check: Evident with Syringe: Y / (N?) Evident with pump: Y / (N?)

Initial Field Readings: Where? VP-4 O2 21.3%, CO2 0.6 %, CH4 0.1 %

Relative humidity: 83% in/Hg, Barometric Pressure: 28.90 in/Hg, Meter used GEM5000

Initial PID Reading: 0.0 ppm, Instrument used: MINIRAE LITE, Calibration Date: 2/11/22

Leak Detection

Bottle Vac #:_____, Regulator #: 11353

Sample Summa Canister #: 20160 1L or 6L? Duplicate Summa Canister #:_____ 1L or 6L?

Tubing Type: Teflon_____, Polyethylene_____, Master Flex X, Nylon Y Other_____

Tubing Diam: 1/4 inches ID, Tubing Length: 5 per foot, Moisture trap: Y / N? Volume: 107 ml

Tubing certified clean: Y / N? Field purged with Nitrogen: Y / N?

Shut In Test completed for Sample Train: Y / N? -5 (pressure) in/Hg held for 5 minutes

Leak Test performed on vapor point/soil gas point: Y / N?

Tracer Gas utilized: Y / N? Helium X, IPA_____, Other_____

Shroud Type filled with tracer gas: Y / N? Pressurized: Y / N? (Not part of MDEQ SOP)

Total volume of tubing: 107 ml X 3 = 321 Tubing Purge Volume (ml)

Pump used: Y / N? Pump Flow Rate: 200 mL/min Syringe used: Y / N? _____pulls

Evidence of leakage: Y / N? Regulator Gauge Baseline Reading: 0 in/Hg

Sample container: Bottle Vac or Summa Canister ?

Initial Pressure Reading: -26 **in/Hg, Shroud Helium:** 21.1 **% Start Time:** 1230

2nd Pressure Reading: -24 **in/Hg, Shroud Helium:** 20.7 **% Time:** 1231

3rd Pressure Reading: -16 **in/Hg, Shroud Helium:** 20.7 **% Time:** 1232

4th Pressure Reading: -8 **in/Hg, Shroud Helium:** 20.2 **% Time:** 1234

Final Pressure Reading: -3 **in/Hg, Shroud Helium:** 20.0 **% End Time:** 1235

Final Field Readings: **Time:** 1238 Evidence of Moisture in Bottle Vac: Y / N?

PID 0.0 ppm, O2 21.6 %, CO2 0.6 %, CH4 0.1 %

Additional Notes:

Other Potential Ambient sources of VOC's on-site? _____

Other Potential Ambient sources of VOC's off-site? _____

Sample storage_____ Sample Shipping method_____

Photo documentation of well point included? Y / N

Sampler's Signature: _____ Date: 2/11/22

Attachments: Purge Volume Calculation form, Boring Log & Photograph

PURGE VOLUME CALCULATIONS

THIS FORM TO BE USED ONLY INCONJUCTION WITH
ATLAS VAPOR SOILGAS ASSESSMENT SAMPLING DATA SHEET

Site Name: VP-4 Site Location: _____

Vapor Point ID _____

Location of Vapor Point Interior _____ Exterior X

Volume for Atlas' Standard Tubing Sizes (per foot) Black Nylon Tubing OD 1/4" and 1/4" Lab Tubing from Pace/Esc		
Tubing Size	*Volume/ft.*	*Volume/ft*
(inches ID)*	*(liters)*	*(mL)**
3/16"	0.005	5

Volume for Atlas' Exterior Sampling Point (1" x 6" 10 slot PVC)		
Tubing Size	*Volume/ft.*	*Volume/ft*
(inches ID)*	*(liters)*	*(mL)*
1	0.082	82

Calulations for Interior Point & Exterior Point Vapor Implant

Length of tubing	_____	feet (include above and below ground)
Thickness of Interior Concrete	_____	feet
Volume per foot of tubing	5	mL/ft
Volume of tubing =	_____	(legth of tubing (ft)+ Concrete Thickness (ft))*Volume per foot of tubing mL/ft
Purge Volume =		Volume of tubing *3

Calulations for Exterior Point with Atlas Exterior Sampling Point

Length of tubing	5	feet (include above and below ground)
Volume per foot of tubing	5	mL/ft
Volume of tubing =	25	length of tubing (feet)*Volume per foot of tubing mL/ft
Volume of point	82	mL/ft
Purge Volume =	321	(Volume of tubing+ Volume of Point) *3

* = 1 mL = 1 cc

These purge volumes do not include the sand and betonite pack for exterior points.

These calculations are to be used as with stated tubing and points, any deviation from this must be approved by Project Manager

Version 1.1 (5/2016)

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46555 Humboldt Drive, Suite 100
Novi, Michigan 48377
Telephone 248-669-5140

ATLAS

VAPOR /SOIL GAS ASSESSMENT SAMPLING DATA SHEET

Field Sheet

Sample Point ID: VP-5

Date: 2/11/20

Site Name: Detroit Axle

Site Address: 1600 N. 8 mile Rd Ferndale MI

Consultant Co. Name: _____ Samplers Name: _____

Project #: _____ Project Account #: _____

MDEQ PM: _____ District: _____

Suspected COC's: Petroleum_____ Solvent X Drycleaner_____ Other_____

Point Information

Name of Point/Well VP-5 Location of Point/Well: _____

Date of Point/Well installation_____ Time of Installation: _____

Subslab _____ Soil Gas Probe X Depth: 5 ft Volume 107 ml

Exterior Point size (volume):_____ml

Permanent: X Temporary: _____ Probe Material: stainless steel _____ Teflon X PVC_____

Weather Conditions: Temp. 36° Rain Event: Y / N? Amount of rain: _____ Date: _____

Surface Type: Asphalt____ Concrete____ Grass X Surface Thickness: _____inches

Surface Staining: Y / N? Comments_____

Pressure Reading of Point/Well: _____ (in/H20) or (in/Hg) 0-0 mBAR

Moisture Check: Evident with syringe: Y / N? Evident with pump: Y / N?

Low Permeability Soil Check: Evident with Syringe: Y / N? Evident with pump: Y / N?

Initial Field Readings: Where? VP-5 O2 21.3 %, CO2 0.9 %, CH4 0.1 %

Relative humidity: 86% in/Hg, Barometric Pressure: 28.88 in/Hg, Meter used GEM5000

Initial PID Reading: 0.0 ppm, Instrument used: miniRAE lite, Calibration Date: 2/11/20

Leak Detection

Bottle Vac #:_____, Regulator #: 11001

Sample Summa Canister #: 20571 (1L or 6L?) Duplicate Summa Canister #:_____ 1L or 6L?

Tubing Type: Teflon_____, Polyethylene_____, Master Flex X, (Nylon) / Other 0

Tubing Diam: 1/4 inches ID, Tubing Length: 5 per foot, Moisture trap: Y / N? Volume: 107 ml

Tubing certified clean: (Y) / N? Field purged with Nitrogen: Y / (N)?

Shut In Test completed for Sample Train: (Y) / N? -5 (pressure) in/Hg held for 5 minutes

Leak Test performed on vapor point/soil gas point: (Y) / N?

Tracer Gas utilized: (Y) / N? Helium X, IPA_____, Other_____

Shroud Type filled with tracer gas: Y / N? Pressurized: Y / (N)? (Not part of MDEQ SOP)

Total volume of tubing: 107 ml X 3 = 321 Tubing Purge Volume (ml)

Pump used: (Y) / N? Pump Flow Rate: 200 mL/min Syringe used: Y / (N)? _____pulls

Evidence of leakage: Y / (N)? Regulator Gauge Baseline Reading: 0 in/Hg

Sample container: Bottle Vac or Summa Canister ?

Initial Pressure Reading: -26 **in/Hg, Shroud Helium:** 23.2 **% Start Time:** 1323

2nd Pressure Reading: -24 **in/Hg, Shroud Helium:** 23.0 **% Time:** 1323

3rd Pressure Reading: -16 **in/Hg, Shroud Helium:** 22.7 **% Time:** 1324

4th Pressure Reading: -8 **in/Hg, Shroud Helium:** 22.6 **% Time:** 1325

Final Pressure Reading: -3 **in/Hg, Shroud Helium:** 22.4 **% End Time:** 1326

Final Field Readings: **Time:** 1329 Evidence of Moisture in Bottle Vac: Y / N?

PID 0.1 ppm, O2 21.6 %, CO2 0.9 %, CH4 0.1 %

Additional Notes:

Other Potential Ambient sources of VOC's on-site?_____

Other Potential Ambient sources of VOC's off-site?_____

Sample storage_____ Sample Shipping method_____

Photo documentation of well point included? Y / N

Sampler's Signature: X [signature] Date: 2/11/22

Attachments: Purge Volume Calculation form, Boring Log & Photograph

PURGE VOLUME CALCULATIONS

THIS FORM TO BE USED ONLY INCONJUCTION WITH ATLAS VAPOR SOILGAS ASSESSMENT SAMPLING DATA SHEET

Site Name: _____
Vapor Point ID: VP-5
Location of Vapor Point: Interior _____ Exterior X

Site Location: _____

Volume for Atlas' Standard Tubing Sizes (per foot) Black Nylon Tubing OD 1/4" and 1/4" Lab Tubing from Pace/Esc		
Tubing Size	*Volume/ft.*	*Volume/ft*
(inches ID)*	*(liters)*	*(mL)**
3/16"	0.005	5

Volume for Atlas' Exterior Sampling Point (1" x 6" 10 slot PVC)		
Tubing Size	*Volume/ft.*	*Volume/ft*
(inches ID)*	*(liters)*	*(mL)*
1	0.082	82

Calulations for Interior Point & Exterior Point Vapor Implant

Length of tubing	_____	feet (include above and below ground)
Thickness of Interior Concrete	_____	feet
Volume per foot of tubing	5	mL/ft
Volume of tubing =	_____	(legth of tubing (ft)+ Concrete Thickness (ft))*Volume per foot of tubing mL/ft
Purge Volume =		Volume of tubing *3

Calulations for Exterior Point with Atlas Exterior Sampling Point

Length of tubing	5	feet (include above and below ground)
Volume per foot of tubing	5	mL/ft
Volume of tubing =	25	length of tubing (feet)*Volume per foot of tubing mL/ft
Volume of point	82	mL/ft
Purge Volume =	321	(Volume of tubing+ Volume of Point) *3

* = 1 mL = 1 cc
These purge volumes do not include the sand and betonite pack for exterior points.
These calculations are to be used as with stated tubing and points, any deviation from this must be approved by Project Manager

Version 1.1 (5/2016)

Novi Office
46555 Humboldt Drive, Suite 100
Novi, Michigan 48377
Telephone 248-669-5140

ATLAS

VAPOR /SOIL GAS ASSESSMENT SAMPLING DATA SHEET

Field Sheet

Sample Point ID: VP-6

Date: 2/11/22

Site Name: Detroit Axle

Site Address: 1600 W. 8 mile Ferndale

Consultant Co. Name: _____ Samplers Name: M. Hass

Project #: _____ Project Account #: _____

MDEQ PM: _____ District: _____

Suspected COC's: Petroleum _____ Solvent X Drycleaner _____ Other _____

Point Information

Name of Point/Well VP-6 Location of Point/Well: _____

Date of Point/Well installation _____ Time of Installation: _____

Subslab _____ Soil Gas Probe X Depth: 5 ft Volume 107 ml

Exterior Point size (volume): _____ ml

Permanent: X Temporary: _____ Probe Material: stainless steel _____ Teflon X PVC _____

Weather Conditions: Temp. 36° Rain Event: Y / N? Amount of rain: _____ Date: _____

Surface Type: Asphalt ___ Concrete ___ Grass X Surface Thickness: _____ inches

Surface Staining: Y / (N?) Comments _____

Pressure Reading of Point/Well: _____ (in/H20) or (in/Hg) + 0.02 mBAR

Moisture Check: Evident with syringe: Y / (N?) Evident with pump: Y / (N?)

Low Permeability Soil Check: Evident with Syringe: Y / (N?) Evident with pump: Y / (N?)

Initial Field Readings: Where? VP-6 O2 21.3 %, CO2 0.8 %, CH4 0.1 %

Relative humidity: 86% in/Hg, Barometric Pressure: 28.88 in/Hg, Meter used GEM5000

Initial PID Reading: 0.0 ppm, Instrument used: MiniRAE Lite, Calibration Date: 2/11/22

Leak Detection

Bottle Vac #:_____, Regulator #: 012056

Sample Summa Canister #: 20666 (1L) or 6L? Duplicate Summa Canister #:_____ 1L or 6L?

Tubing Type: Teflon_____, Polyethylene_____, Master Flex X, (Nylon) / Other_____

Tubing Diam: 1/4 inches ID, Tubing Length: 5 per foot, Moisture trap: Y / N? Volume: 107 ml

Tubing certified clean: (Y) / N? Field purged with Nitrogen: Y / (N)?

Shut In Test completed for Sample Train: (Y) / N? -6 (pressure) in/Hg held for 5 minutes

Leak Test performed on vapor point/soil gas point: (Y) / N?

Tracer Gas utilized: (Y) / N? Helium X, IPA_____, Other_____

Shroud Type filled with tracer gas: (Y) / N? Pressurized: Y / (N)? (Not part of MDEQ SOP)

Total volume of tubing: 107 ml X 3 = 321 Tubing Purge Volume (ml)

Pump used: (Y) / N? Pump Flow Rate: 200 mL/min Syringe used: Y / (N)? _____pulls

Evidence of leakage: Y / N? Regulator Gauge Baseline Reading: 0 in/Hg

Sample container: Bottle Vac or Summa Canister ?

Initial Pressure Reading: -26 **in/Hg, Shroud Helium:** 22.1 **% Start Time:** 1345

2nd Pressure Reading: -24 **in/Hg, Shroud Helium:** 22.1 **% Time:** 1345

3rd Pressure Reading: -16 **in/Hg, Shroud Helium:** 22.0 **% Time:** 1346

4th Pressure Reading: -8 **in/Hg, Shroud Helium:** 21.8 **% Time:** 1348

Final Pressure Reading: -3 **in/Hg, Shroud Helium:** 21.8 **% End Time:** 1349

Final Field Readings: **Time:** 1351 Evidence of Moisture in Bottle Vac: Y / N?

PID 0.0 ppm, O2 21.2 %, CO2 0.8 %, CH4 0.1 %

Additional Notes:

Other Potential Ambient sources of VOC's on-site? _____

Other Potential Ambient sources of VOC's off-site? _____

Sample storage_____ Sample Shipping method_____

Photo documentation of well point included? Y / N

Sampler's Signature: _____ Date: 2/14/20

Attachments: Purge Volume Calculation form, Boring Log & Photograph

PURGE VOLUME CALCULATIONS

THIS FORM TO BE USED ONLY INCONJUCTION WITH
ATLAS VAPOR SOILGAS ASSESSMENT SAMPLING DATA SHEET

Site Name: _____ Site Location: _____

Vapor Point ID: VP-10

Location of Vapor Point: Interior _____ Exterior ✓

Volume for Atlas' Standard Tubing Sizes (per foot) Black Nylon Tubing OD 1/4" and 1/4" Lab Tubing from Pace/Esc		
Tubing Size	*Volume/ft.*	*Volume/ft*
(inches ID)*	*(liters)*	*(mL)**
3/16"	0.005	5

Volume for Atlas' Exterior Sampling Point (1" x 6" 10 slot PVC)		
Tubing Size	*Volume/ft.*	*Volume/ft*
(inches ID)*	*(liters)*	*(mL)*
1	0.082	82

Calulations for Interior Point & Exterior Point Vapor Implant

Length of tubing	_____	feet (include above and below ground)
Thickness of Interior Concrete	_____	feet
Volume per foot of tubing	5	mL/ft
Volume of tubing =	_____	(legth of tubing (ft)+ Concrete Thickness (ft))*Volume per foot of tubing mL/ft
Purge Volume =		Volume of tubing *3

Calulations for Exterior Point with Atlas Exterior Sampling Point

Length of tubing	5	feet (include above and below ground)
Volume per foot of tubing	5	mL/ft
Volume of tubing =	25	length of tubing (feet)*Volume per foot of tubing mL/ft
Volume of point	82	mL/ft
Purge Volume =	321	(Volume of tubing+ Volume of Point) *3

* = 1 mL = 1 cc

These purge volumes do not include the sand and betonite pack for exterior points.

These calculations are to be used as with stated tubing and points, any deviation from this must be approved by Project Manager

Version 1.1 (5/2016)

Novi Office
46555 Humboldt Drive, Suite 100
Novi, Michigan 48377
Telephone 248-669-5140

ATLAS

VAPOR /SOIL GAS ASSESSMENT SAMPLING DATA SHEET

Field Sheet

Sample Point ID: VP-7

Date: 2/11/22

Site Name: Detroit Axle

Site Address: 1600 W. 8 mile Rd, Ferndale, MI

Consultant Co. Name: _____ Samplers Name: _____

Project #: _____ Project Account #: _____

MDEQ PM: _____ District: _____

Suspected COC's: Petroleum_____ Solvent X Drycleaner_____ Other_____

Point Information

Name of Point/Well VP-7 Location of Point/Well: _____

Date of Point/Well installation_____ Time of Installation: _____

Subslab _____ Soil Gas Probe X Depth: 5 ft Volume 107 ml

Exterior Point size (volume):_____ml

Permanent: X Temporary: _____ Probe Material: stainless steel _____ Teflon X PVC_____

Weather Conditions: Temp. 37° Rain Event: (Y)/ N? Amount of rain: _____ Date: 2/11/22

Surface Type: Asphalt____ Concrete____ Grass X Surface Thickness: _____inches

Surface Staining: Y / (N?) Comments_____

Pressure Reading of Point/Well: _____ (in/H20) or (in/Hg) + 0.025 inHg

Moisture Check: Evident with syringe: Y / (N?) Evident with pump: Y / (N?)

Low Permeability Soil Check: Evident with Syringe: Y / (N?) Evident with pump: Y / (N?)

Initial Field Readings: Where? VP-7 O2 21.5 %, CO2 0.5 %, CH4 0.1 %

Relative humidity: 83% in/Hg, Barometric Pressure: 28.88 in/Hg, Meter used GEM5000

Initial PID Reading: 0.0 ppm, Instrument used: MiniRae Lite, Calibration Date: 2/11/22

Leak Detection

Bottle Vac #:_____, Regulator #: 09594

Sample Summa Canister #: 20575 1L or 6L? Duplicate Summa Canister #:_____ 1L or 6L?

Tubing Type: Teflon_____, Polyethylene_____, Master Flex X, (Nylon) Other X

Tubing Diam: 1/4 inches ID, Tubing Length: 5 per foot, Moisture trap: Y / N? Volume: 107 ml

Tubing certified clean: (Y) / N? Field purged with Nitrogen: Y / (N?)

Shut In Test completed for Sample Train: (Y) / N? -8 (pressure) in/Hg held for 6 minutes

Leak Test performed on vapor point/soil gas point: (Y) / N?

Tracer Gas utilized: (Y) / N? Helium X, IPA_____, Other_____

Shroud Type filled with tracer gas: (Y) / N? Pressurized: Y / (N?) (Not part of MDEQ SOP)

Total volume of tubing: 107 ml X 3 = 321 Tubing Purge Volume (ml)

Pump used: (Y) / N? Pump Flow Rate: 200 ml/min Syringe used: Y / (N?) _____pulls

Evidence of leakage: Y / (N?) Regulator Gauge Baseline Reading: 0 in/Hg

Sample container: Bottle Vac or Summa Canister ?

Initial Pressure Reading: -26 **in/Hg, Shroud Helium:** 24.1 **% Start Time:** 1407

2nd Pressure Reading: -24 **in/Hg, Shroud Helium:** 23.7 **% Time:** 1407

3rd Pressure Reading: -16 **in/Hg, Shroud Helium:** 23.7 **% Time:** 1409

4th Pressure Reading: -8 **in/Hg, Shroud Helium:** 23.6 **% Time:** 1410

Final Pressure Reading: -3 **in/Hg, Shroud Helium:** 23.4 **% End Time:** 1412

Final Field Readings: **Time:** 1415 Evidence of Moisture in Bottle Vac: Y / N?

PID 0.0 ppm, O2 21.5 %, CO2 0.5 %, CH4 0.1 %

Additional Notes:

Other Potential Ambient sources of VOC's on-site? _____

Other Potential Ambient sources of VOC's off-site? _____

Sample storage_____ Sample Shipping method_____

Photo documentation of well point included? Y / N

Sampler's Signature: _____ Date: 2/11/24

Attachments: Purge Volume Calculation form, Boring Log & Photograph

PURGE VOLUME CALCULATIONS

THIS FORM TO BE USED ONLY INCONJUCTION WITH ATLAS VAPOR SOILGAS ASSESSMENT SAMPLING DATA SHEET

Site Name: VP-7 Site Location: _____

Vapor Point ID _____

Location of Vapor Point Interior _____ Exterior X

Volume for Atlas' Standard Tubing Sizes (per foot) Black Nylon Tubing OD 1/4" and 1/4" Lab Tubing from Pace/Esc		
Tubing Size	*Volume/ft.*	*Volume/ft*
(inches ID)*	*(liters)*	*(mL)**
3/16"	0.005	5

Volume for Atlas' Exterior Sampling Point (1" x 6" 10 slot PVC)		
Tubing Size	*Volume/ft.*	*Volume/ft*
(inches ID)*	*(liters)*	*(mL)*
1	0.082	82

Calulations for Interior Point & Exterior Point Vapor Implant

Length of tubing	_____	feet (include above and below ground)
Thickness of Interior Concrete	_____	feet
Volume per foot of tubing	5	mL/ft
Volume of tubing =	_____	(legth of tubing (ft)+ Concrete Thickness (ft))*Volume per foot of tubing mL/ft
Purge Volume =		Volume of tubing *3

Calulations for Exterior Point with Atlas Exterior Sampling Point

Length of tubing	5	feet (include above and below ground)
Volume per foot of tubing	5	mL/ft
Volume of tubing =	25	length of tubing (feet)*Volume per foot of tubing mL/ft
Volume of point	82	mL/ft
Purge Volume =	321	(Volume of tubing+ Volume of Point) *3

* = 1 mL = 1 cc

These purge volumes do not include the sand and betonite pack for exterior points.

These calculations are to be used as with stated tubing and points, any deviation from this must be approved by Project Manager

Version 1.1 (5/2016)

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46555 Humboldt Drive, Suite 100
Novi, Michigan 48377
Telephone 248-669-5140

ATLAS

VAPOR /SOIL GAS ASSESSMENT SAMPLING DATA SHEET

Field Sheet

Sample Point ID: VP-8

Date: 2/15/22

Site Name: Detroit Axle

Site Address: 1600 W. 8 mile Rd Ferndale MI

Consultant Co. Name: _____ Samplers Name: M. Haas

Project #: _____ Project Account #: _____

MDEQ PM: _____ District: _____

Suspected COC's: Petroleum_____ Solvent X Drycleaner_____ Other_____

Point Information

Name of Point/Well VP-8 Location of Point/Well: _____

Date of Point/Well installation_____ Time of Installation: _____

Subslab _____ Soil Gas Probe X Depth: 5 ft Volume 107 ml

Exterior Point size (volume):_____ml

Permanent: X Temporary: _____ Probe Material: stainless steel _____ Teflon X PVC_____

Weather Conditions: Temp. ~~BW~~ 28° Rain Event: Y / N? Amount of rain: _____ Date: _____

Surface Type: Asphalt____ Concrete____ Grass X Surface Thickness: _____inches

Surface Staining: Y / (N?) Comments_____

Pressure Reading of Point/Well: _____ (in/H20) or (in/Hg) 0.0 mBar

Moisture Check: Evident with syringe: Y / (N?) Evident with pump: Y / (N?)

Low Permeability Soil Check: Evident with Syringe: Y / (N?) Evident with pump: Y / (N?)

Initial Field Readings: Where? VP-8 O2 19.9 %, CO2 1.0 %, CH4 0.1 %

Relative humidity: 51% in/Hg, Barometric Pressure: 29.81 in/Hg, Meter used_____

Initial PID Reading: 0.0 ppm, Instrument used: miniRAE lite, Calibration Date: 2/15/22

Leak Detection

Bottle Vac #:_____, Regulator #: 6770

Sample Summa Canister #: 20637 (1L or 6L)? Duplicate Summa Canister #:_____ 1L or 6L?

Tubing Type: Teflon_____, Polyethylene_____, Master Flex X, Nylon / Other X

Tubing Diam: 1/4 inches ID, Tubing Length: 5 per foot, Moisture trap: Y / N? Volume: 107 ml

Tubing certified clean: (Y) / N? Field purged with Nitrogen: Y / (N?)

Shut In Test completed for Sample Train: (Y) / N? -5 (pressure) in/Hg held for 4 minutes

Leak Test performed on vapor point/soil gas point: (Y) / N?

Tracer Gas utilized (Y) / N? Helium X, IPA_____, Other_____

Shroud Type filled with tracer gas: (Y) / N? Pressurized: Y / (N?) (Not part of MDEQ SOP)

Total volume of tubing: 107 ml X 3 = 321 Tubing Purge Volume (ml)

Pump used: Y / (N?) Pump Flow Rate: 0 Syringe used: (Y) / N? 8 pulls

Evidence of leakage: Y / (N?) Regulator Gauge Baseline Reading: 0 in/Hg

Sample container: Bottle Vac or Summa Canister ?

Initial Pressure Reading: -29 **in/Hg, Shroud Helium:** 27.1 **% Start Time:** 1335

2nd Pressure Reading: -24 **in/Hg, Shroud Helium:** 27.0 **% Time:** 1336

3rd Pressure Reading: -16 **in/Hg, Shroud Helium:** 26.8 **% Time:** 1337

4th Pressure Reading: -8 **in/Hg, Shroud Helium:** 26.7 **% Time:** 1339

Final Pressure Reading: -3 **in/Hg, Shroud Helium:** 26.7 **% End Time:** 1340

Final Field Readings: **Time:** 1342 Evidence of Moisture in Bottle Vac: Y / N?

PID _____ppm, O2 19.8 %, CO2 1.6 %, CH4 0.1 %

Additional Notes:

Other Potential Ambient sources of VOC's on-site? _____

Other Potential Ambient sources of VOC's off-site? _____

Sample storage_____ Sample Shipping method_____

Photo documentation of well point included? Y / N

Sampler's Signature: Madelyn Thomas Date: 2/15/22

Attachments: Purge Volume Calculation form, Boring Log & Photograph

PURGE VOLUME CALCULATIONS

THIS FORM TO BE USED ONLY INCONJUCTION WITH ATLAS VAPOR SOILGAS ASSESSMENT SAMPLING DATA SHEET

Site Name: _____ Site Location: _____

Vapor Point ID: VP-8

Location of Vapor Point: Interior _____ Exterior X

Volume for Atlas' Standard Tubing Sizes (per foot) Black Nylon Tubing OD 1/4" and 1/4" Lab Tubing from Pace/Esc		
Tubing Size	*Volume/ft.*	*Volume/ft*
(inches ID)*	*(liters)*	*(mL)**
3/16"	0.005	5

Volume for Atlas' Exterior Sampling Point (1" x 6" 10 slot PVC)		
Tubing Size	*Volume/ft.*	*Volume/ft*
(inches ID)*	*(liters)*	*(mL)*
1	0.082	82

Calulations for Interior Point & Exterior Point Vapor Implant

Length of tubing	_____	feet (include above and below ground)
Thickness of Interior Concrete	_____	feet
Volume per foot of tubing	5	mL/ft
Volume of tubing =	_____	(legth of tubing (ft)+ Concrete Thickness (ft))*Volume per foot of tubing mL/ft
Purge Volume =		Volume of tubing *3

Calulations for Exterior Point with Atlas Exterior Sampling Point

Length of tubing	5	feet (include above and below ground)
Volume per foot of tubing	5	mL/ft
Volume of tubing =	25	length of tubing (feet)*Volume per foot of tubing mL/ft
Volume of point	82	mL/ft
Purge Volume =	321	(Volume of tubing+ Volume of Point) *3

* = 1 mL = 1 cc

These purge volumes do not include the sand and betonite pack for exterior points.

These calculations are to be used as with stated tubing and points, any deviation from this must be approved by Project Manager

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46555 Humboldt Drive, Suite 100
Novi, Michigan 48377
Telephone 248-669-5140

ATLAS

VAPOR /SOIL GAS ASSESSMENT SAMPLING DATA SHEET

Field Sheet

Sample Point ID: VP-9

Date: 2/15/22

Site Name: Detroit Axle

Site Address: 11600 W. 8 mile

Consultant Co. Name: _____ Samplers Name: Madelyn Hevas

Project #: _____ Project Account #: _____

MDEQ PM: _____ District: _____

Suspected COC's: Petroleum_____ Solvent X Drycleaner_____ Other_____

Point Information

Name of Point/Well VP-9 Location of Point/Well: _____

Date of Point/Well installation_____ Time of Installation: _____

Subslab _____ Soil Gas Probe X Depth: 5 ft Volume 107 ml

Exterior Point size (volume):_____ml

Permanent: Y Temporary: _____ Probe Material: stainless steel _____ Teflon X PVC_____

Weather Conditions: Temp. 28° Rain Event: Y / N? Amount of rain: _____ Date: _____

Surface Type: Asphalt____ Concrete____ Grass X Surface Thickness: _____inches

Surface Staining: Y / N? Comments_____

Pressure Reading of Point/Well: _____ (in/H20) or (in/Hg) _____

Moisture Check: Evident with syringe: Y / (N?) Evident with pump: Y / (N?)

Low Permeability Soil Check: Evident with Syringe: Y / (N?) Evident with pump: Y / (N?)

Initial Field Readings: Where? VP-9 O2 20.6 %, CO2 0.8 %, CH4 0.1 %

Relative humidity: 51 % in/Hg, Barometric Pressure: 29.84 in/Hg, Meter used GEM5000

Initial PID Reading: 0.0 ppm, Instrument used: MiniRAE Lite, Calibration Date: 2/15/22

Leak Detection

Bottle Vac #:_____, Regulator #: 7808

Sample Summa Canister #: 20660 (1L or 6L?) Duplicate Summa Canister #:_____ 1L or 6L?

Tubing Type: Teflon_____, Polyethylene_____, Master Flex X, (Nylon / Other)_____

Tubing Diam: 1/4 inches ID, Tubing Length: 5 per foot, Moisture trap: Y / N? Volume: 107 ml

Tubing certified clean: (Y) / N? Field purged with Nitrogen: Y (/ N?)

Shut In Test completed for Sample Train: (Y)/ N? -5 (pressure) in/Hg held for 5 minutes

Leak Test performed on vapor point/soil gas point: (Y)/ N?

Tracer Gas utilized: (Y) / N? Helium X, IPA_____, Other_____

Shroud Type filled with tracer gas: (Y)/ N? Pressurized: Y / (N?) (Not part of MDEQ SOP)

Total volume of tubing: 107 ml X 3 = 321 Tubing Purge Volume (ml)

Pump used: Y / (N?) Pump Flow Rate: _____ Syringe used: (Y)/N? 8 pulls

Evidence of leakage: Y / (N?) Regulator Gauge Baseline Reading: 0 in/Hg

Sample container: Bottle Vac or Summa Canister?

Initial Pressure Reading: -26 **in/Hg, Shroud Helium:** 31.1 **% Start Time:** 1251

2nd Pressure Reading: -24 **in/Hg, Shroud Helium:** 31.1 **% Time:** 1251

3rd Pressure Reading: -16 **in/Hg, Shroud Helium:** 30.9 **% Time:** 1253

4th Pressure Reading: -8 **in/Hg, Shroud Helium:** 30.7 **% Time:** 1254

Final Pressure Reading: -3 **in/Hg, Shroud Helium:** 30.6 **% End Time:** 1255

Final Field Readings: **Time:** 1257 Evidence of Moisture in Bottle Vac: Y / N?

PID 0.0 ppm, O2 20.6 %, CO2 0.8 %, CH4 0.1 %

Additional Notes:

Other Potential Ambient sources of VOC's on-site? _____

Other Potential Ambient sources of VOC's off-site? _____

Sample storage_____ Sample Shipping method_____

Photo documentation of well point included? Y / N

Sampler's Signature: _____ Date: 2/15/22

Attachments: Purge Volume Calculation form, Boring Log & Photograph

PURGE VOLUME CALCULATIONS

THIS FORM TO BE USED ONLY INCONJUCTION WITH ATLAS VAPOR SOILGAS ASSESSMENT SAMPLING DATA SHEET

Site Name: _____ Site Location: _____

Vapor Point ID: VP-9

Location of Vapor Point: Interior _____ Exterior X

Volume for Atlas' Standard Tubing Sizes (per foot) Black Nylon Tubing OD 1/4" and 1/4" Lab Tubing from Pace/Esc		
Tubing Size	*Volume/ft.*	*Volume/ft*
(inches ID)*	*(liters)*	*(mL)**
3/16"	0.005	5

Volume for Atlas' Exterior Sampling Point (1" x 6" 10 slot PVC)		
Tubing Size	*Volume/ft.*	*Volume/ft*
(inches ID)*	*(liters)*	*(mL)*
1	0.082	82

Calulations for Interior Point & Exterior Point Vapor Implant

Length of tubing	_____	feet (include above and below ground)
Thickness of Interior Concrete	_____	feet
Volume per foot of tubing	5	mL/ft
Volume of tubing =	_____	(legth of tubing (ft)+ Concrete Thickness (ft))*Volume per foot of tubing mL/ft
Purge Volume =		Volume of tubing *3

Calulations for Exterior Point with Atlas Exterior Sampling Point

Length of tubing	5	feet (include above and below ground)
Volume per foot of tubing	5	mL/ft
Volume of tubing =	25	length of tubing (feet)*Volume per foot of tubing mL/ft
Volume of point	82	mL/ft
Purge Volume =	321	(Volume of tubing+ Volume of Point) *3

* = 1 mL = 1 cc

These purge volumes do not include the sand and betonite pack for exterior points.

These calculations are to be used as with stated tubing and points, any deviation from this must be approved by Project Manager

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Novi Office
46555 Humboldt Drive, Suite 100
Novi, Michigan 48377
Telephone 248-669-5140

ATLAS

VAPOR /SOIL GAS ASSESSMENT SAMPLING DATA SHEET

Field Sheet

Sample Point ID: VP-1D

Date: 2/15/22

Site Name: Detroit Axle

Site Address: 16000 W. 8 mile Rd Ferndale MI

Consultant Co. Name: _____ Samplers Name: Madelyn Hovan

Project #: _____ Project Account #: _____

MDEQ PM: _____ District: _____

Suspected COC's: Petroleum_____ Solvent X Drycleaner_____ Other_____

Point Information

Name of Point/Well VP-1D Location of Point/Well: _____

Date of Point/Well installation_____ Time of Installation: _____

Subslab _____ Soil Gas Probe X Depth: 5 ft Volume ~~100~~ 107 ml

Exterior Point size (volume):_____ml

Permanent: X Temporary: _____ Probe Material: stainless steel _____ Teflon X PVC_____

Weather Conditions: Temp. 28° Rain Event: Y / (N?) Amount of rain: _____ Date: _____

Surface Type: Asphalt____ Concrete____ Grass X Surface Thickness: _____inches

Surface Staining: Y /(N?) Comments_____

Pressure Reading of Point/Well: _____ (in/H20) or (in/Hg) -0.00 mBar

Moisture Check: Evident with syringe: Y / N? Evident with pump: Y / N?

Low Permeability Soil Check: Evident with Syringe: Y / N? Evident with pump: Y / N?

Initial Field Readings: Where? VP-1D O2 16.6 %, CO2 3.2 %, CH4 0.0 %

Relative humidity: 51% in/Hg, Barometric Pressure: 29.87 in/Hg, Meter used GEM5000

Initial PID Reading: 0.0 ppm, Instrument used: MiniRAE Lite, Calibration Date: 2/15/22

Leak Detection

Bottle Vac #:_____, Regulator #: 113666

Sample Summa Canister #: 20220 (1L or 6L?) Duplicate Summa Canister #:_____ 1L or 6L?

Tubing Type: Teflon_____, Polyethylene_____, Master Flex X, (Nylon) / Other_____

Tubing Diam: 1/4 inches ID, Tubing Length: 5 per foot, Moisture trap: (Y) / N? Volume: 107 ml

Tubing certified clean: (Y) / N? Field purged with Nitrogen: Y / (N?)

Shut In Test completed for Sample Train: Y / N? -6 (pressure) in/Hg held for 3 minutes

Leak Test performed on vapor point/soil gas point: (Y) / N?

Tracer Gas utilized: (Y) / N? Helium X, IPA_____, Other_____

Shroud Type filled with tracer gas: Y / N? Pressurized: Y / N? (Not part of MDEQ SOP)

Total volume of tubing: 107 ml X 3 = 321 Tubing Purge Volume (ml)

Pump used: Y / (N?) Pump Flow Rate: _____ Syringe used: (Y)/N? 8 pulls

Evidence of leakage: Y / (N?) Regulator Gauge Baseline Reading: 0 in/Hg

Sample container: Bottle Vac or (Summa Canister ?)

Initial Pressure Reading: -30 **in/Hg, Shroud Helium:** 30.1 **% Start Time:** 1217

2nd Pressure Reading: -24 **in/Hg, Shroud Helium:** 29.7 **% Time:** 1219

3rd Pressure Reading: -16 **in/Hg, Shroud Helium:** 29.6 **% Time:** 1221

4th Pressure Reading: -8 **in/Hg, Shroud Helium:** 29.4 **% Time:** 1222

Final Pressure Reading: -3 **in/Hg, Shroud Helium:** 29.1 **% End Time:** 1224

Final Field Readings: **Time:**_____ Evidence of Moisture in Bottle Vac: Y / N?

PID 0.0 ppm, O2 16.8 %, CO2 3.1 %, CH4 0.0 %

Additional Notes:

Other Potential Ambient sources of VOC's on-site? _____

Other Potential Ambient sources of VOC's off-site? _____

Sample storage_____ Sample Shipping method_____

Photo documentation of well point included? Y / N

Sampler's Signature: Madelyn Hann Date: 2/15/22

Attachments: Purge Volume Calculation form, Boring Log & Photograph

PURGE VOLUME CALCULATIONS

THIS FORM TO BE USED ONLY INCONJUCTION WITH ATLAS VAPOR SOILGAS ASSESSMENT SAMPLING DATA SHEET

Site Name: _____ Site Location: _____

Vapor Point ID: VP-10

Location of Vapor Point: Interior _____ Exterior X

Volume for Atlas' Standard Tubing Sizes (per foot) Black Nylon Tubing OD 1/4" and 1/4" Lab Tubing from Pace/Esc		
Tubing Size	*Volume/ft.*	*Volume/ft*
(inches ID)*	*(liters)*	*(mL)**
3/16"	0.005	5

Volume for Atlas' Exterior Sampling Point (1" x 6" 10 slot PVC)		
Tubing Size	*Volume/ft.*	*Volume/ft*
(inches ID)*	*(liters)*	*(mL)*
1	0.082	82

Calulations for Interior Point & Exterior Point Vapor Implant

Length of tubing	_____	feet (include above and below ground)
Thickness of Interior Concrete	_____	feet
Volume per foot of tubing	5	mL/ft
Volume of tubing =	_____	(legth of tubing (ft)+ Concrete Thickness (ft))*Volume per foot of tubing mL/ft
Purge Volume =		Volume of tubing *3

Calulations for Exterior Point with Atlas Exterior Sampling Point

Length of tubing	5	feet (include above and below ground)
Volume per foot of tubing	5	mL/ft
Volume of tubing =	25	length of tubing (feet)*Volume per foot of tubing mL/ft
Volume of point	82	mL/ft
Purge Volume =	321	(Volume of tubing+ Volume of Point) *3

* = 1 mL = 1 cc

These purge volumes do not include the sand and betonite pack for exterior points.

These calculations are to be used as with stated tubing and points, any deviation from this must be approved by Project Manager

Version 1.1 (5/2016)

Novi Office
46555 Humboldt Drive, Suite 100
Novi, Michigan 48377
Telephone 248-669-5140

ATLAS

VAPOR /SOIL GAS ASSESSMENT SAMPLING DATA SHEET

Field Sheet

Sample Point ID: VP-11

Date: 2/15/22

Site Name: Detroit Axle

Site Address: 1600 W. Detroit Axle

Consultant Co. Name: _____ Samplers Name: Madelyn Haas

Project #: _____ Project Account #: _____

MDEQ PM: _____ District: _____

Suspected COC's: Petroleum_____ Solvent X Drycleaner_____ Other_____

Point Information

Name of Point/Well VP-11 Location of Point/Well: _____

Date of Point/Well installation_____ Time of Installation: _____

Subslab _____ Soil Gas Probe Y Depth: 5 ft Volume 107 ml

Exterior Point size (volume):_____ml

Permanent: Y Temporary: _____ Probe Material: stainless steel _____ Teflon _____ PVC_____

Weather Conditions: Temp. 20° Rain Event: Y / N? Amount of rain: _____ Date: _____

Surface Type: Asphalt____ Concrete____ Grass X Surface Thickness: _____inches

Surface Staining: Y / (N?) Comments_____

Pressure Reading of Point/Well: _____ (in/H20) or (in/Hg) + 5.853 mBar

Moisture Check: Evident with syringe: Y / (N?) Evident with pump: Y / (N?)

Low Permeability Soil Check: Evident with Syringe: Y / (N?) Evident with pump: Y / (N?)

Initial Field Readings: Where? VP-11 O2 16.3 %, CO2 4.1 %, CH4 0.1 %

Relative humidity: 51% in/Hg, Barometric Pressure: 29.85 in/Hg, Meter used GEM 5000

Initial PID Reading: 0.0 ppm, Instrument used: MiniRAE, Calibration Date: 2/15/22

Leak Detection

Bottle Vac #:_____, Regulator #: 7137

Sample Summa Canister #: 26316 1L or 6L? Duplicate Summa Canister #:_____ 1L or 6L?

Tubing Type: Teflon_____, Polyethylene_____, Master Flex X, Nylon / Other_____

Tubing Diam: 1/4 inches ID, Tubing Length: 5 per foot, Moisture trap: Y / N? Volume: 107 ml

Tubing certified clean: Y / N? Field purged with Nitrogen: Y / N?

Shut In Test completed for Sample Train: Y / N? -5 (pressure) in/Hg held for 6 minutes

Leak Test performed on vapor point/soil gas point: Y / N?

Tracer Gas utilized: Y / N? Helium 0, IPA_____, Other_____

Shroud Type filled with tracer gas: Y / N? Pressurized: Y / N? (Not part of MDEQ SOP)

Total volume of tubing: 107 ml X 3 = 321 Tubing Purge Volume (ml)

Pump used: Y / N? Pump Flow Rate: _____ Syringe used: Y / N? 8 pulls

Evidence of leakage: Y / N? Regulator Gauge Baseline Reading: 0 in/Hg

Sample container: Bottle Vac or Summa Canister ?

Initial Pressure Reading: -30 **in/Hg, Shroud Helium:** 32.1 **% Start Time:** 1430

2nd Pressure Reading: -24 **in/Hg, Shroud Helium:** 32.5 **% Time:** 1431

3rd Pressure Reading: -16 **in/Hg, Shroud Helium:** 32.4 **% Time:** 1433

4th Pressure Reading: -8 **in/Hg, Shroud Helium:** 32.1 **% Time:** 1435

Final Pressure Reading: -3 **in/Hg, Shroud Helium:** 31.8 **% End Time:** 1437

Final Field Readings: **Time:** 1440 Evidence of Moisture in Bottle Vac: Y / N?

PID 0.0 ppm, O2 16.9 %, CO2 4.0 %, CH4 0.1 %

Additional Notes:

Other Potential Ambient sources of VOC's on-site? _____

Other Potential Ambient sources of VOC's off-site? _____

Sample storage_____ Sample Shipping method_____

Photo documentation of well point included? Y / N

Sampler's Signature: Madelyn Lucas Date: 2/15/22

Attachments: Purge Volume Calculation form, Boring Log & Photograph

PURGE VOLUME CALCULATIONS

THIS FORM TO BE USED ONLY INCONJUCTION WITH
ATLAS VAPOR SOILGAS ASSESSMENT SAMPLING DATA SHEET

Site Name: VP-11
Vapor Point ID
Location of Vapor Point Interior _____ Exterior X

Site Location: _____

Volume for Atlas' Standard Tubing Sizes (per foot) Black Nylon Tubing OD 1/4" and 1/4" Lab Tubing from Pace/Esc		
Tubing Size	*Volume/ft.*	*Volume/ft*
(inches ID)*	*(liters)*	*(mL)**
3/16"	0.005	5

Volume for Atlas' Exterior Sampling Point (1" x 6" 10 slot PVC)		
Tubing Size	*Volume/ft.*	*Volume/ft*
(inches ID)*	*(liters)*	*(mL)*
1	0.082	82

Calulations for Interior Point & Exterior Point Vapor Implant

Length of tubing	_____	feet (include above and below ground)
Thickness of Interior Concrete	_____	feet
Volume per foot of tubing	5	mL/ft
Volume of tubing =	_____	(legth of tubing (ft)+ Concrete Thickness (ft))*Volume per foot of tubing mL/ft
Purge Volume =		Volume of tubing *3

Calulations for Exterior Point with Atlas Exterior Sampling Point

Length of tubing	5	feet (include above and below ground)
Volume per foot of tubing	5	mL/ft
Volume of tubing =	25	length of tubing (feet)*Volume per foot of tubing mL/ft
Volume of point	82	mL/ft
Purge Volume =	321	(Volume of tubing+ Volume of Point) *3

* = 1 mL = 1 cc
These purge volumes do not include the sand and betonite pack for exterior points.
These calculations are to be used as with stated tubing and points, any deviation from this must be approved by Project Manager

Version 1.1 (5/2016)

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46555 Humboldt Drive, Suite 100
Novi, Michigan 48377
Telephone 248-669-5140

ATLAS

VAPOR /SOIL GAS ASSESSMENT SAMPLING DATA SHEET

Field Sheet

Sample Point ID: VP-13

Date: 2/15/22

Site Name: Detroit Axle

Site Address: 1600 W. 8 mile Ferndale MI

Consultant Co. Name: _____ Samplers Name: M Haas

Project #: _____ Project Account #: _____

MDEQ PM: _____ District: X

Suspected COC's: Petroleum_____ Solvent X Drycleaner_____ Other_____

Point Information

Name of Point/Well _____ Location of Point/Well: _____

Date of Point/Well installation_____ Time of Installation: _____

Subslab _____ Soil Gas Probe X Depth: 5 ft Volume ~~BBA~~ 107 ml

Exterior Point size (volume):_____ml

Permanent: X Temporary: _____ Probe Material: stainless steel _____ Teflon X PVC_____

Weather Conditions: Temp. 27° Rain Event: Y (N?) Amount of rain: _____ Date: _____

Surface Type: Asphalt____ Concrete____ Grass X Surface Thickness: _____inches

Surface Staining: Y / (N?) Comments_____

Pressure Reading of Point/Well: _____ (in/H20) or (in/Hg) 0.00 mBar

Moisture Check: Evident with syringe: Y / (N?) Evident with pump: Y / (N?)

Low Permeability Soil Check: Evident with Syringe: Y / (N?) Evident with pump: Y / (N?)

Initial Field Readings: Where? ~~SM~~ VP-13 O2 18.8 %, CO2 2.0 %, CH4 0.0 %

Relative humidity: 51° in/Hg, Barometric Pressure: _____ in/Hg, Meter used GEM5000

Initial PID Reading: 0.0 ppm, Instrument used: miniRAE Lite, Calibration Date: 2/15/22

Leak Detection

Bottle Vac #:_____, Regulator #: 1015A

Sample Summa Canister #:_____ 1L or 6L? Duplicate Summa Canister #:_____ 1L or 6L?

Tubing Type: Teflon_____, Polyethylene_____, Master Flex X, (Nylon) / Other X

Tubing Diam: 1/4 inches ID, Tubing Length: 5 per foot, Moisture trap: Y / N? Volume: 107 ml

Tubing certified clean: Y / N? Field purged with Nitrogen: Y / N?

Shut In Test completed for Sample Train: (Y) / N? -7 (pressure) in/Hg held for 4 minutes

Leak Test performed on vapor point/soil gas point: (Y) / N?

Tracer Gas utilized: (Y) / N? Helium X, IPA_____, Other_____

Shroud Type filled with tracer gas: (Y) / N? Pressurized: Y / (N?) (Not part of MDEQ SOP)

Total volume of tubing: 107 ml X 3 = 321 Tubing Purge Volume (ml)

Pump used: Y / (N?) Pump Flow Rate: _____ Syringe used: (Y) / N? 8 pulls

Evidence of leakage: Y / (N?) Regulator Gauge Baseline Reading: 0 in/Hg

Sample container: Bottle Vac or Summa Canister ?

Initial Pressure Reading: -28 **in/Hg, Shroud Helium:** 25.6 **% Start Time:** 1501

2nd Pressure Reading: -24 **in/Hg, Shroud Helium:** 25.4 **% Time:** 1502

3rd Pressure Reading: -16 **in/Hg, Shroud Helium:** 25.3 **% Time:** 1503

4th Pressure Reading: -8 **in/Hg, Shroud Helium:** 25.1 **% Time:** 1504

Final Pressure Reading: -3 **in/Hg, Shroud Helium:** 25.0 **% End Time:** 1506

Final Field Readings: **Time:** 1509 Evidence of Moisture in Bottle Vac: Y / N?

PID 0.0 ppm, O2 18.8 %, CO2 1.9 %, CH4 0.1 %

Additional Notes:

Other Potential Ambient sources of VOC's on-site? _____

Other Potential Ambient sources of VOC's off-site? _____

Sample storage_____ Sample Shipping method_____

Photo documentation of well point included? Y / N

Sampler's Signature: _____ Date: 2/15/25

Attachments: Purge Volume Calculation form, Boring Log & Photograph

PURGE VOLUME CALCULATIONS

THIS FORM TO BE USED ONLY INCONJUCTION WITH
ATLAS VAPOR SOILGAS ASSESSMENT SAMPLING DATA SHEET

Site Name: _____ Site Location: _____
Vapor Point ID VP-13 _____
Location of Vapor Point Interior _____ Exterior X

Volume for Atlas' Standard Tubing Sizes (per foot) Black Nylon Tubing OD 1/4" and 1/4" Lab Tubing from Pace/Esc		
Tubing Size	*Volume/ft.*	*Volume/ft*
(inches ID)*	*(liters)*	*(mL)**
3/16"	0.005	5

Volume for Atlas' Exterior Sampling Point (1" x 6" 10 slot PVC)		
Tubing Size	*Volume/ft.*	*Volume/ft*
(inches ID)*	*(liters)*	*(mL)*
1	0.082	82

Calulations for Interior Point & Exterior Point Vapor Implant

Length of tubing	_____	feet (include above and below ground)
Thickness of Interior Concrete	_____	feet
Volume per foot of tubing	5	mL/ft
Volume of tubing =	_____	(legth of tubing (ft)+ Concrete Thickness (ft))*Volume per foot of tubing mL/ft
Purge Volume =		Volume of tubing *3

Calulations for Exterior Point with Atlas Exterior Sampling Point

Length of tubing	5	feet (include above and below ground)
Volume per foot of tubing	5	mL/ft
Volume of tubing =	25	length of tubing (feet)*Volume per foot of tubing mL/ft
Volume of point	82	mL/ft
Purge Volume =	321	(Volume of tubing+ Volume of Point) *3

* = 1 mL = 1 cc
These purge volumes do not include the sand and betonite pack for exterior points.
These calculations are to be used as with stated tubing and points, any deviation from this must be approved by Project Manager

Version 1.1 (5/2016)

Novi Office
46555 Humboldt Drive, Suite 100
Novi, Michigan 48377
Telephone 248-669-5140

ATLAS

VAPOR /SOIL GAS ASSESSMENT SAMPLING DATA SHEET

Field Sheet

Sample Point ID: VP-14

Date: 2/15/22

Site Name: Detroit Axle

Site Address: 1600 W. 8 mile Ferndale, MI

Consultant Co. Name: _____ Samplers Name: Madelyn Heas

Project #: _____ Project Account #: _____

MDEQ PM: _____ District: _____

Suspected COC's: Petroleum_____ Solvent X Drycleaner_____ Other_____

Point Information

Name of Point/Well VP-14 Location of Point/Well: _____

Date of Point/Well installation_____ Time of Installation: _____

Subslab _____ Soil Gas Probe X Depth: 5 ft Volume BDN 107 ml

Exterior Point size (volume):_____ml

Permanent: X Temporary: _____ Probe Material: stainless steel _____ Teflon X PVC_____

Weather Conditions: Temp. 16° Rain Event: Y / (N?) Amount of rain: _____ Date: _____

Surface Type: Asphalt____ Concrete____ Grass X Surface Thickness: _____inches

Surface Staining: Y / (N?) Comments_____

Pressure Reading of Point/Well: _____ (in/H20) or (in/Hg) 0.00 mBar

Moisture Check: Evident with syringe: Y / (N?) Evident with pump: Y / (N?)

Low Permeability Soil Check: Evident with Syringe: Y / (N?) Evident with pump: Y / (N?)

Initial Field Readings: Where? VP-14 O2 20.1 %, CO2 0.9 %, CH4 0.1 %

Relative humidity: _____ in/Hg, Barometric Pressure: 29.83 in/Hg, Meter used GEM5000

Initial PID Reading: 0.0 ppm, Instrument used: miniRAELite, Calibration Date: 2/15/22

Leak Detection

Bottle Vac #:_____, Regulator #: 10351

Sample Summa Canister #: 20634 (1L) or 6L? Duplicate Summa Canister #:_____ 1L or 6L?

Tubing Type: Teflon_____, Polyethylene_____, Master Flex X, (Nylon) /Other_____

Tubing Diam: 1/4 inches ID, Tubing Length: 5 per foot, Moisture trap: Y / N? Volume: 107 ml

Tubing certified clean: (Y) / N? Field purged with Nitrogen: Y / (N?)

Shut In Test completed for Sample Train: (Y) / N? -5 (pressure) in/Hg held for 4 minutes

Leak Test performed on vapor point/soil gas point: (Y) / N?

Tracer Gas utilized: (Y) / N? Helium X, IPA_____, Other_____

Shroud Type filled with tracer gas: (Y) / N? Pressurized: Y / N? (Not part of MDEQ SOP)

Total volume of tubing: 107 ml X 3 = 321 Tubing Purge Volume (ml)

Pump used: Y (N?) Pump Flow Rate: _____ Syringe used: (Y)/N? 8 pulls

Evidence of leakage: Y (N?) Regulator Gauge Baseline Reading: 0 in/Hg

Sample container: Bottle Vac or Summa Canister ?

Initial Pressure Reading: -29 **in/Hg, Shroud Helium:** 31.0 **% Start Time:** 1021

2nd Pressure Reading: -24 **in/Hg, Shroud Helium:** _____ **% Time:** 1022

3rd Pressure Reading: -16 **in/Hg, Shroud Helium:** _____ **% Time:** 1024

4th Pressure Reading: -8 **in/Hg, Shroud Helium:** _____ **% Time:** 1025

Final Pressure Reading: -3 **in/Hg, Shroud Helium:** _____ **% End Time:** 1027

Final Field Readings: **Time:** 1032 Evidence of Moisture in Bottle Vac: Y / N?

PID 0.0 ppm, O2 19.5 %, CO2 0.8 %, CH4 0.0 %

Additional Notes:

Other Potential Ambient sources of VOC's on-site? _____

Other Potential Ambient sources of VOC's off-site? _____

Sample storage_____ Sample Shipping method_____

Photo documentation of well point included? Y / N

Sampler's Signature: Madelyn Hanson Date: 2/15/20

Attachments: Purge Volume Calculation form, Boring Log & Photograph

PURGE VOLUME CALCULATIONS

THIS FORM TO BE USED ONLY INCONJUCTION WITH
ATLAS VAPOR SOILGAS ASSESSMENT SAMPLING DATA SHEET

Site Name: _____ Site Location: Ferndale, NM
Vapor Point ID VP-14
Location of Vapor Point Interior _____ Exterior X

Volume for Atlas' Standard Tubing Sizes (per foot) Black Nylon Tubing OD 1/4" and 1/4" Lab Tubing from Pace/Esc		
Tubing Size	*Volume/ft.*	*Volume/ft*
(inches ID)*	*(liters)*	*(mL)**
3/16"	0.005	5

Volume for Atlas' Exterior Sampling Point (1" x 6" 10 slot PVC)		
Tubing Size	*Volume/ft.*	*Volume/ft*
(inches ID)*	*(liters)*	*(mL)*
1	0.082	82

Calulations for Interior Point & Exterior Point Vapor Implant

Length of tubing	_____	feet (include above and below ground)
Thickness of Interior Concrete	_____	feet
Volume per foot of tubing	5	mL/ft
Volume of tubing =	_____	(legth of tubing (ft)+ Concrete Thickness (ft))*Volume per foot of tubing mL/ft
Purge Volume =		Volume of tubing *3

Calulations for Exterior Point with Atlas Exterior Sampling Point

Length of tubing	5	feet (include above and below ground)
Volume per foot of tubing	5	mL/ft
Volume of tubing =	25	length of tubing (feet)*Volume per foot of tubing mL/ft
Volume of point	82	mL/ft
Purge Volume =	321	(Volume of tubing+ Volume of Point) *3

* = 1 mL = 1 cc
These purge volumes do not include the sand and betonite pack for exterior points.
These calculations are to be used as with stated tubing and points, any deviation from this must be approved by Project Manager

Version 1.1 (5/2016)

APPENDIX C
LOW-FLOW GROUNDWATER SAMPLING DATA SHEETS

DAILY WATER LEVEL AND LOW FLOW SAMPLING DATA

Page_____ of _____

Job# _____

Date 12/10/21

By M. HAAS

WELL NO.	DEPTH TO FREE PRODUCT	DEPTH TO WATER	DEPTH TO BOTTOM OF WELL	TIME GAUGED	TIME PURGED	SAMPLE TIME	WELL DIA.	NOTES
MW-109	—	5.75	7.66	0956	1000	1032	2"	
MW-108	—	7.07	7.59	1101	1107	1129	2"	
MW-107	—	7.82	12.18	1205	1208	1254	2"	
MW-106	—	8.03	12.36	1339	1342	1429	2"	
MW-121	—	9.94	12.48	1515	1542	1619	2"	DUP-1

F-

T ~~1105~~

DAILY WATER LEVEL AND LOW FLOW SAMPLING DATA

Page_____ of_____

Job#_____

Date 12/10/21

By NP

WELL NO.	DEPTH TO FREE PRODUCT	DEPTH TO WATER	DEPTH TO BOTTOM OF WELL	TIME GAUGED	TIME PURGED	SAMPLE TIME	WELL DIA.	NOTES
MW 110	—	6.46	9.94	0956	1000	1045	2"	
MW 111	—	5.91	8.81	1116	1120	1200	2"	
MW 112	—	5.03	8.79	1225	1229	1310	2"	DUP. 2
MW 119	—	6.68	9.55	1350	1354	1430	2"	
MW 113	—	8.32	12.56	1451	1455	1520	2"	
MW-120		Could Not locate						

ATLAS TECHNICAL LLC

LOW-FLOW GROUNDWATER SAMPLING FIELD

SITE NAME: Detroit Axle

Date: 12/10/21

Well Number: MW- 104

Personnel: MH

Parameters to be analyzed:

MI-ULG

WELL DATA:

Secure Upon Arrival: (X) Yes ( ) No

Well Condition: Good/ Fair/ Bad

Casing Material: PVC

Casing Diameter: 1"/ 2"/ 4"

Well Depth (ft TOC): 12.36

Screen Length: 5'

Depth of Water (ft) (-): 8.03

Well Secured? (X) Yes ( ) No

Time	pH (±0.1)	ORP (±10 mV)	Cond(µsp) (± 3%)	Dis. O^2 (± 10%)	Temp (°F)	Turb. (±10%)	DTW (ft. btoc)	Notes
1344	7.75	22.4	1707	65.4	56.88	33.30	8.05	
1349	7.54	-70.2	1748	7.3	57.45	10.30	8.05	
1354	7.57	-74.0	1603	6.6	57.07	19.10	8.05	
1359	7.63	-66.0	1402	10.7	56.18	5.82	8.05	
1404	7.66	-47.8	1040	25.7	57.93	4.34	8.05	
1409	7.67	-36.6	985.5	31.1	57.64	3.80	8.05	
1414	7.68	-26.4	942.7	33.9	57.25	3.81	8.05	
1419	7.68	-18.0	943.0	34.1	56.73	3.63	8.05	
1424	7.67	-13.8	973.6	32.6	56.05	3.75	8.05	
		Max Time → Sampled @			1429			

SAMPLING DATA:

Sampling Depth: (ft): 11.36

Low Flow Water Level (ft): 8.05

Sample Appearance: Clear/ Cloudy/ Dark

Sample Time: 1429

COMMENTS AND OBSERVATIONS:

Information 2in = 617 ml/ft, 4in = 2470 ml/ft: Vol cyl = $\pi r^2 h$, Vol sphere = $4/3\pi r^3$

ATLAS TECHNICAL LLC

LOW-FLOW GROUNDWATER SAMPLING FIELD

SITE NAME: Detroit Axle

Date: 12/10/21

Well Number: MW- 107

Personnel: MH

Parameters to be analyzed:

MI-ULG

WELL DATA:

Secure Upon Arrival: (X) Yes ( ) No

Well Condition: Good/ Fair/ Bad

Casing Material: PVC

Casing Diameter: 1"/(2")/ 4"

Well Depth (ft TOC): 12.19

Screen Length: 5'

Depth of Water (ft) (-): 7.82

Well Secured? (X) Yes ( ) No

Time	pH (±0.1)	ORP (±10 mV)	Cond(µsp) (± 3%)	Dis. O^2 (± 10%)	Temp (°F)	Turb. (±10%)	DTW (ft. btoc)	Notes
1209	7.65	1.7	708.0	58.0	55.54	118.4	7.83	
1214	7.52	-44.6	690.8	9.4	56.39	32.62	7.83	
1219	7.51	-57.6	681.1	5.9	56.53	12.47	7.84	
1224	7.50	-68.1	682.9	5.5	56.39	10.77	7.84	
1229	7.51	-72.7	683.9	5.6	56.35	8.06	7.83	
1234	7.51	-75.3	689.2	5.4	56.60	6.87	7.84	
1239	7.50	-79.5	690.4	5.2	56.58	5.98	7.83	
1244	7.51	-79.7	688.3	5.2	56.48	4.78	7.83	
1249	7.51	-82.3	683.5	5.2	56.50	4.29	7.83	
		Max Time → Sampled @			1254			

SAMPLING DATA:

Sampling Depth: (ft): ~~12~~ 11.18

Low Flow Water Level (ft): 7.83

Sample Appearance: Clear/ Cloudy/ Dark

Sample Time: 1254

COMMENTS AND OBSERVATIONS:

Information 2in = 617 ml/ft, 4in = 2470 ml/ft: Vol cyl = $\pi r^2 h$, Vol sphere = $4/3\pi r^3$

ATLAS TECHNICAL LLC

LOW-FLOW GROUNDWATER SAMPLING FIELD

SITE NAME: Detroit Axle

Date: 12/10/21

Well Number: MW- 108

Personnel: MH

Parameters to be analyzed:

MI-ULG

WELL DATA:

Secure Upon Arrival: (X) Yes ( ) No

Well Condition: Good/ Fair/ Bad

Casing Material: PVC

Casing Diameter: 1"/(2")/ 4"

Well Depth (ft TOC): 7.59

Screen Length: 5'

Depth of Water (ft) (-): 7.07

Well Secured? (✓) Yes ( ) No

Time	pH (±0.1)	ORP (±10 mV)	Cond(µsp) (± 3%)	Dis. O^2 (± 10%)	Temp (°F)	Turb. (±10%)	DTW (ft. btoc)	Notes
1109	7.51	-107.8	1165	41.3	53.78	5.86	7.14	
1114	7.56	-150.7	943.5	4.6	53.72	3.38	7.14	
1119	7.56	-164.0	931.0	2.8	53.82	3.13	7.15	
1124	7.56	-165.8	940.0	2.3	53.86	3.00	7.15	
		Max Time → Sampled @			1129			

SAMPLING DATA:

Sampling Depth: (ft): 7.50

Low Flow Water Level (ft): 7.15

Sample Appearance: Clear/ Cloudy/ Dark

Sample Time: 1129

COMMENTS AND OBSERVATIONS:

Information 2in = 617 ml/ft, 4in = 2470 ml/ft: Vol cyl = $\pi r^2 h$, Vol sphere = $4/3\pi r^3$

ATLAS TECHNICAL LLC

LOW-FLOW GROUNDWATER SAMPLING FIELD

SITE NAME: Detroit Axle

Date: 12/10/21

Well Number: MW-109

Personnel: MH

Parameters to be analyzed:

MI-ULG

WELL DATA:

Secure Upon Arrival: (X) Yes ( ) No

Well Condition: Good/ Fair/ Bad

Casing Material: PVC

Casing Diameter: 1" (2") 4"

Well Depth (ft TOC): 7.66

Screen Length: 5'

Depth of Water (ft) (-): 5.75

Well Secured? (X) Yes ( ) No

Time	pH (±0.1)	ORP (±10 mV)	Cond(µsp) (± 3%)	Dis. O^2 (± 10%)	Temp (°F)	Turb. (±10%)	DTW (ft. btoc)	Notes
1002	6.85	-70.0	1235	23.1	52.14	5.92	6.50	
1007	~~7.34~~	-174.9	1037	2.1	52.23	6.08	6.51	
1012	7.42	-192.1	1017	2.0	52.25	6.82	6.51	
1017	7.46	-199.0	1029	2.0	52.07	5.58	6.51	
1022	7.46	-200.3	1026	2.2	52.07	4.97	6.51	
1027	7.47	-201.5	1005	2.3	52.25	4.19	6.52	
		Max Time → Sampled @			1032			

SAMPLING DATA:

Sampling Depth: (ft): ~~7.00~~

Low Flow Water Level (ft): 6.52

Sample Appearance: Clear/ Cloudy/ Dark

Sample Time: 1032

COMMENTS AND OBSERVATIONS:

Information 2in = 617 ml/ft, 4in = 2470 ml/ft: Vol cyl = $\pi r^2 h$, Vol sphere = $4/3\pi r^3$

ATLAS TECHNICAL LLC

LOW-FLOW GROUNDWATER SAMPLING FIELD

SITE NAME: Detroit Axle

Date: 12/10/21

Well Number: MW-113

Personnel: MH (NP)

Parameters to be analyzed:

MI-ULG

WELL DATA:

Secure Upon Arrival: (✓) Yes ( ) No

Well Condition: (Good/ Fair/ Bad)

Casing Material: PVC

Casing Diameter: 1" (2") 4"

Well Depth (ft TOC): 12.56

Screen Length: 5'

Depth of Water (ft) (-): 8.32

Well Secured? (✓) Yes ( ) No

Time	pH (±0.1)	ORP (±10 mV)	Cond(µsp) (± 3%)	Dis. O^2 (± 10%)	Temp (°F)	Turb. (±10%)	DTW (ft. btoc)	Notes
1455	7.08	-22.0	1004	11.2	53.7	18.58	8.38	
1500	7.01	0.4	850	22.1	53.7	9.75	8.38	
1505	7.00	14.0	776	44.5	53.6	7.50	8.38	
1510	7.00	20.6	773	48.2	53.5	7.13	8.38	
1515	7.00	23.8	795	47.9	53.5	7.00	8.38	
1520		(1520)						
1525								
1530								
1535								
		Max Time → Sampled @ 1520						

SAMPLING DATA:

Sampling Depth: (ft): 12.06

Low Flow Water Level (ft): 8.38

Sample Appearance: (Clear/ Cloudy/ Dark)

Sample Time: 1520

COMMENTS AND OBSERVATIONS:

Information 2in = 617 ml/ft, 4in = 2470 ml/ft: Vol cyl = $\pi r^2 h$, Vol sphere = $4/3\pi r^3$

ATLAS TECHNICAL LLC

LOW-FLOW GROUNDWATER SAMPLING FIELD

SITE NAME: Detroit Axle

Date: 12/10/21

Well Number: MW- 119

Personnel: MH (NP)

Parameters to be analyzed:

MI-ULG

WELL DATA:

Secure Upon Arrival: (✓) Yes ( ) No

Well Condition: Good/ Fair/ Bad

Casing Material: PVC

Casing Diameter: 1" (2") 4"

Well Depth (ft TOC): 9.55

Screen Length: 5'

Depth of Water (ft) (-): 6.68

Well Secured? (✓) Yes ( ) No

Time	pH (±0.1)	ORP (±10 mV)	Cond(µsp) (± 3%)	Dis. O^2 (± 10%)	Temp (°F)	Turb. (±10%)	DTW (ft. btoc)	Notes
1355	7.04	42.5	709	72.7	52.6	13.83	6.81	
1400	6.99	51.2	705	71.3	52.2	7.30	6.81	
1405	6.98	57.9	707	70.6	52.2	5.91	6.81	
1410	6.96	62.6	708	69.9	52.2	5.55	6.81	
1415	6.98	66.9	709	69.7	52.2	4.97	6.81	
1420	6.98	70.4	709	69.2	52.2	4.91	6.82	
1425	6.96	73.0	716	68.6	52.2	4.67	6.82	
1430								
		Max Time → Sampled @			1430			

SAMPLING DATA:

Sampling Depth: (ft): 9.05

Low Flow Water Level (ft): 6.82

Sample Appearance: Clear/ Cloudy/ Dark

Sample Time: 1430

COMMENTS AND OBSERVATIONS:

Information 2in = 617 ml/ft, 4in = 2470 ml/ft: Vol cyl = $\pi r^2 h$, Vol sphere = $4/3\pi r^3$

ATLAS TECHNICAL LLC

LOW-FLOW GROUNDWATER SAMPLING FIELD

SITE NAME: Detroit Axle

Date: 12/10/21

Well Number: MW-112

Personnel: MH (NP)

Parameters to be analyzed:

MI-ULG

WELL DATA:

Secure Upon Arrival: (✓) Yes ( ) No

Well Condition: Good/ Fair/ Bad

Casing Material: PVC

Casing Diameter: 1" (2") 4"

Well Depth (ft TOC): 8.79

Screen Length: 5'

Depth of Water (ft) (-): 5.03

Well Secured? ( ) Yes ( ) No

Time	pH (±0.1)	ORP (±10 mV)	Cond(µsp) (± 3%)	Dis. O^2 (± 10%)	Temp (°F)	Turb. (±10%)	DTW (ft. btoc)	Notes
1230	7.05	23.7	937	5.2	51.4	52.36	5.11	
1235	7.00	7.1	986	3.5	51.2	20.90	5.12	
1240	7.01	-21.9	1023	3.1	51.0	13.19	5.12	
1245	7.02	-34.3	1031	3.1	50.9	11.97	5.12	
1250	7.03	-42.4	1032	3.2	50.9	8.47	5.11	
1255	7.04	-46.0	1052	3.7	50.8	6.61	5.11	
1300	7.04	-49.9	1055	3.9	50.8	5.78	5.11	
1305	7.04	-50.6	1055	3.9	50.7	5.55	5.11	
1310								
		Max Time → Sampled @			1310			

SAMPLING DATA:

Sampling Depth: (ft): 8.29

Low Flow Water Level (ft): 5.11

Sample Appearance: Clear/ Cloudy/ Dark

Sample Time: 1310

COMMENTS AND OBSERVATIONS: DUP-2

Information 2in = 617 ml/ft, 4in = 2470 ml/ft: Vol cyl = $\pi r^2 h$, Vol sphere = $4/3\pi r^3$

ATLAS TECHNICAL LLC

LOW-FLOW GROUNDWATER SAMPLING FIELD

SITE NAME: Detroit Axle

Date: 12/10/21

Well Number: MW-111

Personnel: MH/NP

Parameters to be analyzed:

MI-ULG

WELL DATA:

Secure Upon Arrival: (✓) Yes ( ) No

Well Condition: Good/ Fair/ Bad

Casing Material: PVC

Casing Diameter: 1" (2") 4"

Well Depth (ft TOC): 8.81

Screen Length: 5'

Depth of Water (ft) (-): 5.91

Well Secured? (✓) Yes ( ) No

Time	pH (±0.1)	ORP (±10 mV)	Cond(µsp) (± 3%)	Dis. O^2 (± 10%)	Temp (°F)	Turb. (±10%)	DTW (ft. btoc)	Notes
1120	7.11	-5.4	457.6	26.3	52.0	146.28	5.96	
1125	6.94	-1.1	465.9	8.0	51.8	65.78	5.97	
1130	6.92	-25.2	485.4	7.3	51.7	27.06	5.98	
1135	6.92	-36.8	503.0	7.0	51.7	18.72	5.98	
1140	6.90	-38.4	523.0	7.9	51.6	14.52	5.99	
1145	6.92	-39.6	523	8.3	51.6	13.31	5.99	
1150	6.91	-38.0	529	10.3	51.5	12.23	5.99	
1155	6.91	-37.3	529	11.4	51.5	11.27	5.99	
1200								
		Max Time → Sampled @						

SAMPLING DATA:

Sampling Depth: (ft): 8.31

Low Flow Water Level (ft): 5.99

Sample Appearance: Clear/ Cloudy/ Dark

Sample Time: 1200

COMMENTS AND OBSERVATIONS:

Information 2in = 617 ml/ft, 4in = 2470 ml/ft: Vol cyl = $\pi r^2 h$, Vol sphere = $4/3\pi r^3$

ATLAS TECHNICAL LLC

LOW-FLOW GROUNDWATER SAMPLING FIELD

SITE NAME: Detroit Axle

Date: 12/10/21

Well Number: MW- 110

Personnel: MH/NP

Parameters to be analyzed:

MI-ULG

WELL DATA:

Secure Upon Arrival: (✓) Yes ( ) No

Well Condition: Good/ Fair/ Bad

Casing Material: PVC

Casing Diameter: 1" (2") 4"

Well Depth (ft TOC): 9.94

Screen Length: 5'

Depth of Water (ft) (-): 6.46

Well Secured? (✓) Yes ( ) No

Time	pH (±0.1)	ORP (±10 mV)	Cond(µsp) (± 3%)	Dis. O^2 (± 10%)	Temp (°F)	Turb. (±10%)	DTW (ft. btoc)	Notes
1000	6.32	3.0	620	8.0	51.6	5.75	6.54	
1005	6.65	-51.2	575	3.2	51.7	5.32	6.55	
1010	6.75	-72.9	578	2.4	51.7	5.10	6.55	
1015	6.76	-80.5	575	2.4	51.7	4.68	6.55	
1020	6.81	-88.9	578	1.8	51.8	4.57	6.55	
1025	6.80	-91.1	575	2.2	51.9	4.62	6.55	
1030	6.81	-93.4	571	2.5	52.0	4.81	6.57	
1035	6.82	-96.0	569	2.5	52.1	5.14	6.57	
1040	6.83	-96.2	566	2.7	52.3	5.35	6.57	
		Max Time → Sampled @			1045			

SAMPLING DATA:

Sampling Depth: (ft): 9.44

Low Flow Water Level (ft): 6.57

Sample Appearance: (Clear)/ Cloudy/ Dark

Sample Time: 1045

COMMENTS AND OBSERVATIONS:

Information 2in = 617 ml/ft, 4in = 2470 ml/ft: Vol cyl = $\pi r^2 h$, Vol sphere = $4/3\pi r^3$

ATLAS TECHNICAL LLC

LOW-FLOW GROUNDWATER SAMPLING FIELD

SITE NAME: Detroit Axle

Date: 12/10/21

Well Number: MW-121

Personnel: MH

Parameters to be analyzed:

MI-ULG

WELL DATA:

Secure Upon Arrival: (X) Yes ( ) No

Well Condition: Good/ Fair/ Bad

Casing Material: PVC

Casing Diameter: 1"/2"/4"

Well Depth (ft TOC):

Screen Length: 5'

Depth of Water (ft) (-): 9.94

Well Secured? ( ) Yes ( ) No

Time	pH (±0.1)	ORP (±10 mV)	Cond(µsp) (± 3%)	Dis. O^2 (± 10%)	Temp (°F)	Turb. (±10%)	DTW (ft. btoc)	Notes
1544	7.85	-173.1	948.7	62.8	54.95	13.70	10.03	
1549	7.56	-248.8	952.9	7.6	58.81	11.58	10.21	
1554	7.60	-255.9	947.1	2.0	59.34	7.98	10.21	
1559	7.58	-247.8	953.1	1.7	59.73	5.29	10.21	
1604	7.57	-242.1	957.1	1.6	59.89	4.49	10.21	
1609	7.58	-238.8	962.6	1.5	59.60	4.20	10.21	
1614	7.59	-236.2	967.5	1.5	59.85	3.94	10.21	
MW19							~~10.21~~	
							10.21	
		Max Time → Sampled @			1619			

SAMPLING DATA:

Sampling Depth: (ft):

Low Flow Water Level (ft):

Sample Appearance: Clear/ Cloudy/ Dark

Sample Time: 1619

COMMENTS AND OBSERVATIONS: DUP-1

Information 2in = 617 ml/ft, 4in = 2470 ml/ft: Vol cyl = $\pi r^2 h$, Vol sphere = $4/3\pi r^3$

DAILY WATER LEVEL AND LOW FLOW SAMPLING DATA

Page ________ of __________
Job# __________
Date 1/20/22
By M. HAAS

Well No.	Depth to Free Product	Depth to Water	Depth to Bottom of Well	Time Gauged	Time Purged	Sample Time	Well Dia.	Notes
MW-104	–	9.46	20.19	1025	1030	1118	2"	DUP-1
MW-120	–	4.22	7.37	1247	1248	1336	2"	

ATLAS TECHNICAL LLC

LOW-FLOW GROUNDWATER SAMPLING FIELD

SITE NAME: Detroit Axle

Date: 1/20/2022

Well Number: MW- 120

Personnel: MH

Parameters to be analyzed:

MI-ULG

WELL DATA:

Secure Upon Arrival: (X) Yes ( ) No

Well Condition: Good/ Fair/ Bad

Casing Material: PVC

Casing Diameter: 1"/ 2"/ 4"

Well Depth (ft TOC):

Screen Length: 5'

Depth of Water (ft) (-):

Well Secured? (X) Yes ( ) No

Time	pH (±0.1)	ORP (±10 mV)	Cond(µsp) (± 3%)	Dis. O^2 (± 10%)	Temp (°F)	Turb. (±10%)	DTW (ft. btoc)	Notes
1251	8.12	57.9	1333	53.2	43.03	311.7	4.39	
1256	7.82	57.2	1133	27.7	42.82	309.1	4.39	
1301	7.80	57.4	1130	31.3	42.67	311.3		
1306	7.76	58.5	1119	31.9	43.16	311.7		
1311	7.75	60.7	1136	31.8	42.93	313.7		
~~1316~~								
~~1321~~								
~~1326~~								
~~1331~~								
		Max Time → Sampled @			1336			

SAMPLING DATA:

Sampling Depth: (ft):

Low Flow Water Level (ft):

Sample Appearance: Clear/ Cloudy/ Dark

Sample Time: 1336

COMMENTS AND OBSERVATIONS: Sample sampled at 1336

Information 2in = 617 ml/ft, 4in = 2470 ml/ft: Vol cyl = $\pi r^2 h$, Vol sphere = $4/3\pi r^3$

ATLAS TECHNICAL LLC

LOW-FLOW GROUNDWATER SAMPLING FIELD

SITE NAME: Detroit Axle

Date: 1/20/2022

Well Number: MW- 104

Personnel: MH

Parameters to be analyzed:

MI-ULG

WELL DATA:

Secure Upon Arrival: (X) Yes ( ) No

Well Condition: Good/ Fair/ Bad

Casing Material: PVC

Casing Diameter: 1"/ (2")/ 4"

Well Depth (ft TOC): 20.19

Screen Length: 5'

Depth of Water (ft) (-): 9.46

Well Secured? (X) Yes ( ) No

Time	pH (±0.1)	ORP (±10 mV)	Cond(µsp) (± 3%)	Dis. O^2 (± 10%)	Temp (°F)	Turb. (±10%)	DTW (ft. btoc)	Notes
1033	7.00	103.1	1902	58.8	52.46	10.60	9.50	
1038	7.03	53.3	1777	29.4	51.76	7.65	9.51	
1043	7.85	39.5	1579	9.7	51.81	2.29	9.52	
1048	7.94	33.0	1502	4.5	52.29	2.84		
1053	7.99	28.1	1485	3.5	52.33	2.15		
1058	8.02	25.2	1492	3.4	52.90	2.21		
1103	8.05	21.9	1481	2.8	52.90	2.16		
1108	8.06	19.7	1505	2.6	53.04	1.96	↓	
1113	8.09	17.1	1511	2.5	52.69	2.06	9.52	
		Max Time → Sampled @			1118			

SAMPLING DATA:

Sampling Depth: (ft): 19.19

Low Flow Water Level (ft): 9.52

Sample Appearance: Clear/ Cloudy/ Dark

Sample Time: 1118

COMMENTS AND OBSERVATIONS: DUP-1

Information 2in = 617 ml/ft, 4in = 2470 ml/ft: Vol cyl = $\pi r^2 h$, Vol sphere = $4/3\pi r^3$

APPENDIX D
LABORATORY ANALYTICAL DATA REPORTS

ANALYTICAL REPORT

February 18, 2022

ATC Group Services - Novi, MI

Sample Delivery Group:	L1462141
Samples Received:	02/16/2022
Project Number:	
Description:	Detroit Axle 1600 W. 8 Mile Road

Report To: Ryann Scott
46555 Humboldt Drive Suite 100
Novi, MI 48377

Entire Report Reviewed By:

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

TABLE OF CONTENTS

VP-1 L1462141-01 Air

Collected by	Collected date/time	Received date/time
Nick Priehs	02/11/22 10:38	02/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG1819602	1	02/17/22 15:41	02/17/22 15:41	CEP	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG1819561	1	02/17/22 12:39	02/17/22 12:39	DBB	Mt. Juliet, TN

VP-2 L1462141-02 Air

Collected by	Collected date/time	Received date/time
Nick Priehs	02/11/22 11:23	02/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG1819602	1	02/17/22 16:18	02/17/22 16:18	CEP	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG1819561	1	02/17/22 12:43	02/17/22 12:43	DBB	Mt. Juliet, TN

VP-3 L1462141-03 Air

Collected by	Collected date/time	Received date/time
Nick Priehs	02/11/22 11:59	02/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG1819602	1	02/17/22 16:55	02/17/22 16:55	CEP	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG1819561	1	02/17/22 12:47	02/17/22 12:47	DBB	Mt. Juliet, TN

VP-4 L1462141-04 Air

Collected by	Collected date/time	Received date/time
Nick Priehs	02/11/22 12:35	02/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG1819602	1	02/17/22 17:31	02/17/22 17:31	CEP	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG1819561	1	02/17/22 14:03	02/17/22 14:03	DBB	Mt. Juliet, TN

VP-5 L1462141-05 Air

Collected by	Collected date/time	Received date/time
Nick Priehs	02/11/22 13:26	02/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG1819602	1	02/17/22 18:11	02/17/22 18:11	CEP	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG1819561	1	02/17/22 14:07	02/17/22 14:07	DBB	Mt. Juliet, TN

VP-6 L1462141-06 Air

Collected by	Collected date/time	Received date/time
Nick Priehs	02/11/22 13:49	02/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG1819602	1	02/17/22 18:48	02/17/22 18:48	CEP	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG1819561	1	02/17/22 14:22	02/17/22 14:22	DBB	Mt. Juliet, TN

VP-7 L1462141-07 Air

Collected by	Collected date/time	Received date/time
Nick Priehs	02/11/22 14:12	02/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG1819602	1	02/17/22 19:23	02/17/22 19:23	CEP	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG1819561	1	02/17/22 14:25	02/17/22 14:25	DBB	Mt. Juliet, TN

VP-8 L1462141-08 Air

Collected by	Collected date/time	Received date/time
Nick Priehs	02/15/22 13:40	02/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG1819602	1	02/17/22 20:00	02/17/22 20:00	CEP	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG1819561	1	02/17/22 14:34	02/17/22 14:34	DBB	Mt. Juliet, TN

VP-9 L1462141-09 Air

Collected by	Collected date/time	Received date/time
Nick Priehs	02/15/22 12:55	02/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG1819602	1	02/17/22 20:36	02/17/22 20:36	CEP	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG1819561	1	02/17/22 14:44	02/17/22 14:44	DBB	Mt. Juliet, TN

VP-10 L1462141-10 Air

Collected by	Collected date/time	Received date/time
Nick Priehs	02/15/22 12:24	02/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG1819602	1	02/17/22 21:13	02/17/22 21:13	CEP	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG1819561	1	02/17/22 14:48	02/17/22 14:48	DBB	Mt. Juliet, TN

VP-11 L1462141-11 Air

Collected by	Collected date/time	Received date/time
Nick Priehs	02/15/22 14:37	02/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG1819602	1	02/17/22 12:40	02/17/22 12:40	CEP	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG1819561	1	02/17/22 15:17	02/17/22 15:17	DBB	Mt. Juliet, TN

VP-13 L1462141-12 Air

Collected by	Collected date/time	Received date/time
Nick Priehs	02/15/22 15:06	02/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG1819602	1	02/17/22 13:20	02/17/22 13:20	CEP	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG1819561	1	02/17/22 15:24	02/17/22 15:24	DBB	Mt. Juliet, TN

VP-14 L1462141-13 Air

Collected by	Collected date/time	Received date/time
Nick Priehs	02/15/22 10:27	02/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG1819602	1	02/17/22 14:00	02/17/22 14:00	CEP	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG1819561	1	02/17/22 15:29	02/17/22 15:29	DBB	Mt. Juliet, TN

DUP-1 L1462141-14 Air

Collected by	Collected date/time	Received date/time
Nick Priehs	02/11/22 00:00	02/16/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG1819602	1	02/17/22 14:38	02/17/22 14:38	CEP	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG1819561	1	02/17/22 15:33	02/17/22 15:33	DBB	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

John Hawkins
Project Manager

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	ND	ND		1	WG1819602
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1819602
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	WG1819602
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1819602
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1819602
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1819602
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1819602
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1819602
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1819602
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1819602
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1819602
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1819602
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1819602
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	WG1819602
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1819602
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG1819602
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1819602
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1819602
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1819602
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1819602
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1819602
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1819602
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1819602
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1819602
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1819602
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1819602
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1819602
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1819602
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1819602
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1819602
Ethanol	64-17-5	46.10	1.25	2.36	3.69	6.96		1	WG1819602
Ethylbenzene	100-41-4	106	0.200	0.867	0.958	4.15		1	WG1819602
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.413	2.03		1	WG1819602
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.217	1.22		1	WG1819602
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.326	1.61		1	WG1819602
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1819602
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1819602
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	WG1819602
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1819602
n-Hexane	110-54-3	86.20	0.630	2.22	ND	ND		1	WG1819602
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1819602
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1819602
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1819602
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	1.28	3.77		1	WG1819602
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1819602
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1819602
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1819602
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1819602
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	WG1819602
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	WG1819602
Styrene	100-42-5	104	0.200	0.851	1.17	4.98		1	WG1819602
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1819602
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG1819602
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1819602
Toluene	108-88-3	92.10	0.500	1.88	10.9	41.1		1	WG1819602
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1819602

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG1819602
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1819602
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1819602
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.495	2.43		1	WG1819602
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1819602
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1819602
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1819602
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1819602
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1819602
m&p-Xylene	1330-20-7	106	0.400	1.73	3.65	15.8		1	WG1819602
o-Xylene	95-47-6	106	0.200	0.867	1.24	5.38		1	WG1819602
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	WG1819602
1,1-Difluoroethane	75-37-6	66.05	1.00	2.70	1.78	4.81		1	WG1819602
1,2,3-Trimethylbenzene	526-73-8	120.10	0.200	0.982	ND	ND		1	WG1819602
Chlorodifluoromethane	75-45-6	86.50	0.200	0.708	ND	ND		1	WG1819602
Ethyl acetate	141-78-6	88	0.200	0.720	ND	ND		1	WG1819602
Methyl Cyclohexane	108-87-2	98.1860	0.200	0.803	0.294	1.18		1	WG1819602
Tert-Amyl Ethyl Ether	919-94-8	116.20	0.200	0.951	ND	ND		1	WG1819602
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*97.6*				WG1819602

Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	WG1819561

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	12.3	29.2		1	WG1819602
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1819602
Benzene	71-43-2	78.10	0.200	0.639	0.294	0.939		1	WG1819602
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1819602
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1819602
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1819602
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1819602
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1819602
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1819602
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1819602
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1819602
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1819602
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1819602
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	WG1819602
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1819602
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG1819602
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1819602
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1819602
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1819602
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1819602
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1819602
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1819602
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1819602
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1819602
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1819602
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1819602
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1819602
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1819602
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1819602
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1819602
Ethanol	64-17-5	46.10	1.25	2.36	12.0	22.6		1	WG1819602
Ethylbenzene	100-41-4	106	0.200	0.867	1.01	4.38		1	WG1819602
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.201	0.987		1	WG1819602
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.232	1.30		1	WG1819602
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.309	1.53		1	WG1819602
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1819602
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1819602
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	WG1819602
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1819602
n-Hexane	110-54-3	86.20	0.630	2.22	ND	ND		1	WG1819602
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1819602
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1819602
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1819602
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	2.15	6.34		1	WG1819602
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1819602
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1819602
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1819602
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1819602
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	WG1819602
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	WG1819602
Styrene	100-42-5	104	0.200	0.851	1.64	6.98		1	WG1819602
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1819602
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG1819602
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1819602
Toluene	108-88-3	92.10	0.500	1.88	10.1	38.0		1	WG1819602
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1819602

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG1819602
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1819602
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1819602
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	WG1819602
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1819602
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1819602
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1819602
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1819602
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1819602
m&p-Xylene	1330-20-7	106	0.400	1.73	3.94	17.1		1	WG1819602
o-Xylene	95-47-6	106	0.200	0.867	1.38	5.98		1	WG1819602
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	WG1819602
1,1-Difluoroethane	75-37-6	66.05	1.00	2.70	3.04	8.21		1	WG1819602
1,2,3-Trimethylbenzene	526-73-8	120.10	0.200	0.982	ND	ND		1	WG1819602
Chlorodifluoromethane	75-45-6	86.50	0.200	0.708	ND	ND		1	WG1819602
Ethyl acetate	141-78-6	88	0.200	0.720	ND	ND		1	WG1819602
Methyl Cyclohexane	108-87-2	98.1860	0.200	0.803	0.280	1.12		1	WG1819602
Tert-Amyl Ethyl Ether	919-94-8	116.20	0.200	0.951	ND	ND		1	WG1819602
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*96.8*				WG1819602

Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	WG1819561

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	1.98	4.71		1	WG1819602
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1819602
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	WG1819602
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1819602
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1819602
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1819602
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1819602
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1819602
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1819602
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1819602
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1819602
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1819602
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1819602
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	WG1819602
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1819602
Cyclohexane	110-82-7	84.20	0.200	0.689	0.262	0.902		1	WG1819602
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1819602
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1819602
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1819602
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1819602
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1819602
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1819602
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1819602
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1819602
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1819602
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1819602
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1819602
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1819602
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1819602
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1819602
Ethanol	64-17-5	46.10	1.25	2.36	81.9	154		1	WG1819602
Ethylbenzene	100-41-4	106	0.200	0.867	1.28	5.55		1	WG1819602
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1819602
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.278	1.56		1	WG1819602
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.297	1.47		1	WG1819602
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1819602
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1819602
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	WG1819602
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1819602
n-Hexane	110-54-3	86.20	0.630	2.22	ND	ND		1	WG1819602
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1819602
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1819602
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1819602
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG1819602
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1819602
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1819602
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1819602
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1819602
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	WG1819602
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	WG1819602
Styrene	100-42-5	104	0.200	0.851	2.19	9.32		1	WG1819602
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1819602
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG1819602
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1819602
Toluene	108-88-3	92.10	0.500	1.88	12.6	47.5		1	WG1819602
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1819602

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG1819602
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1819602
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1819602
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	WG1819602
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1819602
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1819602
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1819602
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1819602
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1819602
m&p-Xylene	1330-20-7	106	0.400	1.73	4.97	21.5		1	WG1819602
o-Xylene	95-47-6	106	0.200	0.867	1.69	7.33		1	WG1819602
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	208	859		1	WG1819602
1,1-Difluoroethane	75-37-6	66.05	1.00	2.70	8.08	21.8		1	WG1819602
1,2,3-Trimethylbenzene	526-73-8	120.10	0.200	0.982	ND	ND		1	WG1819602
Chlorodifluoromethane	75-45-6	86.50	0.200	0.708	ND	ND		1	WG1819602
Ethyl acetate	141-78-6	88	0.200	0.720	ND	ND		1	WG1819602
Methyl Cyclohexane	108-87-2	98.1860	0.200	0.803	0.375	1.51		1	WG1819602
Tert-Amyl Ethyl Ether	919-94-8	116.20	0.200	0.951	ND	ND		1	WG1819602
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*97.3*				WG1819602

Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	WG1819561

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	1.42	3.37		1	WG1819602
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1819602
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	WG1819602
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1819602
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1819602
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1819602
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1819602
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1819602
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1819602
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1819602
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1819602
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1819602
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1819602
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	WG1819602
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1819602
Cyclohexane	110-82-7	84.20	0.200	0.689	0.233	0.802		1	WG1819602
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1819602
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1819602
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1819602
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1819602
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1819602
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1819602
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1819602
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1819602
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1819602
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1819602
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1819602
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1819602
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1819602
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1819602
Ethanol	64-17-5	46.10	1.25	2.36	4.12	7.77		1	WG1819602
Ethylbenzene	100-41-4	106	0.200	0.867	1.05	4.55		1	WG1819602
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1819602
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.289	1.62		1	WG1819602
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.291	1.44		1	WG1819602
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1819602
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1819602
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	WG1819602
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1819602
n-Hexane	110-54-3	86.20	0.630	2.22	ND	ND		1	WG1819602
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1819602
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1819602
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1819602
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG1819602
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1819602
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1819602
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1819602
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1819602
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	WG1819602
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	WG1819602
Styrene	100-42-5	104	0.200	0.851	1.84	7.83		1	WG1819602
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1819602
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG1819602
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1819602
Toluene	108-88-3	92.10	0.500	1.88	10.7	40.3		1	WG1819602
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1819602

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG1819602
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1819602
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1819602
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	WG1819602
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1819602
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1819602
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1819602
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1819602
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1819602
m&p-Xylene	1330-20-7	106	0.400	1.73	4.13	17.9		1	WG1819602
o-Xylene	95-47-6	106	0.200	0.867	1.41	6.11		1	WG1819602
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	WG1819602
1,1-Difluoroethane	75-37-6	66.05	1.00	2.70	1.80	4.86		1	WG1819602
1,2,3-Trimethylbenzene	526-73-8	120.10	0.200	0.982	ND	ND		1	WG1819602
Chlorodifluoromethane	75-45-6	86.50	0.200	0.708	ND	ND		1	WG1819602
Ethyl acetate	141-78-6	88	0.200	0.720	ND	ND		1	WG1819602
Methyl Cyclohexane	108-87-2	98.1860	0.200	0.803	0.343	1.38		1	WG1819602
Tert-Amyl Ethyl Ether	919-94-8	116.20	0.200	0.951	ND	ND		1	WG1819602
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*97.5*				WG1819602

Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	WG1819561

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	11.6	27.6		1	WG1819602
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1819602
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	WG1819602
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1819602
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1819602
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1819602
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1819602
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1819602
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1819602
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1819602
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1819602
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1819602
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1819602
Chloromethane	74-87-3	50.50	0.200	0.413	0.217	0.448		1	WG1819602
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1819602
Cyclohexane	110-82-7	84.20	0.200	0.689	0.221	0.761		1	WG1819602
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1819602
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1819602
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1819602
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1819602
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1819602
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1819602
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1819602
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1819602
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1819602
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1819602
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1819602
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1819602
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1819602
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1819602
Ethanol	64-17-5	46.10	1.25	2.36	11.3	21.3		1	WG1819602
Ethylbenzene	100-41-4	106	0.200	0.867	0.924	4.01		1	WG1819602
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1819602
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	ND	ND		1	WG1819602
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.292	1.44		1	WG1819602
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1819602
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1819602
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	WG1819602
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1819602
n-Hexane	110-54-3	86.20	0.630	2.22	ND	ND		1	WG1819602
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1819602
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1819602
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1819602
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG1819602
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1819602
Methyl methacrylate	80-62-6	100.12	0.200	0.819	0.241	0.987		1	WG1819602
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1819602
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1819602
2-Propanol	67-63-0	60.10	1.25	3.07	42.0	103		1	WG1819602
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	WG1819602
Styrene	100-42-5	104	0.200	0.851	1.52	6.47		1	WG1819602
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1819602
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG1819602
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1819602
Toluene	108-88-3	92.10	0.500	1.88	9.77	36.8		1	WG1819602
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1819602

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG1819602
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1819602
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1819602
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	WG1819602
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1819602
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1819602
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1819602
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1819602
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1819602
m&p-Xylene	1330-20-7	106	0.400	1.73	3.59	15.6		1	WG1819602
o-Xylene	95-47-6	106	0.200	0.867	1.22	5.29		1	WG1819602
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	WG1819602
1,1-Difluoroethane	75-37-6	66.05	1.00	2.70	4.33	11.7		1	WG1819602
1,2,3-Trimethylbenzene	526-73-8	120.10	0.200	0.982	ND	ND		1	WG1819602
Chlorodifluoromethane	75-45-6	86.50	0.200	0.708	ND	ND		1	WG1819602
Ethyl acetate	141-78-6	88	0.200	0.720	ND	ND		1	WG1819602
Methyl Cyclohexane	108-87-2	98.1860	0.200	0.803	0.345	1.39		1	WG1819602
Tert-Amyl Ethyl Ether	919-94-8	116.20	0.200	0.951	ND	ND		1	WG1819602
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*95.9*				WG1819602

Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	0.298		1	WG1819561

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	2.86	6.80		1	WG1819602
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1819602
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	WG1819602
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1819602
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1819602
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1819602
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1819602
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1819602
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1819602
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1819602
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1819602
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1819602
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1819602
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	WG1819602
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1819602
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG1819602
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1819602
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1819602
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1819602
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1819602
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1819602
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1819602
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1819602
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1819602
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1819602
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1819602
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1819602
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1819602
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1819602
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1819602
Ethanol	64-17-5	46.10	1.25	2.36	7.54	14.2		1	WG1819602
Ethylbenzene	100-41-4	106	0.200	0.867	0.901	3.91		1	WG1819602
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1819602
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	ND	ND		1	WG1819602
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.292	1.44		1	WG1819602
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1819602
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1819602
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	WG1819602
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1819602
n-Hexane	110-54-3	86.20	0.630	2.22	ND	ND		1	WG1819602
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1819602
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1819602
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1819602
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG1819602
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1819602
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1819602
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1819602
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1819602
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	WG1819602
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	WG1819602
Styrene	100-42-5	104	0.200	0.851	1.64	6.98		1	WG1819602
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1819602
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG1819602
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1819602
Toluene	108-88-3	92.10	0.500	1.88	8.40	31.6		1	WG1819602
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1819602

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG1819602
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1819602
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1819602
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	WG1819602
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1819602
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1819602
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1819602
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1819602
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1819602
m&p-Xylene	1330-20-7	106	0.400	1.73	3.67	15.9		1	WG1819602
o-Xylene	95-47-6	106	0.200	0.867	1.24	5.38		1	WG1819602
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	WG1819602
1,1-Difluoroethane	75-37-6	66.05	1.00	2.70	3.52	9.51		1	WG1819602
1,2,3-Trimethylbenzene	526-73-8	120.10	0.200	0.982	ND	ND		1	WG1819602
Chlorodifluoromethane	75-45-6	86.50	0.200	0.708	ND	ND		1	WG1819602
Ethyl acetate	141-78-6	88	0.200	0.720	ND	ND		1	WG1819602
Methyl Cyclohexane	108-87-2	98.1860	0.200	0.803	0.282	1.13		1	WG1819602
Tert-Amyl Ethyl Ether	919-94-8	116.20	0.200	0.951	ND	ND		1	WG1819602
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*97.2*				WG1819602

Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	0.155		1	WG1819561

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	3.00	7.13		1	WG1819602
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1819602
Benzene	71-43-2	78.10	0.200	0.639	0.205	0.655		1	WG1819602
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1819602
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1819602
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1819602
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1819602
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1819602
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1819602
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1819602
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1819602
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1819602
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1819602
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	WG1819602
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1819602
Cyclohexane	110-82-7	84.20	0.200	0.689	0.225	0.775		1	WG1819602
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1819602
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1819602
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1819602
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1819602
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1819602
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1819602
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1819602
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1819602
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1819602
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1819602
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1819602
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1819602
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1819602
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1819602
Ethanol	64-17-5	46.10	1.25	2.36	10.1	19.0		1	WG1819602
Ethylbenzene	100-41-4	106	0.200	0.867	1.28	5.55		1	WG1819602
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1819602
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.494	2.78		1	WG1819602
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.312	1.54		1	WG1819602
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1819602
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1819602
Heptane	142-82-5	100	0.200	0.818	0.202	0.826		1	WG1819602
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1819602
n-Hexane	110-54-3	86.20	0.630	2.22	ND	ND		1	WG1819602
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1819602
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1819602
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1819602
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	1.36	4.01		1	WG1819602
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1819602
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1819602
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1819602
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1819602
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	WG1819602
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	WG1819602
Styrene	100-42-5	104	0.200	0.851	2.13	9.06		1	WG1819602
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1819602
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG1819602
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1819602
Toluene	108-88-3	92.10	0.500	1.88	12.5	47.1		1	WG1819602
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1819602

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG1819602
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1819602
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1819602
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	WG1819602
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1819602
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1819602
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1819602
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1819602
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1819602
m&p-Xylene	1330-20-7	106	0.400	1.73	4.93	21.4		1	WG1819602
o-Xylene	95-47-6	106	0.200	0.867	1.66	7.20		1	WG1819602
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	216	892		1	WG1819602
1,1-Difluoroethane	75-37-6	66.05	1.00	2.70	2.50	6.75		1	WG1819602
1,2,3-Trimethylbenzene	526-73-8	120.10	0.200	0.982	ND	ND		1	WG1819602
Chlorodifluoromethane	75-45-6	86.50	0.200	0.708	ND	ND		1	WG1819602
Ethyl acetate	141-78-6	88	0.200	0.720	ND	ND		1	WG1819602
Methyl Cyclohexane	108-87-2	98.1860	0.200	0.803	0.424	1.70		1	WG1819602
Tert-Amyl Ethyl Ether	919-94-8	116.20	0.200	0.951	ND	ND		1	WG1819602
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*97.7*				WG1819602

Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	WG1819561

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	2.52	5.99		1	WG1819602
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1819602
Benzene	71-43-2	78.10	0.200	0.639	0.208	0.664		1	WG1819602
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1819602
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1819602
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1819602
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1819602
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1819602
Carbon disulfide	75-15-0	76.10	0.200	0.622	0.216	0.672		1	WG1819602
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1819602
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1819602
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1819602
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1819602
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	WG1819602
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1819602
Cyclohexane	110-82-7	84.20	0.200	0.689	0.230	0.792		1	WG1819602
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1819602
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1819602
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1819602
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1819602
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1819602
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1819602
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1819602
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1819602
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1819602
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1819602
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1819602
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1819602
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1819602
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1819602
Ethanol	64-17-5	46.10	1.25	2.36	6.77	12.8		1	WG1819602
Ethylbenzene	100-41-4	106	0.200	0.867	0.905	3.92		1	WG1819602
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1819602
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	ND	ND		1	WG1819602
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.297	1.47		1	WG1819602
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1819602
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1819602
Heptane	142-82-5	100	0.200	0.818	0.263	1.08		1	WG1819602
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1819602
n-Hexane	110-54-3	86.20	0.630	2.22	ND	ND		1	WG1819602
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1819602
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1819602
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1819602
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG1819602
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1819602
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1819602
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1819602
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1819602
2-Propanol	67-63-0	60.10	1.25	3.07	1.55	3.81		1	WG1819602
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	WG1819602
Styrene	100-42-5	104	0.200	0.851	1.49	6.34		1	WG1819602
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1819602
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG1819602
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1819602
Toluene	108-88-3	92.10	0.500	1.88	11.9	44.8		1	WG1819602
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1819602

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG1819602
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1819602
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1819602
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	WG1819602
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1819602
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1819602
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1819602
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1819602
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1819602
m&p-Xylene	1330-20-7	106	0.400	1.73	3.53	15.3		1	WG1819602
o-Xylene	95-47-6	106	0.200	0.867	1.21	5.25		1	WG1819602
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	WG1819602
1,1-Difluoroethane	75-37-6	66.05	1.00	2.70	2.84	7.67		1	WG1819602
1,2,3-Trimethylbenzene	526-73-8	120.10	0.200	0.982	ND	ND		1	WG1819602
Chlorodifluoromethane	75-45-6	86.50	0.200	0.708	ND	ND		1	WG1819602
Ethyl acetate	141-78-6	88	0.200	0.720	1.16	4.18		1	WG1819602
Methyl Cyclohexane	108-87-2	98.1860	0.200	0.803	0.303	1.22		1	WG1819602
Tert-Amyl Ethyl Ether	919-94-8	116.20	0.200	0.951	ND	ND		1	WG1819602
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*96.5*				WG1819602

Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	WG1819561

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	1.92	4.56		1	WG1819602
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1819602
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	WG1819602
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1819602
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1819602
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1819602
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1819602
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1819602
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1819602
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1819602
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1819602
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1819602
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1819602
Chloromethane	74-87-3	50.50	0.200	0.413	0.237	0.490		1	WG1819602
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1819602
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG1819602
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1819602
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1819602
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1819602
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1819602
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1819602
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1819602
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1819602
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1819602
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1819602
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1819602
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1819602
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1819602
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1819602
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1819602
Ethanol	64-17-5	46.10	1.25	2.36	8.38	15.8		1	WG1819602
Ethylbenzene	100-41-4	106	0.200	0.867	0.637	2.76		1	WG1819602
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1819602
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	ND	ND		1	WG1819602
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.335	1.66		1	WG1819602
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1819602
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1819602
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	WG1819602
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1819602
n-Hexane	110-54-3	86.20	0.630	2.22	ND	ND		1	WG1819602
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1819602
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1819602
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1819602
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG1819602
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1819602
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1819602
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1819602
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1819602
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	WG1819602
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	WG1819602
Styrene	100-42-5	104	0.200	0.851	0.925	3.93		1	WG1819602
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1819602
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG1819602
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1819602
Toluene	108-88-3	92.10	0.500	1.88	7.02	26.4		1	WG1819602
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1819602

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG1819602
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1819602
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1819602
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	WG1819602
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1819602
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1819602
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1819602
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1819602
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1819602
m&p-Xylene	1330-20-7	106	0.400	1.73	2.35	10.2		1	WG1819602
o-Xylene	95-47-6	106	0.200	0.867	0.810	3.51		1	WG1819602
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	WG1819602
1,1-Difluoroethane	75-37-6	66.05	1.00	2.70	2.33	6.29		1	WG1819602
1,2,3-Trimethylbenzene	526-73-8	120.10	0.200	0.982	ND	ND		1	WG1819602
Chlorodifluoromethane	75-45-6	86.50	0.200	0.708	ND	ND		1	WG1819602
Ethyl acetate	141-78-6	88	0.200	0.720	ND	ND		1	WG1819602
Methyl Cyclohexane	108-87-2	98.1860	0.200	0.803	ND	ND		1	WG1819602
Tert-Amyl Ethyl Ether	919-94-8	116.20	0.200	0.951	ND	ND		1	WG1819602
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*97.5*				WG1819602

Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	0.171		1	WG1819561

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	4.15	9.86		1	WG1819602
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1819602
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	WG1819602
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1819602
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1819602
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1819602
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1819602
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1819602
Carbon disulfide	75-15-0	76.10	0.200	0.622	0.210	0.654		1	WG1819602
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1819602
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1819602
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1819602
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1819602
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	WG1819602
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1819602
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG1819602
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1819602
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1819602
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1819602
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1819602
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1819602
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1819602
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1819602
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1819602
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1819602
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1819602
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1819602
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1819602
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1819602
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1819602
Ethanol	64-17-5	46.10	1.25	2.36	25.2	47.5		1	WG1819602
Ethylbenzene	100-41-4	106	0.200	0.867	1.12	4.86		1	WG1819602
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1819602
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	ND	ND		1	WG1819602
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.246	1.22		1	WG1819602
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1819602
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1819602
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	WG1819602
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1819602
n-Hexane	110-54-3	86.20	0.630	2.22	ND	ND		1	WG1819602
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1819602
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1819602
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1819602
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	1.43	4.22		1	WG1819602
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1819602
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1819602
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1819602
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1819602
2-Propanol	67-63-0	60.10	1.25	3.07	5.60	13.8		1	WG1819602
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	WG1819602
Styrene	100-42-5	104	0.200	0.851	1.69	7.19		1	WG1819602
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1819602
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG1819602
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1819602
Toluene	108-88-3	92.10	0.500	1.88	12.6	47.5		1	WG1819602
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1819602

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG1819602
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1819602
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1819602
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	WG1819602
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1819602
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1819602
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1819602
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1819602
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1819602
m&p-Xylene	1330-20-7	106	0.400	1.73	4.00	17.3		1	WG1819602
o-Xylene	95-47-6	106	0.200	0.867	1.36	5.90		1	WG1819602
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	WG1819602
1,1-Difluoroethane	75-37-6	66.05	1.00	2.70	1.95	5.27		1	WG1819602
1,2,3-Trimethylbenzene	526-73-8	120.10	0.200	0.982	ND	ND		1	WG1819602
Chlorodifluoromethane	75-45-6	86.50	0.200	0.708	ND	ND		1	WG1819602
Ethyl acetate	141-78-6	88	0.200	0.720	ND	ND		1	WG1819602
Methyl Cyclohexane	108-87-2	98.1860	0.200	0.803	0.293	1.18		1	WG1819602
Tert-Amyl Ethyl Ether	919-94-8	116.20	0.200	0.951	ND	ND		1	WG1819602
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*97.1*				WG1819602

Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	WG1819561

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	1.60	3.80		1	WG1819602
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1819602
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	WG1819602
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1819602
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1819602
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1819602
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1819602
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1819602
Carbon disulfide	75-15-0	76.10	0.200	0.622	0.207	0.644		1	WG1819602
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1819602
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1819602
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1819602
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1819602
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	WG1819602
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1819602
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG1819602
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1819602
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1819602
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1819602
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1819602
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1819602
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1819602
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1819602
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1819602
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1819602
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1819602
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1819602
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1819602
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1819602
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1819602
Ethanol	64-17-5	46.10	1.25	2.36	2.45	4.62		1	WG1819602
Ethylbenzene	100-41-4	106	0.200	0.867	1.15	4.99		1	WG1819602
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1819602
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	ND	ND		1	WG1819602
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.238	1.18		1	WG1819602
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1819602
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1819602
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	WG1819602
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1819602
n-Hexane	110-54-3	86.20	0.630	2.22	ND	ND		1	WG1819602
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1819602
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1819602
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1819602
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG1819602
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1819602
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1819602
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1819602
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1819602
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	WG1819602
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	WG1819602
Styrene	100-42-5	104	0.200	0.851	1.58	6.72		1	WG1819602
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1819602
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG1819602
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1819602
Toluene	108-88-3	92.10	0.500	1.88	14.5	54.6		1	WG1819602
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1819602

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG1819602
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1819602
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1819602
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	WG1819602
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1819602
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1819602
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1819602
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1819602
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1819602
m&p-Xylene	1330-20-7	106	0.400	1.73	3.97	17.2		1	WG1819602
o-Xylene	95-47-6	106	0.200	0.867	1.37	5.94		1	WG1819602
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	WG1819602
1,1-Difluoroethane	75-37-6	66.05	1.00	2.70	1.37	3.70		1	WG1819602
1,2,3-Trimethylbenzene	526-73-8	120.10	0.200	0.982	ND	ND		1	WG1819602
Chlorodifluoromethane	75-45-6	86.50	0.200	0.708	ND	ND		1	WG1819602
Ethyl acetate	141-78-6	88	0.200	0.720	ND	ND		1	WG1819602
Methyl Cyclohexane	108-87-2	98.1860	0.200	0.803	0.325	1.31		1	WG1819602
Tert-Amyl Ethyl Ether	919-94-8	116.20	0.200	0.951	ND	ND		1	WG1819602
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*96.1*				WG1819602

Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	WG1819561

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	ND	ND		1	WG1819602
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1819602
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	WG1819602
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1819602
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1819602
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1819602
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1819602
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1819602
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1819602
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1819602
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1819602
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1819602
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1819602
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	WG1819602
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1819602
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG1819602
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1819602
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1819602
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1819602
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1819602
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1819602
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1819602
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1819602
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1819602
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1819602
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1819602
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1819602
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1819602
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1819602
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1819602
Ethanol	64-17-5	46.10	1.25	2.36	5.55	10.5		1	WG1819602
Ethylbenzene	100-41-4	106	0.200	0.867	0.661	2.87		1	WG1819602
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.401	1.97		1	WG1819602
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	ND	ND		1	WG1819602
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.275	1.36		1	WG1819602
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1819602
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1819602
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	WG1819602
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1819602
n-Hexane	110-54-3	86.20	0.630	2.22	ND	ND		1	WG1819602
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1819602
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1819602
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1819602
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG1819602
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1819602
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1819602
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1819602
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1819602
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	WG1819602
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	WG1819602
Styrene	100-42-5	104	0.200	0.851	0.416	1.77		1	WG1819602
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1819602
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG1819602
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1819602
Toluene	108-88-3	92.10	0.500	1.88	2.58	9.72		1	WG1819602
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1819602

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG1819602
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1819602
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1819602
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.373	1.83		1	WG1819602
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1819602
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1819602
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1819602
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1819602
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1819602
m&p-Xylene	1330-20-7	106	0.400	1.73	1.62	7.02		1	WG1819602
o-Xylene	95-47-6	106	0.200	0.867	0.524	2.27		1	WG1819602
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	WG1819602
1,1-Difluoroethane	75-37-6	66.05	1.00	2.70	1.55	4.19		1	WG1819602
1,2,3-Trimethylbenzene	526-73-8	120.10	0.200	0.982	ND	ND		1	WG1819602
Chlorodifluoromethane	75-45-6	86.50	0.200	0.708	ND	ND		1	WG1819602
Ethyl acetate	141-78-6	88	0.200	0.720	ND	ND		1	WG1819602
Methyl Cyclohexane	108-87-2	98.1860	0.200	0.803	ND	ND		1	WG1819602
Tert-Amyl Ethyl Ether	919-94-8	116.20	0.200	0.951	ND	ND		1	WG1819602
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*97.0*				WG1819602

Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	WG1819561

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	2.78	6.61		1	WG1819602
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1819602
Benzene	71-43-2	78.10	0.200	0.639	0.207	0.661		1	WG1819602
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1819602
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1819602
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1819602
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1819602
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1819602
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1819602
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1819602
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1819602
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1819602
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1819602
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	WG1819602
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1819602
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG1819602
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1819602
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1819602
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1819602
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1819602
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1819602
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1819602
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1819602
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1819602
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1819602
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1819602
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1819602
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1819602
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1819602
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1819602
Ethanol	64-17-5	46.10	1.25	2.36	16.4	30.9		1	WG1819602
Ethylbenzene	100-41-4	106	0.200	0.867	0.929	4.03		1	WG1819602
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1819602
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	ND	ND		1	WG1819602
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.305	1.51		1	WG1819602
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1819602
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1819602
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	WG1819602
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1819602
n-Hexane	110-54-3	86.20	0.630	2.22	ND	ND		1	WG1819602
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1819602
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1819602
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1819602
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG1819602
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1819602
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1819602
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1819602
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1819602
2-Propanol	67-63-0	60.10	1.25	3.07	1.55	3.81		1	WG1819602
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	WG1819602
Styrene	100-42-5	104	0.200	0.851	1.41	6.00		1	WG1819602
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1819602
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG1819602
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1819602
Toluene	108-88-3	92.10	0.500	1.88	10.4	39.2		1	WG1819602
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1819602

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG1819602
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1819602
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1819602
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	WG1819602
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1819602
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1819602
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1819602
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1819602
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1819602
m&p-Xylene	1330-20-7	106	0.400	1.73	3.45	15.0		1	WG1819602
o-Xylene	95-47-6	106	0.200	0.867	1.18	5.12		1	WG1819602
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	WG1819602
1,1-Difluoroethane	75-37-6	66.05	1.00	2.70	3.41	9.21		1	WG1819602
1,2,3-Trimethylbenzene	526-73-8	120.10	0.200	0.982	ND	ND		1	WG1819602
Chlorodifluoromethane	75-45-6	86.50	0.200	0.708	ND	ND		1	WG1819602
Ethyl acetate	141-78-6	88	0.200	0.720	ND	ND		1	WG1819602
Methyl Cyclohexane	108-87-2	98.1860	0.200	0.803	0.244	0.980		1	WG1819602
Tert-Amyl Ethyl Ether	919-94-8	116.20	0.200	0.951	ND	ND		1	WG1819602
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*96.0*				WG1819602

Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	WG1819561

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	6.07	14.4		1	WG1819602
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1819602
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	WG1819602
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1819602
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1819602
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1819602
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1819602
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1819602
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1819602
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1819602
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1819602
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1819602
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1819602
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	WG1819602
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1819602
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG1819602
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1819602
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1819602
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1819602
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1819602
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1819602
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1819602
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1819602
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1819602
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1819602
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1819602
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1819602
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1819602
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1819602
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1819602
Ethanol	64-17-5	46.10	1.25	2.36	4.66	8.79		1	WG1819602
Ethylbenzene	100-41-4	106	0.200	0.867	1.26	5.46		1	WG1819602
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.333	1.63		1	WG1819602
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.219	1.23		1	WG1819602
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.343	1.70		1	WG1819602
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1819602
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1819602
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	WG1819602
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1819602
n-Hexane	110-54-3	86.20	0.630	2.22	ND	ND		1	WG1819602
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1819602
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1819602
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1819602
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG1819602
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1819602
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1819602
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1819602
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1819602
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	WG1819602
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	WG1819602
Styrene	100-42-5	104	0.200	0.851	0.894	3.80		1	WG1819602
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1819602
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG1819602
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1819602
Toluene	108-88-3	92.10	0.500	1.88	7.43	28.0		1	WG1819602
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1819602

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG1819602
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1819602
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1819602
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.388	1.90		1	WG1819602
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1819602
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1819602
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1819602
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1819602
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1819602
m&p-Xylene	1330-20-7	106	0.400	1.73	5.05	21.9		1	WG1819602
o-Xylene	95-47-6	106	0.200	0.867	1.75	7.59		1	WG1819602
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	WG1819602
1,1-Difluoroethane	75-37-6	66.05	1.00	2.70	4.68	12.6		1	WG1819602
1,2,3-Trimethylbenzene	526-73-8	120.10	0.200	0.982	ND	ND		1	WG1819602
Chlorodifluoromethane	75-45-6	86.50	0.200	0.708	ND	ND		1	WG1819602
Ethyl acetate	141-78-6	88	0.200	0.720	ND	ND		1	WG1819602
Methyl Cyclohexane	108-87-2	98.1860	0.200	0.803	0.205	0.823		1	WG1819602
Tert-Amyl Ethyl Ether	919-94-8	116.20	0.200	0.951	ND	ND		1	WG1819602
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*98.7*				WG1819602

Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	WG1819561

Method Blank (MB)

(MB) R3761372-3 02/17/22 10:35

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Acetone	U		0.584	1.25
Allyl Chloride	U		0.114	0.200
Benzene	U		0.0715	0.200
Benzyl Chloride	U		0.0598	0.200
Bromodichloromethane	U		0.0702	0.200
Bromoform	U		0.0732	0.600
Bromomethane	U		0.0982	0.200
1,3-Butadiene	U		0.104	2.00
Carbon disulfide	U		0.102	0.200
Carbon tetrachloride	U		0.0732	0.200
Chlorobenzene	U		0.0832	0.200
Chloroethane	U		0.0996	0.200
Chloroform	U		0.0717	0.200
Chloromethane	U		0.103	0.200
2-Chlorotoluene	U		0.0828	0.200
Cyclohexane	U		0.0753	0.200
Dibromochloromethane	U		0.0727	0.200
1,2-Dibromoethane	U		0.0721	0.200
1,2-Dichlorobenzene	U		0.128	0.200
1,3-Dichlorobenzene	U		0.182	0.200
1,4-Dichlorobenzene	U		0.0557	0.200
1,2-Dichloroethane	U		0.0700	0.200
1,1-Dichloroethane	U		0.0723	0.200
1,1-Dichloroethene	U		0.0762	0.200
cis-1,2-Dichloroethene	U		0.0784	0.200
trans-1,2-Dichloroethene	U		0.0673	0.200
1,2-Dichloropropane	U		0.0760	0.200
cis-1,3-Dichloropropene	U		0.0689	0.200
trans-1,3-Dichloropropene	U		0.0728	0.200
1,4-Dioxane	U		0.0833	0.200
Ethylbenzene	U		0.0835	0.200
4-Ethyltoluene	U		0.0783	0.200
Trichlorofluoromethane	U		0.0819	0.200
Dichlorodifluoromethane	U		0.137	0.200
1,1,2-Trichlorotrifluoroethane	U		0.0793	0.200
1,2-Dichlorotetrafluoroethane	U		0.0890	0.200
Heptane	U		0.104	0.200
Hexachloro-1,3-butadiene	U		0.105	0.630
n-Hexane	U		0.206	0.630
Isopropylbenzene	U		0.0777	0.200

Method Blank (MB)

(MB) R3761372-3 02/17/22 10:35

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Methylene Chloride	U		0.0979	0.200
Methyl Butyl Ketone	U		0.133	1.25
2-Butanone (MEK)	U		0.0814	1.25
4-Methyl-2-pentanone (MIBK)	U		0.0765	1.25
Methyl Methacrylate	U		0.0876	0.200
MTBE	U		0.0647	0.200
Naphthalene	U		0.350	0.630
2-Propanol	U		0.264	1.25
Propene	0.229	J	0.0932	1.25
Styrene	U		0.0788	0.200
1,1,2,2-Tetrachloroethane	U		0.0743	0.200
Tetrachloroethylene	U		0.0814	0.200
Tetrahydrofuran	U		0.0734	0.200
Toluene	U		0.0870	0.500
1,2,4-Trichlorobenzene	U		0.148	0.630
1,1,1-Trichloroethane	U		0.0736	0.200
1,1,2-Trichloroethane	U		0.0775	0.200
Trichloroethylene	U		0.0680	0.200
1,2,4-Trimethylbenzene	U		0.0764	0.200
1,3,5-Trimethylbenzene	U		0.0779	0.200
2,2,4-Trimethylpentane	U		0.133	0.200
Vinyl chloride	U		0.0949	0.200
Vinyl Bromide	U		0.0852	0.200
Vinyl acetate	U		0.116	0.200
m&p-Xylene	U		0.135	0.400
o-Xylene	U		0.0828	0.200
Ethanol	U		0.265	1.25
TPH (GC/MS) Low Fraction	U		39.7	200
1,1-Difluoroethane	U		0.129	1.00
1,2,3-Trimethylbenzene	U		0.0805	0.200
Chlorodifluoromethane	U		0.131	0.200
Ethyl acetate	U		0.100	0.200
Methyl Cyclohexane	U		0.0813	0.200
Tert-Amyl Ethyl Ether	U		0.0778	0.200
(S) 1,4-Bromofluorobenzene	*93.9*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3761372-1 02/17/22 09:07 • (LCSD) R3761372-2 02/17/22 09:54

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethanol	3.75	3.38	3.55	90.1	94.7	55.0-148			4.91	25
Propene	3.75	4.05	3.96	108	106	64.0-144			2.25	25
Dichlorodifluoromethane	3.75	3.00	2.94	80.0	78.4	64.0-139			2.02	25
1,2-Dichlorotetrafluoroethane	3.75	3.90	3.88	104	103	70.0-130			0.514	25
Chloromethane	3.75	4.03	3.96	107	106	70.0-130			1.75	25
Vinyl chloride	3.75	3.94	3.86	105	103	70.0-130			2.05	25
1,3-Butadiene	3.75	4.00	3.96	107	106	70.0-130			1.01	25
Bromomethane	3.75	3.96	3.82	106	102	70.0-130			3.60	25
Chloroethane	3.75	3.97	3.93	106	105	70.0-130			1.01	25
Trichlorofluoromethane	3.75	3.90	3.87	104	103	70.0-130			0.772	25
1,1,2-Trichlorotrifluoroethane	3.75	3.92	3.89	105	104	70.0-130			0.768	25
1,1-Dichloroethene	3.75	3.92	3.92	105	105	70.0-130			0.000	25
1,1-Dichloroethane	3.75	3.94	3.82	105	102	70.0-130			3.09	25
Acetone	3.75	3.91	3.89	104	104	70.0-130			0.513	25
2-Propanol	3.75	3.97	4.05	106	108	70.0-139			2.00	25
Carbon disulfide	3.75	4.10	3.62	109	96.5	70.0-130			12.4	25
Methylene Chloride	3.75	3.93	3.88	105	103	70.0-130			1.28	25
MTBE	3.75	3.92	3.82	105	102	70.0-130			2.58	25
trans-1,2-Dichloroethene	3.75	3.96	3.90	106	104	70.0-130			1.53	25
n-Hexane	3.75	3.96	3.84	106	102	70.0-130			3.08	25
Vinyl acetate	3.75	4.02	3.99	107	106	70.0-130			0.749	25
Methyl Ethyl Ketone	3.75	4.12	3.98	110	106	70.0-130			3.46	25
cis-1,2-Dichloroethene	3.75	3.93	3.85	105	103	70.0-130			2.06	25
Chloroform	3.75	3.87	3.89	103	104	70.0-130			0.515	25
Cyclohexane	3.75	3.91	3.88	104	103	70.0-130			0.770	25
1,1,1-Trichloroethane	3.75	3.94	3.84	105	102	70.0-130			2.57	25
Carbon tetrachloride	3.75	3.98	3.88	106	103	70.0-130			2.54	25
Benzene	3.75	3.84	3.84	102	102	70.0-130			0.000	25
1,2-Dichloroethane	3.75	3.87	3.83	103	102	70.0-130			1.04	25
Heptane	3.75	3.40	3.29	90.7	87.7	70.0-130			3.29	25
Trichloroethylene	3.75	3.92	3.84	105	102	70.0-130			2.06	25
1,2-Dichloropropane	3.75	3.92	3.90	105	104	70.0-130			0.512	25
1,4-Dioxane	3.75	3.81	4.04	102	108	70.0-140			5.86	25
Bromodichloromethane	3.75	3.91	3.83	104	102	70.0-130			2.07	25
cis-1,3-Dichloropropene	3.75	3.95	3.87	105	103	70.0-130			2.05	25
4-Methyl-2-pentanone (MIBK)	3.75	4.06	4.18	108	111	70.0-139			2.91	25
Toluene	3.75	3.92	3.81	105	102	70.0-130			2.85	25
trans-1,3-Dichloropropene	3.75	3.96	3.88	106	103	70.0-130			2.04	25
1,1,2-Trichloroethane	3.75	3.84	3.86	102	103	70.0-130			0.519	25
Tetrachloroethylene	3.75	3.98	3.85	106	103	70.0-130			3.32	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3761372-1 02/17/22 09:07 • (LCSD) R3761372-2 02/17/22 09:54

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Methyl Butyl Ketone	3.75	4.25	4.32	113	115	70.0-149			1.63	25
Dibromochloromethane	3.75	3.96	3.91	106	104	70.0-130			1.27	25
1,2-Dibromoethane	3.75	3.93	3.84	105	102	70.0-130			2.32	25
Chlorobenzene	3.75	3.91	3.89	104	104	70.0-130			0.513	25
Ethylbenzene	3.75	3.87	3.88	103	103	70.0-130			0.258	25
m&p-Xylene	7.50	7.83	7.82	104	104	70.0-130			0.128	25
o-Xylene	3.75	3.85	3.87	103	103	70.0-130			0.518	25
Styrene	3.75	3.89	3.92	104	105	70.0-130			0.768	25
Bromoform	3.75	3.98	3.96	106	106	70.0-130			0.504	25
1,1,2,2-Tetrachloroethane	3.75	3.86	3.82	103	102	70.0-130			1.04	25
4-Ethyltoluene	3.75	3.86	3.86	103	103	70.0-130			0.000	25
1,3,5-Trimethylbenzene	3.75	3.98	3.90	106	104	70.0-130			2.03	25
1,2,4-Trimethylbenzene	3.75	4.05	4.05	108	108	70.0-130			0.000	25
1,3-Dichlorobenzene	3.75	3.96	3.93	106	105	70.0-130			0.760	25
1,4-Dichlorobenzene	3.75	3.90	3.90	104	104	70.0-130			0.000	25
Benzyl Chloride	3.75	3.80	3.83	101	102	70.0-152			0.786	25
1,2-Dichlorobenzene	3.75	3.64	3.68	97.1	98.1	70.0-130			1.09	25
1,2,4-Trichlorobenzene	3.75	3.83	3.83	102	102	70.0-160			0.000	25
Hexachloro-1,3-butadiene	3.75	3.91	3.97	104	106	70.0-151			1.52	25
Naphthalene	3.75	4.48	4.47	119	119	70.0-159			0.223	25
TPH (GC/MS) Low Fraction	203	215	213	106	105	70.0-130			0.935	25
Allyl Chloride	3.75	3.75	3.79	100	101	70.0-130			1.06	25
2-Chlorotoluene	3.75	3.82	3.73	102	99.5	70.0-130			2.38	25
Methyl Methacrylate	3.75	4.00	4.02	107	107	70.0-130			0.499	25
Tetrahydrofuran	3.75	4.19	4.07	112	109	70.0-137			2.91	25
2,2,4-Trimethylpentane	3.75	3.98	3.90	106	104	70.0-130			2.03	25
Vinyl Bromide	3.75	3.94	3.93	105	105	70.0-130			0.254	25
Isopropylbenzene	3.75	3.86	3.77	103	101	70.0-130			2.36	25
1,1-Difluoroethane	3.75	3.96	3.89	106	104	70.0-130			1.78	25
1,2,3-Trimethylbenzene	3.75	3.78	3.80	101	101	70.0-130			0.528	25
Chlorodifluoromethane	3.75	3.83	3.86	102	103	70.0-130			0.780	25
Ethyl acetate	3.75	4.08	4.01	109	107	70.0-130			1.73	25
Methyl Cyclohexane	3.75	3.85	3.87	103	103	70.0-130			0.518	25
Tert-Amyl Ethyl Ether	3.75	3.85	3.94	103	105	70.0-130			2.31	25
(S) 1,4-Bromofluorobenzene				*101*	*99.6*	*60.0-140*				

Method Blank (MB)

(MB) R3761173-3 02/17/22 12:33

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Helium	U		0.0259	0.100

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3761173-1 02/17/22 12:08 • (LCSD) R3761173-2 02/17/22 12:14

Analyte	Spike Amount %	LCS Result %	LCSD Result %	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Helium	2.50	2.54	2.50	102	100	70.0-130			1.59	25

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
ATC Group Services - Novi, MI

46555 Humboldt Drive Suite 100
Novi, MI 48377

Billing Information:
Accounts Payable
46555 Humboldt Dr., Ste.100
Novi, MI 48377

Report To:
Ryann Scott

Email To:
Ryann.Scott@atcgs.com

Project Description: Detroit Axle 1600 W. 8mile road

City/State Collected: Ferndale, MI

Please Circle: PT MT CT ET

Phone:
248-669-5140

Client Project #

Lab Project #
ATCNMI-RYANN

Collected by (print):
Nick Prichs

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day ___ Three Day
___ Next Day ___ Five Day
___ Two Day

Date Results Needed

Sample ID	Can #	Flow Cont. #	Collection Date	Collection Time	Canister Pressure/Vacuum Initial	Canister Pressure/Vacuum Final	Analysis: TO-15 Summa	Analysis: Helium			Rem./Contaminant	Sample # (lab only)
VP-1	20214	10377	2/11/22	1038	-26	-3	X	X				-01
VP-2	20309	9532	2/11/22	1123	-27	-3	X	X				-02
VP-3	20256	10388	2/11/22	1159	-27	-3	X	X				-03
VP-4	20160	11353	2/11/22	1235	-26	-3	X	X				-04
VP-5	20571	11001	2/11/22	1326	-26	-3	X	X				-05
VP-6	20666	12056	2/11/22	1349	-26	-3	X	X				-06
VP-7	20575	9594	2/11/22	1412	-26	-3	X	X				-07
VP-8	20637	6770	2/15/22	1346	-29	-3	X	X				-08
VP-9	20660	7808	2/15/22	1255	-26	-3	X	X				-09
VP-10	20220	11366	2/15/22	1224	-30	-3	X	X				-10

Chain of Custody Page ___ of ___

Pace
PEOPLE ADVANCING SCIENCE
MT JULIET, TN
12065 Lebanon Road Mt Juliet, TN 37122
Phone: 615-758-5858 Alt: 800-767-5859
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1462141

C243

Tat

Acctnum: **ATCNMI**
Template: **T203253**
Prelogin: **P903328**
PM: 341 - John Hawkins
PB:
Shipped Via: **FedEX Ground**

Remarks:

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Nick Prichs /	2/15/22	1600	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: __ UPS __ FedEx __ Courier __ _____

Tracking #

Date:	Time:
Date:	Time:
Date: 2/16/22	Time: 900

Hold #

Condition: 14=TOTAL (lab use only) OK
AMB

COC Seal Intact: ___ Y ___ N ___ NA

NCF:

Company Name/Address:
ATC Group Services - Novi, MI

46555 Humboldt Drive Suite 100
Novi, MI 48377

Billing Information:
Accounts Payable
46555 Humboldt Dr., Ste.100
Novi, MI 48377

Report To:
Ryann Scott

Email To:
Ryann.Scott@atcgs.com

Project Description: Detroit Axle 1600 W. 8 mile road

City/State Collected: Ferndale, MI

Please Circle: PT MT CT ET

Phone:
248-669-5140

Client Project #

Lab Project #
ATCNMI-RYANN

Collected by (print):
Nick Prichs

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day ___ Three Day
___ Next Day ___ Five Day
___ Two Day

Date Results Needed

Sample ID	Can #	Flow Cont. #	Collection Date	Collection Time	Canister Pressure/Vacuum Initial	Canister Pressure/Vacuum Final	Analysis: TO-15 Summa	Analysis: Helium			Rem./Contaminant	Sample # (lab only)
VP-11	20316	7137	2/15/22	1437	-30	-3	X	X				-11
VP-13	20172	10154	2/15/22	1506	-28	-3	X	X				-12
VP-14	20634	10351	2/15/22	1027	-29	-3	X	X				-13
DUP-1	20293	10377	2/11/22	0000	-26	-3	X	X				-14
							X					
							X					
							X					
							X					
							X					
							X					

Chain of Custody Page ___ of ___

Pace
PEOPLE ADVANCING SCIENCE
MT JULIET, TN
12065 Lebanon Road Mt Juliet, TN 37122
Phone: 615-758-5858 Alt: 800-767-5859
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1146441

Table #

Acctnum: **ATCNMI**
Template: **T203253**
Prelogin: **P903328**
PM: 341 - John Hawkins
PB: CX 02/03/22

Shipped Via: **FedEX Ground**

Remarks:

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Nick Prichs /	2/15/22	1600	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) K. Holden

Samples returned via: __ UPS __ FedEx __ Courier __ _____

Tracking #

Date: Time:

Date: Time:

Date: 2/16/22 Time: 902

Hold #

Condition: 14 total (lab use only)

AMB

COC Seal Intact: ___Y ___N ___(NA)

NCF:

ANALYTICAL REPORT

January 18, 2022

ATC Group Services - Novi, MI

Sample Delivery Group:	L1442051
Samples Received:	12/14/2021
Project Number:	
Description:	Detroit Axle 1600 W. 8 Mile Road

Report To: Ryann Scott
46555 Humboldt Drive Suite 100
Novi, MI 48377

Entire Report Reviewed By:

John Hawkins
Project Manager

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

MW-106 L1442051-01 GW

Collected by: Nick Priehs | Collected date/time: 12/10/21 14:29 | Received date/time: 12/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2016	WG1790337	1	12/17/21 11:54	12/20/21 16:23	KEG	Mt. Juliet, TN
Mercury by Method 7470A	WG1790263	1	12/16/21 14:05	12/17/21 13:37	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1793384	1	01/04/22 13:05	01/04/22 23:12	JDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1799108	1	01/08/22 09:17	01/11/22 03:42	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1790087	1	12/18/21 14:17	12/18/21 14:17	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1791341	1	12/17/21 20:12	12/17/21 20:12	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1789878	1	12/16/21 14:44	12/17/21 05:11	LEA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1789902	1	12/16/21 07:44	12/16/21 13:45	LEA	Mt. Juliet, TN

MW-107 L1442051-02 GW

Collected by: Nick Priehs | Collected date/time: 12/10/21 12:54 | Received date/time: 12/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2016	WG1790337	1	12/17/21 11:54	12/20/21 16:24	KEG	Mt. Juliet, TN
Mercury by Method 7470A	WG1790263	1	12/16/21 14:05	12/17/21 13:40	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1793384	1	01/04/22 13:05	01/04/22 23:15	JDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1799108	1	01/08/22 09:17	01/11/22 03:45	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1790087	1	12/18/21 14:38	12/18/21 14:38	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1791341	1	12/17/21 20:32	12/17/21 20:32	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1789878	1	12/16/21 14:44	12/17/21 05:32	LEA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1789902	1	12/16/21 07:44	12/16/21 14:02	LEA	Mt. Juliet, TN

MW-108 L1442051-03 GW

Collected by: Nick Priehs | Collected date/time: 12/10/21 11:29 | Received date/time: 12/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2016	WG1790337	1	12/17/21 11:54	12/20/21 16:25	KEG	Mt. Juliet, TN
Mercury by Method 7470A	WG1790263	1	12/16/21 14:05	12/17/21 13:42	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1793384	1	01/04/22 13:05	01/04/22 23:17	JDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1799108	1	01/08/22 09:17	01/11/22 03:48	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1790087	1	12/18/21 14:59	12/18/21 14:59	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1791341	1	12/17/21 20:52	12/17/21 20:52	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1789878	1	12/16/21 14:44	12/17/21 05:53	LEA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1789902	1	12/16/21 07:44	12/16/21 14:20	LEA	Mt. Juliet, TN

MW-109 L1442051-04 GW

Collected by: Nick Priehs | Collected date/time: 12/10/21 10:32 | Received date/time: 12/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2016	WG1790337	1	12/17/21 11:54	12/20/21 16:29	KEG	Mt. Juliet, TN
Mercury by Method 7470A	WG1790263	1	12/16/21 14:05	12/17/21 13:49	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1793384	1	01/04/22 13:05	01/04/22 23:25	JDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1799108	1	01/08/22 09:17	01/11/22 03:52	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1790087	1	12/18/21 15:20	12/18/21 15:20	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1791341	1	12/17/21 21:12	12/17/21 21:12	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1789878	1	12/16/21 14:44	12/17/21 06:15	LEA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1789902	1	12/16/21 07:44	12/16/21 14:37	LEA	Mt. Juliet, TN

MW-110 L1442051-05 GW

Collected by: Nick Priehs | Collected date/time: 12/10/21 10:45 | Received date/time: 12/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2016	WG1791261	1	12/18/21 10:53	12/21/21 18:38	JER	Mt. Juliet, TN
Mercury by Method 7470A	WG1790263	1	12/16/21 14:05	12/17/21 13:51	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1793384	1	01/04/22 13:05	01/04/22 23:28	JDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1799108	1	01/08/22 09:17	01/11/22 03:55	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1790087	1	12/18/21 15:41	12/18/21 15:41	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1791341	1	12/17/21 21:32	12/17/21 21:32	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1789878	1	12/16/21 14:44	12/17/21 06:36	LEA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1789902	1	12/16/21 07:44	12/16/21 14:54	LEA	Mt. Juliet, TN

MW-111 L1442051-06 GW

Collected by: Nick Priehs | Collected date/time: 12/10/21 12:00 | Received date/time: 12/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2016	WG1791261	1	12/18/21 10:53	12/21/21 18:40	JER	Mt. Juliet, TN
Mercury by Method 7470A	WG1790263	1	12/16/21 14:05	12/17/21 13:53	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1793384	1	01/04/22 13:05	01/04/22 23:31	JDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1799108	1	01/08/22 09:17	01/11/22 03:58	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1790087	1	12/18/21 16:02	12/18/21 16:02	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1791341	1	12/17/21 21:51	12/17/21 21:51	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1789878	1	12/16/21 14:44	12/17/21 06:57	LEA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1789902	1	12/16/21 07:44	12/16/21 15:11	LEA	Mt. Juliet, TN

MW-112 L1442051-07 GW

Collected by: Nick Priehs | Collected date/time: 12/10/21 13:10 | Received date/time: 12/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2016	WG1791261	1	12/18/21 10:53	12/21/21 18:45	JER	Mt. Juliet, TN
Mercury by Method 7470A	WG1790263	1	12/16/21 14:05	12/17/21 13:56	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1793384	1	01/04/22 13:05	01/04/22 23:34	JDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1799108	1	01/08/22 09:17	01/11/22 04:02	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1790087	1	12/18/21 16:23	12/18/21 16:23	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1791341	1	12/17/21 22:11	12/17/21 22:11	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1789878	1	12/16/21 14:44	12/17/21 07:18	LEA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1789902	1	12/16/21 07:44	12/16/21 15:29	LEA	Mt. Juliet, TN

MW-113 L1442051-08 GW

Collected by: Nick Priehs | Collected date/time: 12/10/21 15:20 | Received date/time: 12/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2016	WG1791261	1	12/18/21 10:53	12/21/21 18:46	JER	Mt. Juliet, TN
Mercury by Method 7470A	WG1790263	1	12/16/21 14:05	12/17/21 13:58	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1793384	1	01/04/22 13:05	01/04/22 23:36	JDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1799108	1	01/08/22 09:17	01/11/22 04:05	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1790087	1	12/18/21 16:45	12/18/21 16:45	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1791341	1	12/17/21 22:31	12/17/21 22:31	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1789878	1	12/16/21 14:44	12/17/21 07:39	LEA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1789902	1	12/16/21 07:44	12/16/21 15:46	LEA	Mt. Juliet, TN

MW-119 L1442051-09 GW

Collected by: Nick Priehs | Collected date/time: 12/10/21 14:30 | Received date/time: 12/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2016	WG1791261	1	12/18/21 10:53	12/21/21 18:47	JER	Mt. Juliet, TN
Mercury by Method 7470A	WG1790263	1	12/16/21 14:05	12/17/21 14:00	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1798458	1	01/12/22 08:04	01/14/22 02:08	JDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1800316	1	01/12/22 11:15	01/12/22 18:16	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1790087	1	12/18/21 17:06	12/18/21 17:06	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1791341	1	12/17/21 22:51	12/17/21 22:51	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1789878	1	12/16/21 14:44	12/17/21 08:00	LEA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1789902	1	12/16/21 07:44	12/16/21 16:03	LEA	Mt. Juliet, TN

MW-121 L1442051-10 GW

Collected by: Nick Priehs | Collected date/time: 12/10/21 16:19 | Received date/time: 12/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2016	WG1791261	1	12/18/21 10:53	12/21/21 18:48	JER	Mt. Juliet, TN
Mercury by Method 7470A	WG1790263	1	12/16/21 14:05	12/17/21 14:03	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1798458	1	01/12/22 08:04	01/14/22 02:17	JDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1800316	1	01/12/22 11:15	01/12/22 18:20	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1790087	1	12/18/21 17:27	12/18/21 17:27	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1791341	1	12/17/21 23:11	12/17/21 23:11	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1789878	1	12/16/21 14:44	12/17/21 08:21	LEA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1789902	1	12/16/21 07:44	12/16/21 16:21	LEA	Mt. Juliet, TN

DUP-1 L1442051-11 GW

Collected by: Nick Priehs | Collected date/time: 12/10/21 00:00 | Received date/time: 12/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2016	WG1791261	1	12/18/21 10:53	12/21/21 18:49	JER	Mt. Juliet, TN
Mercury by Method 7470A	WG1790263	1	12/16/21 14:05	12/17/21 14:05	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1798458	1	01/12/22 08:04	01/14/22 02:19	JDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1800316	1	01/12/22 11:15	01/12/22 18:23	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1790087	1	12/18/21 17:48	12/18/21 17:48	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1791341	1	12/17/21 23:30	12/17/21 23:30	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1789878	1	12/16/21 14:44	12/17/21 08:42	LEA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1789902	1	12/16/21 07:44	12/16/21 16:38	LEA	Mt. Juliet, TN

DUP-2 L1442051-12 GW

Collected by: Nick Priehs | Collected date/time: 12/10/21 00:00 | Received date/time: 12/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2016	WG1791261	1	12/18/21 10:53	12/21/21 18:50	JER	Mt. Juliet, TN
Mercury by Method 7470A	WG1790263	1	12/16/21 14:05	12/17/21 14:07	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1798458	1	01/12/22 08:04	01/14/22 02:22	JDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1800316	1	01/12/22 11:15	01/12/22 18:26	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1790652	1	12/16/21 19:58	12/16/21 19:58	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1791331	1	12/17/21 16:55	12/17/21 16:55	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1791341	1	12/17/21 23:50	12/17/21 23:50	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1790526	1	12/17/21 00:07	12/17/21 12:09	AGW	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1789902	1	12/16/21 07:44	12/16/21 16:55	LEA	Mt. Juliet, TN

TRIP BLANK L1442051-13 GW

Collected by: Nick Priehs | Collected date/time: 12/10/21 18:00 | Received date/time: 12/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2016	WG1791261	1	12/18/21 10:53	12/21/21 18:52	JER	Mt. Juliet, TN
Mercury by Method 7470A	WG1790263	1	12/16/21 14:05	12/17/21 14:10	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1798458	1	01/12/22 08:04	01/14/22 02:25	JDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1800316	1	01/12/22 11:15	01/12/22 18:37	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1790652	1	12/16/21 14:54	12/16/21 14:54	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1791341	1	12/17/21 19:32	12/17/21 19:32	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1790526	1	12/17/21 00:07	12/17/21 12:30	AGW	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1789902	1	12/16/21 07:44	12/16/21 17:13	LEA	Mt. Juliet, TN

FIELD BLANK L1442051-14 GW

Collected by: Nick Priehs | Collected date/time: 12/10/21 09:15 | Received date/time: 12/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2016	WG1791261	1	12/18/21 10:53	12/21/21 18:54	JER	Mt. Juliet, TN
Mercury by Method 7470A	WG1790263	1	12/16/21 14:05	12/17/21 14:16	MRW	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1798458	1	01/12/22 08:04	01/14/22 02:28	JDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1800316	1	01/12/22 11:15	01/12/22 18:40	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1791434	1	12/17/21 21:08	12/17/21 21:08	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1793365	1	12/22/21 13:36	12/22/21 13:36	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1791341	1	12/17/21 19:52	12/17/21 19:52	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1790526	1	12/17/21 00:07	12/17/21 12:52	AGW	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1790534	1	12/16/21 16:40	12/16/21 22:05	AGW	Mt. Juliet, TN

TRIP BLANK L1442051-15 GW

Collected by: Nick Priehs | Collected date/time: 12/10/21 00:00 | Received date/time: 12/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1791434	1	12/17/21 19:43	12/17/21 19:43	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1793365	1	12/22/21 13:15	12/22/21 13:15	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1791341	1	12/17/21 19:12	12/17/21 19:12	ADM	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

John Hawkins
Project Manager

Wet Chemistry by Method 4500CN E-2016

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cyanide	U		1.80	5.00	1	12/20/2021 16:23	WG1790337

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury,Dissolved	U		0.100	0.200	1	12/17/2021 13:37	WG1790263

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	U		4.40	10.0	1	01/04/2022 23:12	WG1793384
Barium,Dissolved	35.2		0.736	5.00	1	01/04/2022 23:12	WG1793384
Boron,Dissolved	36.0	J	20.0	200	1	01/04/2022 23:12	WG1793384
Calcium,Dissolved	79800		79.3	1000	1	01/04/2022 23:12	WG1793384
Chromium,Dissolved	U		1.40	10.0	1	01/04/2022 23:12	WG1793384
Cobalt,Dissolved	U		0.840	10.0	1	01/04/2022 23:12	WG1793384
Iron,Dissolved	U		18.0	100	1	01/04/2022 23:12	WG1793384
Magnesium,Dissolved	12900		85.3	1000	1	01/04/2022 23:12	WG1793384
Manganese,Dissolved	2.40	B J	0.934	10.0	1	01/04/2022 23:12	WG1793384
Molybdenum,Dissolved	U		1.16	5.00	1	01/04/2022 23:12	WG1793384
Nickel,Dissolved	U		1.61	10.0	1	01/04/2022 23:12	WG1793384
Potassium,Dissolved	2330		261	2000	1	01/04/2022 23:12	WG1793384
Sodium,Dissolved	66600		504	3000	1	01/04/2022 23:12	WG1793384
Strontium,Dissolved	202		0.640	10.0	1	01/04/2022 23:12	WG1793384
Zinc,Dissolved	U		6.52	50.0	1	01/04/2022 23:12	WG1793384

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		18.5	100	1	01/11/2022 03:42	WG1799108
Antimony,Dissolved	U		1.03	4.00	1	01/11/2022 03:42	WG1799108
Beryllium,Dissolved	U		0.190	2.00	1	01/11/2022 03:42	WG1799108
Cadmium,Dissolved	U		0.150	1.00	1	01/11/2022 03:42	WG1799108
Lead,Dissolved	U		0.849	2.00	1	01/11/2022 03:42	WG1799108
Selenium,Dissolved	0.503	J	0.300	2.00	1	01/11/2022 03:42	WG1799108
Silver,Dissolved	U		0.0700	2.00	1	01/11/2022 03:42	WG1799108
Thallium,Dissolved	U		0.121	2.00	1	01/11/2022 03:42	WG1799108
Titanium,Dissolved	U		2.18	20.0	1	01/11/2022 03:42	WG1799108
Vanadium,Dissolved	1.17	J	0.664	5.00	1	01/11/2022 03:42	WG1799108

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	12/18/2021 14:17	WG1790087
Benzene	U		0.0941	1.00	1	12/18/2021 14:17	WG1790087
Bromodichloromethane	U		0.136	1.00	1	12/18/2021 14:17	WG1790087
Bromoform	U		0.129	1.00	1	12/18/2021 14:17	WG1790087
Bromomethane	U		0.605	5.00	1	12/18/2021 14:17	WG1790087
Carbon disulfide	U		0.0962	1.00	1	12/18/2021 14:17	WG1790087
Carbon tetrachloride	U		0.128	1.00	1	12/18/2021 14:17	WG1790087
Chlorobenzene	15.8		0.116	1.00	1	12/18/2021 14:17	WG1790087
Chloroethane	U		0.192	5.00	1	12/18/2021 14:17	WG1790087
Chloroform	U		0.111	5.00	1	12/18/2021 14:17	WG1790087
Cyclohexane	U		0.188	1.00	1	12/18/2021 14:17	WG1790087

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2-Dichlorobenzene	U		0.107	1.00	1	12/18/2021 14:17	WG1790087
1,3-Dichlorobenzene	U		0.110	1.00	1	12/18/2021 14:17	WG1790087
1,4-Dichlorobenzene	U		0.120	1.00	1	12/18/2021 14:17	WG1790087
1,1-Dichloroethane	U		0.100	1.00	1	12/18/2021 14:17	WG1790087
1,2-Dichloroethane	U		0.0819	1.00	1	12/18/2021 14:17	WG1790087
1,1-Dichloroethene	U		0.188	1.00	1	12/18/2021 14:17	WG1790087
cis-1,2-Dichloroethene	U		0.126	1.00	1	12/18/2021 14:17	WG1790087
trans-1,2-Dichloroethene	U		0.149	1.00	1	12/18/2021 14:17	WG1790087
1,2-Dichloropropane	U		0.149	1.00	1	12/18/2021 14:17	WG1790087
1,3-Dichloropropane	U		0.110	1.00	1	12/18/2021 14:17	WG1790087
cis-1,3-Dichloropropene	U		0.111	1.00	1	12/18/2021 14:17	WG1790087
trans-1,3-Dichloropropene	U		0.118	1.00	1	12/18/2021 14:17	WG1790087
Ethylbenzene	U		0.137	1.00	1	12/18/2021 14:17	WG1790087
Hexachloro-1,3-butadiene	U		0.337	1.00	1	12/18/2021 14:17	WG1790087
n-Hexane	U		0.749	10.0	1	12/18/2021 14:17	WG1790087
Isopropylbenzene	U		0.105	1.00	1	12/18/2021 14:17	WG1790087
2-Butanone (MEK)	U		1.19	10.0	1	12/18/2021 14:17	WG1790087
Methylene Chloride	U		0.430	5.00	1	12/18/2021 14:17	WG1790087
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	12/18/2021 14:17	WG1790087
Methyl tert-butyl ether	U		0.101	1.00	1	12/18/2021 14:17	WG1790087
Naphthalene	U		1.00	5.00	1	12/18/2021 14:17	WG1790087
1-Methylnaphthalene	U	J4	7.30	10.0	1	12/18/2021 14:17	WG1790087
2-Methylnaphthalene	U	J4	7.18	10.0	1	12/18/2021 14:17	WG1790087
Styrene	U		0.118	1.00	1	12/18/2021 14:17	WG1790087
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	12/18/2021 14:17	WG1790087
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	12/18/2021 14:17	WG1790087
Tetrachloroethene	U		0.300	1.00	1	12/18/2021 14:17	WG1790087
Toluene	U		0.278	1.00	1	12/18/2021 14:17	WG1790087
1,2,3-Trichlorobenzene	U		0.230	1.00	1	12/18/2021 14:17	WG1790087
1,2,4-Trichlorobenzene	U		0.481	1.00	1	12/18/2021 14:17	WG1790087
1,1,1-Trichloroethane	U		0.149	1.00	1	12/18/2021 14:17	WG1790087
1,1,2-Trichloroethane	U		0.158	1.00	1	12/18/2021 14:17	WG1790087
Trichloroethene	0.256	J	0.190	1.00	1	12/18/2021 14:17	WG1790087
1,2,4-Trimethylbenzene	U		0.322	1.00	1	12/18/2021 14:17	WG1790087
1,3,5-Trimethylbenzene	U		0.104	1.00	1	12/18/2021 14:17	WG1790087
Vinyl acetate	U		0.692	10.0	1	12/18/2021 14:17	WG1790087
Vinyl chloride	U		0.234	1.00	1	12/18/2021 14:17	WG1790087
Xylenes, Total	U		0.174	3.00	1	12/18/2021 14:17	WG1790087
Di-isopropyl ether	U		0.105	1.00	1	12/18/2021 14:17	WG1790087
Ethanol	U		42.0	100	1	12/18/2021 14:17	WG1790087
3,3-Dimethyl-1-butanol	U		4.51	100	1	12/18/2021 14:17	WG1790087
Ethyl tert-butyl ether	U		0.101	1.00	1	12/18/2021 14:17	WG1790087
t-Amyl Alcohol	U		4.90	50.0	1	12/18/2021 14:17	WG1790087
tert-Butyl alcohol	U		4.06	5.00	1	12/18/2021 14:17	WG1790087
tert-Butyl Formate	U		4.51	20.0	1	12/18/2021 14:17	WG1790087
tert-Amyl Methyl Ether	U		0.195	1.00	1	12/18/2021 14:17	WG1790087
(S) 1,2-Dichloroethane-d4	*95.9*			*70.0-130*		*12/18/2021 14:17*	WG1790087
(S) Toluene-d8	*92.7*			*80.0-120*		*12/18/2021 14:17*	WG1790087
(S) 4-Bromofluorobenzene	*101*			*77.0-126*		*12/18/2021 14:17*	WG1790087

Volatile Organic Compounds (GC/MS) by Method 8260B-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	U		0.597	3.00	1	12/17/2021 20:12	WG1791341
(S) Toluene-d8	*100*			*77.0-127*		*12/17/2021 20:12*	WG1791341

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acenaphthene	U		0.0886	1.00	1	12/17/2021 05:11	WG1789878
Acenaphthylene	U		0.0921	1.00	1	12/17/2021 05:11	WG1789878
Anthracene	U		0.0804	1.00	1	12/17/2021 05:11	WG1789878
Benzidine	U		3.74	10.0	1	12/17/2021 05:11	WG1789878
Benzo(a)anthracene	U		0.199	1.00	1	12/17/2021 05:11	WG1789878
Benzo(b)fluoranthene	U		0.130	1.00	1	12/17/2021 05:11	WG1789878
Benzo(k)fluoranthene	U		0.120	1.00	1	12/17/2021 05:11	WG1789878
Benzo(g,h,i)perylene	U		0.121	1.00	1	12/17/2021 05:11	WG1789878
Benzo(a)pyrene	U		0.0381	1.00	1	12/17/2021 05:11	WG1789878
Bis(2-chlorethoxy)methane	U		0.116	10.0	1	12/17/2021 05:11	WG1789878
Bis(2-chloroethyl)ether	U		0.137	10.0	1	12/17/2021 05:11	WG1789878
2,2-Oxybis(1-Chloropropane)	U		0.210	10.0	1	12/17/2021 05:11	WG1789878
4-Bromophenyl-phenylether	U		0.0877	10.0	1	12/17/2021 05:11	WG1789878
2-Chloronaphthalene	U		0.0648	1.00	1	12/17/2021 05:11	WG1789878
4-Chlorophenyl-phenylether	U		0.0926	10.0	1	12/17/2021 05:11	WG1789878
Chrysene	U		0.130	1.00	1	12/17/2021 05:11	WG1789878
Dibenz(a,h)anthracene	U		0.0644	1.00	1	12/17/2021 05:11	WG1789878
1,2-Dichlorobenzene	U		0.0713	10.0	1	12/17/2021 05:11	WG1789878
1,3-Dichlorobenzene	U		0.132	10.0	1	12/17/2021 05:11	WG1789878
1,4-Dichlorobenzene	U		0.0942	10.0	1	12/17/2021 05:11	WG1789878
3,3-Dichlorobenzidine	U		0.212	10.0	1	12/17/2021 05:11	WG1789878
2,4-Dinitrotoluene	U		0.0983	10.0	1	12/17/2021 05:11	WG1789878
2,6-Dinitrotoluene	U		0.250	10.0	1	12/17/2021 05:11	WG1789878
Fluoranthene	U		0.102	1.00	1	12/17/2021 05:11	WG1789878
Fluorene	U		0.0844	1.00	1	12/17/2021 05:11	WG1789878
Hexachlorobenzene	U		0.0755	1.00	1	12/17/2021 05:11	WG1789878
Hexachloro-1,3-butadiene	U		0.0968	10.0	1	12/17/2021 05:11	WG1789878
Hexachlorocyclopentadiene	U		0.0598	10.0	1	12/17/2021 05:11	WG1789878
Hexachloroethane	U		0.127	10.0	1	12/17/2021 05:11	WG1789878
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	12/17/2021 05:11	WG1789878
Isophorone	U		0.143	10.0	1	12/17/2021 05:11	WG1789878
Naphthalene	U		0.159	1.00	1	12/17/2021 05:11	WG1789878
Nitrobenzene	U		0.297	10.0	1	12/17/2021 05:11	WG1789878
n-Nitrosodimethylamine	U		0.998	10.0	1	12/17/2021 05:11	WG1789878
n-Nitrosodiphenylamine	U		2.37	10.0	1	12/17/2021 05:11	WG1789878
n-Nitrosodi-n-propylamine	U		0.261	10.0	1	12/17/2021 05:11	WG1789878
Phenanthrene	U		0.112	1.00	1	12/17/2021 05:11	WG1789878
Benzylbutyl phthalate	U		0.765	3.00	1	12/17/2021 05:11	WG1789878
Bis(2-ethylhexyl)phthalate	U		0.895	3.00	1	12/17/2021 05:11	WG1789878
Di-n-butyl phthalate	U		0.453	3.00	1	12/17/2021 05:11	WG1789878
Diethyl phthalate	U		0.287	3.00	1	12/17/2021 05:11	WG1789878
Dimethyl phthalate	U		0.260	3.00	1	12/17/2021 05:11	WG1789878
Di-n-octyl phthalate	U		0.932	3.00	1	12/17/2021 05:11	WG1789878
Pyrene	U		0.107	1.00	1	12/17/2021 05:11	WG1789878
1,2,4-Trichlorobenzene	U		0.0698	10.0	1	12/17/2021 05:11	WG1789878
4-Chloro-3-methylphenol	U		0.131	10.0	1	12/17/2021 05:11	WG1789878
2-Chlorophenol	U		0.133	10.0	1	12/17/2021 05:11	WG1789878
2,4-Dichlorophenol	U		0.102	10.0	1	12/17/2021 05:11	WG1789878
2,4-Dimethylphenol	U		0.0636	10.0	1	12/17/2021 05:11	WG1789878
4,6-Dinitro-2-methylphenol	U		1.12	10.0	1	12/17/2021 05:11	WG1789878
2,4-Dinitrophenol	U		5.93	10.0	1	12/17/2021 05:11	WG1789878
2-Nitrophenol	U		0.117	10.0	1	12/17/2021 05:11	WG1789878
4-Nitrophenol	U		0.143	10.0	1	12/17/2021 05:11	WG1789878
Pentachlorophenol	U		0.313	10.0	1	12/17/2021 05:11	WG1789878
Phenol	U		4.33	10.0	1	12/17/2021 05:11	WG1789878
2,4,6-Trichlorophenol	U		0.100	10.0	1	12/17/2021 05:11	WG1789878

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
(S) 2-Fluorophenol	*41.8*			*10.0-120*		*12/17/2021 05:11*	WG1789878
(S) Phenol-d5	*26.5*			*10.0-120*		*12/17/2021 05:11*	WG1789878
(S) Nitrobenzene-d5	*67.9*			*10.0-127*		*12/17/2021 05:11*	WG1789878
(S) 2-Fluorobiphenyl	*73.0*			*10.0-130*		*12/17/2021 05:11*	WG1789878
(S) 2,4,6-Tribromophenol	*70.9*			*10.0-155*		*12/17/2021 05:11*	WG1789878
(S) p-Terphenyl-d14	*87.9*			*10.0-128*		*12/17/2021 05:11*	WG1789878

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.0190	0.0500	1	12/16/2021 13:45	WG1789902
Acenaphthene	U		0.0190	0.0500	1	12/16/2021 13:45	WG1789902
Acenaphthylene	U		0.0171	0.0500	1	12/16/2021 13:45	WG1789902
Benzo(a)anthracene	U		0.0203	0.0500	1	12/16/2021 13:45	WG1789902
Benzo(a)pyrene	U		0.0184	0.0500	1	12/16/2021 13:45	WG1789902
Benzo(b)fluoranthene	U		0.0168	0.0500	1	12/16/2021 13:45	WG1789902
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	12/16/2021 13:45	WG1789902
Benzo(k)fluoranthene	U		0.0202	0.0500	1	12/16/2021 13:45	WG1789902
Chrysene	U		0.0179	0.0500	1	12/16/2021 13:45	WG1789902
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	12/16/2021 13:45	WG1789902
Fluoranthene	U		0.0270	0.100	1	12/16/2021 13:45	WG1789902
Fluorene	U		0.0169	0.0500	1	12/16/2021 13:45	WG1789902
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	12/16/2021 13:45	WG1789902
Naphthalene	U		0.0917	0.250	1	12/16/2021 13:45	WG1789902
Phenanthrene	U		0.0180	0.0500	1	12/16/2021 13:45	WG1789902
Pyrene	U		0.0169	0.0500	1	12/16/2021 13:45	WG1789902
1-Methylnaphthalene	U		0.0687	0.250	1	12/16/2021 13:45	WG1789902
2-Methylnaphthalene	U		0.0674	0.250	1	12/16/2021 13:45	WG1789902
2-Chloronaphthalene	U		0.0682	0.250	1	12/16/2021 13:45	WG1789902
Tetraethyllead	U		0.0338	0.0500	1	12/16/2021 13:45	WG1789902
(S) Nitrobenzene-d5	*101*			*31.0-160*		*12/16/2021 13:45*	WG1789902
(S) 2-Fluorobiphenyl	*96.8*			*48.0-148*		*12/16/2021 13:45*	WG1789902
(S) p-Terphenyl-d14	*93.7*			*37.0-146*		*12/16/2021 13:45*	WG1789902

Wet Chemistry by Method 4500CN E-2016

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cyanide	U		1.80	5.00	1	12/20/2021 16:24	WG1790337

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury,Dissolved	U		0.100	0.200	1	12/17/2021 13:40	WG1790263

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	U		4.40	10.0	1	01/04/2022 23:15	WG1793384
Barium,Dissolved	48.5		0.736	5.00	1	01/04/2022 23:15	WG1793384
Boron,Dissolved	83.0	J	20.0	200	1	01/04/2022 23:15	WG1793384
Calcium,Dissolved	98800		79.3	1000	1	01/04/2022 23:15	WG1793384
Chromium,Dissolved	U		1.40	10.0	1	01/04/2022 23:15	WG1793384
Cobalt,Dissolved	U		0.840	10.0	1	01/04/2022 23:15	WG1793384
Iron,Dissolved	49.5	B J	18.0	100	1	01/04/2022 23:15	WG1793384
Magnesium,Dissolved	17700		85.3	1000	1	01/04/2022 23:15	WG1793384
Manganese,Dissolved	U		0.934	10.0	1	01/04/2022 23:15	WG1793384
Molybdenum,Dissolved	U		1.16	5.00	1	01/04/2022 23:15	WG1793384
Nickel,Dissolved	U		1.61	10.0	1	01/04/2022 23:15	WG1793384
Potassium,Dissolved	5910		261	2000	1	01/04/2022 23:15	WG1793384
Sodium,Dissolved	15400		504	3000	1	01/04/2022 23:15	WG1793384
Strontium,Dissolved	219		0.640	10.0	1	01/04/2022 23:15	WG1793384
Zinc,Dissolved	7.93	J	6.52	50.0	1	01/04/2022 23:15	WG1793384

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		18.5	100	1	01/11/2022 03:45	WG1799108
Antimony,Dissolved	17.4		1.03	4.00	1	01/11/2022 03:45	WG1799108
Beryllium,Dissolved	U		0.190	2.00	1	01/11/2022 03:45	WG1799108
Cadmium,Dissolved	U		0.150	1.00	1	01/11/2022 03:45	WG1799108
Lead,Dissolved	2.38		0.849	2.00	1	01/11/2022 03:45	WG1799108
Selenium,Dissolved	1.18	J	0.300	2.00	1	01/11/2022 03:45	WG1799108
Silver,Dissolved	U		0.0700	2.00	1	01/11/2022 03:45	WG1799108
Thallium,Dissolved	U		0.121	2.00	1	01/11/2022 03:45	WG1799108
Titanium,Dissolved	U		2.18	20.0	1	01/11/2022 03:45	WG1799108
Vanadium,Dissolved	2.19	J	0.664	5.00	1	01/11/2022 03:45	WG1799108

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	12/18/2021 14:38	WG1790087
Benzene	U		0.0941	1.00	1	12/18/2021 14:38	WG1790087
Bromodichloromethane	U		0.136	1.00	1	12/18/2021 14:38	WG1790087
Bromoform	U		0.129	1.00	1	12/18/2021 14:38	WG1790087
Bromomethane	U		0.605	5.00	1	12/18/2021 14:38	WG1790087
Carbon disulfide	U		0.0962	1.00	1	12/18/2021 14:38	WG1790087
Carbon tetrachloride	U		0.128	1.00	1	12/18/2021 14:38	WG1790087
Chlorobenzene	0.362	J	0.116	1.00	1	12/18/2021 14:38	WG1790087
Chloroethane	U		0.192	5.00	1	12/18/2021 14:38	WG1790087
Chloroform	0.479	J	0.111	5.00	1	12/18/2021 14:38	WG1790087
Cyclohexane	U		0.188	1.00	1	12/18/2021 14:38	WG1790087

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2-Dichlorobenzene	U		0.107	1.00	1	12/18/2021 14:38	WG1790087
1,3-Dichlorobenzene	U		0.110	1.00	1	12/18/2021 14:38	WG1790087
1,4-Dichlorobenzene	U		0.120	1.00	1	12/18/2021 14:38	WG1790087
1,1-Dichloroethane	U		0.100	1.00	1	12/18/2021 14:38	WG1790087
1,2-Dichloroethane	U		0.0819	1.00	1	12/18/2021 14:38	WG1790087
1,1-Dichloroethene	U		0.188	1.00	1	12/18/2021 14:38	WG1790087
cis-1,2-Dichloroethene	0.185	J	0.126	1.00	1	12/18/2021 14:38	WG1790087
trans-1,2-Dichloroethene	U		0.149	1.00	1	12/18/2021 14:38	WG1790087
1,2-Dichloropropane	U		0.149	1.00	1	12/18/2021 14:38	WG1790087
1,3-Dichloropropane	U		0.110	1.00	1	12/18/2021 14:38	WG1790087
cis-1,3-Dichloropropene	U		0.111	1.00	1	12/18/2021 14:38	WG1790087
trans-1,3-Dichloropropene	U		0.118	1.00	1	12/18/2021 14:38	WG1790087
Ethylbenzene	U		0.137	1.00	1	12/18/2021 14:38	WG1790087
Hexachloro-1,3-butadiene	U		0.337	1.00	1	12/18/2021 14:38	WG1790087
n-Hexane	U		0.749	10.0	1	12/18/2021 14:38	WG1790087
Isopropylbenzene	U		0.105	1.00	1	12/18/2021 14:38	WG1790087
2-Butanone (MEK)	U		1.19	10.0	1	12/18/2021 14:38	WG1790087
Methylene Chloride	U		0.430	5.00	1	12/18/2021 14:38	WG1790087
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	12/18/2021 14:38	WG1790087
Methyl tert-butyl ether	U		0.101	1.00	1	12/18/2021 14:38	WG1790087
Naphthalene	U		1.00	5.00	1	12/18/2021 14:38	WG1790087
1-Methylnaphthalene	U	J4	7.30	10.0	1	12/18/2021 14:38	WG1790087
2-Methylnaphthalene	U	J4	7.18	10.0	1	12/18/2021 14:38	WG1790087
Styrene	U		0.118	1.00	1	12/18/2021 14:38	WG1790087
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	12/18/2021 14:38	WG1790087
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	12/18/2021 14:38	WG1790087
Tetrachloroethene	U		0.300	1.00	1	12/18/2021 14:38	WG1790087
Toluene	U		0.278	1.00	1	12/18/2021 14:38	WG1790087
1,2,3-Trichlorobenzene	U		0.230	1.00	1	12/18/2021 14:38	WG1790087
1,2,4-Trichlorobenzene	U		0.481	1.00	1	12/18/2021 14:38	WG1790087
1,1,1-Trichloroethane	U		0.149	1.00	1	12/18/2021 14:38	WG1790087
1,1,2-Trichloroethane	U		0.158	1.00	1	12/18/2021 14:38	WG1790087
Trichloroethene	10.7		0.190	1.00	1	12/18/2021 14:38	WG1790087
1,2,4-Trimethylbenzene	U		0.322	1.00	1	12/18/2021 14:38	WG1790087
1,3,5-Trimethylbenzene	U		0.104	1.00	1	12/18/2021 14:38	WG1790087
Vinyl acetate	U		0.692	10.0	1	12/18/2021 14:38	WG1790087
Vinyl chloride	U		0.234	1.00	1	12/18/2021 14:38	WG1790087
Xylenes, Total	U		0.174	3.00	1	12/18/2021 14:38	WG1790087
Di-isopropyl ether	U		0.105	1.00	1	12/18/2021 14:38	WG1790087
Ethanol	U		42.0	100	1	12/18/2021 14:38	WG1790087
3,3-Dimethyl-1-butanol	U		4.51	100	1	12/18/2021 14:38	WG1790087
Ethyl tert-butyl ether	U		0.101	1.00	1	12/18/2021 14:38	WG1790087
t-Amyl Alcohol	U		4.90	50.0	1	12/18/2021 14:38	WG1790087
tert-Butyl alcohol	U		4.06	5.00	1	12/18/2021 14:38	WG1790087
tert-Butyl Formate	U		4.51	20.0	1	12/18/2021 14:38	WG1790087
tert-Amyl Methyl Ether	U		0.195	1.00	1	12/18/2021 14:38	WG1790087
(S) 1,2-Dichloroethane-d4	*95.1*			*70.0-130*		*12/18/2021 14:38*	WG1790087
(S) Toluene-d8	*91.4*			*80.0-120*		*12/18/2021 14:38*	WG1790087
(S) 4-Bromofluorobenzene	*87.0*			*77.0-126*		*12/18/2021 14:38*	WG1790087

Volatile Organic Compounds (GC/MS) by Method 8260B-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	U		0.597	3.00	1	12/17/2021 20:32	WG1791341
(S) Toluene-d8	*100*			*77.0-127*		*12/17/2021 20:32*	WG1791341

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acenaphthene	U		0.0886	1.00	1	12/17/2021 05:32	WG1789878
Acenaphthylene	U		0.0921	1.00	1	12/17/2021 05:32	WG1789878
Anthracene	U		0.0804	1.00	1	12/17/2021 05:32	WG1789878
Benzidine	U		3.74	10.0	1	12/17/2021 05:32	WG1789878
Benzo(a)anthracene	U		0.199	1.00	1	12/17/2021 05:32	WG1789878
Benzo(b)fluoranthene	U		0.130	1.00	1	12/17/2021 05:32	WG1789878
Benzo(k)fluoranthene	U		0.120	1.00	1	12/17/2021 05:32	WG1789878
Benzo(g,h,i)perylene	U		0.121	1.00	1	12/17/2021 05:32	WG1789878
Benzo(a)pyrene	U		0.0381	1.00	1	12/17/2021 05:32	WG1789878
Bis(2-chlorethoxy)methane	U		0.116	10.0	1	12/17/2021 05:32	WG1789878
Bis(2-chloroethyl)ether	U		0.137	10.0	1	12/17/2021 05:32	WG1789878
2,2-Oxybis(1-Chloropropane)	U		0.210	10.0	1	12/17/2021 05:32	WG1789878
4-Bromophenyl-phenylether	U		0.0877	10.0	1	12/17/2021 05:32	WG1789878
2-Chloronaphthalene	U		0.0648	1.00	1	12/17/2021 05:32	WG1789878
4-Chlorophenyl-phenylether	U		0.0926	10.0	1	12/17/2021 05:32	WG1789878
Chrysene	U		0.130	1.00	1	12/17/2021 05:32	WG1789878
Dibenz(a,h)anthracene	U		0.0644	1.00	1	12/17/2021 05:32	WG1789878
1,2-Dichlorobenzene	U		0.0713	10.0	1	12/17/2021 05:32	WG1789878
1,3-Dichlorobenzene	U		0.132	10.0	1	12/17/2021 05:32	WG1789878
1,4-Dichlorobenzene	U		0.0942	10.0	1	12/17/2021 05:32	WG1789878
3,3-Dichlorobenzidine	U		0.212	10.0	1	12/17/2021 05:32	WG1789878
2,4-Dinitrotoluene	U		0.0983	10.0	1	12/17/2021 05:32	WG1789878
2,6-Dinitrotoluene	U		0.250	10.0	1	12/17/2021 05:32	WG1789878
Fluoranthene	U		0.102	1.00	1	12/17/2021 05:32	WG1789878
Fluorene	U		0.0844	1.00	1	12/17/2021 05:32	WG1789878
Hexachlorobenzene	U		0.0755	1.00	1	12/17/2021 05:32	WG1789878
Hexachloro-1,3-butadiene	U		0.0968	10.0	1	12/17/2021 05:32	WG1789878
Hexachlorocyclopentadiene	U		0.0598	10.0	1	12/17/2021 05:32	WG1789878
Hexachloroethane	U		0.127	10.0	1	12/17/2021 05:32	WG1789878
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	12/17/2021 05:32	WG1789878
Isophorone	U		0.143	10.0	1	12/17/2021 05:32	WG1789878
Naphthalene	U		0.159	1.00	1	12/17/2021 05:32	WG1789878
Nitrobenzene	U		0.297	10.0	1	12/17/2021 05:32	WG1789878
n-Nitrosodimethylamine	U		0.998	10.0	1	12/17/2021 05:32	WG1789878
n-Nitrosodiphenylamine	U		2.37	10.0	1	12/17/2021 05:32	WG1789878
n-Nitrosodi-n-propylamine	U		0.261	10.0	1	12/17/2021 05:32	WG1789878
Phenanthrene	U		0.112	1.00	1	12/17/2021 05:32	WG1789878
Benzylbutyl phthalate	U		0.765	3.00	1	12/17/2021 05:32	WG1789878
Bis(2-ethylhexyl)phthalate	U		0.895	3.00	1	12/17/2021 05:32	WG1789878
Di-n-butyl phthalate	U		0.453	3.00	1	12/17/2021 05:32	WG1789878
Diethyl phthalate	U		0.287	3.00	1	12/17/2021 05:32	WG1789878
Dimethyl phthalate	U		0.260	3.00	1	12/17/2021 05:32	WG1789878
Di-n-octyl phthalate	U		0.932	3.00	1	12/17/2021 05:32	WG1789878
Pyrene	U		0.107	1.00	1	12/17/2021 05:32	WG1789878
1,2,4-Trichlorobenzene	U		0.0698	10.0	1	12/17/2021 05:32	WG1789878
4-Chloro-3-methylphenol	U		0.131	10.0	1	12/17/2021 05:32	WG1789878
2-Chlorophenol	U		0.133	10.0	1	12/17/2021 05:32	WG1789878
2,4-Dichlorophenol	U		0.102	10.0	1	12/17/2021 05:32	WG1789878
2,4-Dimethylphenol	U		0.0636	10.0	1	12/17/2021 05:32	WG1789878
4,6-Dinitro-2-methylphenol	U		1.12	10.0	1	12/17/2021 05:32	WG1789878
2,4-Dinitrophenol	U		5.93	10.0	1	12/17/2021 05:32	WG1789878
2-Nitrophenol	U		0.117	10.0	1	12/17/2021 05:32	WG1789878
4-Nitrophenol	U		0.143	10.0	1	12/17/2021 05:32	WG1789878
Pentachlorophenol	U		0.313	10.0	1	12/17/2021 05:32	WG1789878
Phenol	U		4.33	10.0	1	12/17/2021 05:32	WG1789878
2,4,6-Trichlorophenol	U		0.100	10.0	1	12/17/2021 05:32	WG1789878

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
(S) 2-Fluorophenol	*39.5*			*10.0-120*		*12/17/2021 05:32*	WG1789878
(S) Phenol-d5	*25.5*			*10.0-120*		*12/17/2021 05:32*	WG1789878
(S) Nitrobenzene-d5	*66.7*			*10.0-127*		*12/17/2021 05:32*	WG1789878
(S) 2-Fluorobiphenyl	*73.1*			*10.0-130*		*12/17/2021 05:32*	WG1789878
(S) 2,4,6-Tribromophenol	*65.7*			*10.0-155*		*12/17/2021 05:32*	WG1789878
(S) p-Terphenyl-d14	*81.6*			*10.0-128*		*12/17/2021 05:32*	WG1789878

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Anthracene	U		0.0190	0.0500	1	12/16/2021 14:02	WG1789902
Acenaphthene	U		0.0190	0.0500	1	12/16/2021 14:02	WG1789902
Acenaphthylene	U		0.0171	0.0500	1	12/16/2021 14:02	WG1789902
Benzo(a)anthracene	U		0.0203	0.0500	1	12/16/2021 14:02	WG1789902
Benzo(a)pyrene	U		0.0184	0.0500	1	12/16/2021 14:02	WG1789902
Benzo(b)fluoranthene	U		0.0168	0.0500	1	12/16/2021 14:02	WG1789902
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	12/16/2021 14:02	WG1789902
Benzo(k)fluoranthene	U		0.0202	0.0500	1	12/16/2021 14:02	WG1789902
Chrysene	U		0.0179	0.0500	1	12/16/2021 14:02	WG1789902
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	12/16/2021 14:02	WG1789902
Fluoranthene	U		0.0270	0.100	1	12/16/2021 14:02	WG1789902
Fluorene	U		0.0169	0.0500	1	12/16/2021 14:02	WG1789902
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	12/16/2021 14:02	WG1789902
Naphthalene	U		0.0917	0.250	1	12/16/2021 14:02	WG1789902
Phenanthrene	U		0.0180	0.0500	1	12/16/2021 14:02	WG1789902
Pyrene	U		0.0169	0.0500	1	12/16/2021 14:02	WG1789902
1-Methylnaphthalene	U		0.0687	0.250	1	12/16/2021 14:02	WG1789902
2-Methylnaphthalene	U		0.0674	0.250	1	12/16/2021 14:02	WG1789902
2-Chloronaphthalene	U		0.0682	0.250	1	12/16/2021 14:02	WG1789902
Tetraethyllead	U		0.0338	0.0500	1	12/16/2021 14:02	WG1789902
(S) Nitrobenzene-d5	*100*			*31.0-160*		*12/16/2021 14:02*	WG1789902
(S) 2-Fluorobiphenyl	*96.8*			*48.0-148*		*12/16/2021 14:02*	WG1789902
(S) p-Terphenyl-d14	*94.7*			*37.0-146*		*12/16/2021 14:02*	WG1789902

Wet Chemistry by Method 4500CN E-2016

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cyanide	U		1.80	5.00	1	12/20/2021 16:25	WG1790337

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury,Dissolved	U		0.100	0.200	1	12/17/2021 13:42	WG1790263

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	U		4.40	10.0	1	01/04/2022 23:17	WG1793384
Barium,Dissolved	44.5		0.736	5.00	1	01/04/2022 23:17	WG1793384
Boron,Dissolved	153	J	20.0	200	1	01/04/2022 23:17	WG1793384
Calcium,Dissolved	124000		79.3	1000	1	01/04/2022 23:17	WG1793384
Chromium,Dissolved	U		1.40	10.0	1	01/04/2022 23:17	WG1793384
Cobalt,Dissolved	U		0.840	10.0	1	01/04/2022 23:17	WG1793384
Iron,Dissolved	U		18.0	100	1	01/04/2022 23:17	WG1793384
Magnesium,Dissolved	24300		85.3	1000	1	01/04/2022 23:17	WG1793384
Manganese,Dissolved	236		0.934	10.0	1	01/04/2022 23:17	WG1793384
Molybdenum,Dissolved	U		1.16	5.00	1	01/04/2022 23:17	WG1793384
Nickel,Dissolved	1.66	J	1.61	10.0	1	01/04/2022 23:17	WG1793384
Potassium,Dissolved	5220		261	2000	1	01/04/2022 23:17	WG1793384
Sodium,Dissolved	32400		504	3000	1	01/04/2022 23:17	WG1793384
Strontium,Dissolved	247		0.640	10.0	1	01/04/2022 23:17	WG1793384
Zinc,Dissolved	9.26	J	6.52	50.0	1	01/04/2022 23:17	WG1793384

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		18.5	100	1	01/11/2022 03:48	WG1799108
Antimony,Dissolved	U		1.03	4.00	1	01/11/2022 03:48	WG1799108
Beryllium,Dissolved	U		0.190	2.00	1	01/11/2022 03:48	WG1799108
Cadmium,Dissolved	U		0.150	1.00	1	01/11/2022 03:48	WG1799108
Lead,Dissolved	2.06		0.849	2.00	1	01/11/2022 03:48	WG1799108
Selenium,Dissolved	U		0.300	2.00	1	01/11/2022 03:48	WG1799108
Silver,Dissolved	U		0.0700	2.00	1	01/11/2022 03:48	WG1799108
Thallium,Dissolved	U		0.121	2.00	1	01/11/2022 03:48	WG1799108
Titanium,Dissolved	U		2.18	20.0	1	01/11/2022 03:48	WG1799108
Vanadium,Dissolved	U		0.664	5.00	1	01/11/2022 03:48	WG1799108

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	12/18/2021 14:59	WG1790087
Benzene	U		0.0941	1.00	1	12/18/2021 14:59	WG1790087
Bromodichloromethane	U		0.136	1.00	1	12/18/2021 14:59	WG1790087
Bromoform	U		0.129	1.00	1	12/18/2021 14:59	WG1790087
Bromomethane	U		0.605	5.00	1	12/18/2021 14:59	WG1790087
Carbon disulfide	U		0.0962	1.00	1	12/18/2021 14:59	WG1790087
Carbon tetrachloride	U		0.128	1.00	1	12/18/2021 14:59	WG1790087
Chlorobenzene	0.119	J	0.116	1.00	1	12/18/2021 14:59	WG1790087
Chloroethane	U		0.192	5.00	1	12/18/2021 14:59	WG1790087
Chloroform	1.33	J	0.111	5.00	1	12/18/2021 14:59	WG1790087
Cyclohexane	U		0.188	1.00	1	12/18/2021 14:59	WG1790087

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2-Dichlorobenzene	U		0.107	1.00	1	12/18/2021 14:59	WG1790087
1,3-Dichlorobenzene	U		0.110	1.00	1	12/18/2021 14:59	WG1790087
1,4-Dichlorobenzene	U		0.120	1.00	1	12/18/2021 14:59	WG1790087
1,1-Dichloroethane	U		0.100	1.00	1	12/18/2021 14:59	WG1790087
1,2-Dichloroethane	U		0.0819	1.00	1	12/18/2021 14:59	WG1790087
1,1-Dichloroethene	U		0.188	1.00	1	12/18/2021 14:59	WG1790087
cis-1,2-Dichloroethene	U		0.126	1.00	1	12/18/2021 14:59	WG1790087
trans-1,2-Dichloroethene	U		0.149	1.00	1	12/18/2021 14:59	WG1790087
1,2-Dichloropropane	0.632	J	0.149	1.00	1	12/18/2021 14:59	WG1790087
1,3-Dichloropropane	U		0.110	1.00	1	12/18/2021 14:59	WG1790087
cis-1,3-Dichloropropene	U		0.111	1.00	1	12/18/2021 14:59	WG1790087
trans-1,3-Dichloropropene	U		0.118	1.00	1	12/18/2021 14:59	WG1790087
Ethylbenzene	U		0.137	1.00	1	12/18/2021 14:59	WG1790087
Hexachloro-1,3-butadiene	U		0.337	1.00	1	12/18/2021 14:59	WG1790087
n-Hexane	U		0.749	10.0	1	12/18/2021 14:59	WG1790087
Isopropylbenzene	U		0.105	1.00	1	12/18/2021 14:59	WG1790087
2-Butanone (MEK)	U		1.19	10.0	1	12/18/2021 14:59	WG1790087
Methylene Chloride	U		0.430	5.00	1	12/18/2021 14:59	WG1790087
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	12/18/2021 14:59	WG1790087
Methyl tert-butyl ether	U		0.101	1.00	1	12/18/2021 14:59	WG1790087
Naphthalene	U		1.00	5.00	1	12/18/2021 14:59	WG1790087
1-Methylnaphthalene	U	J4	7.30	10.0	1	12/18/2021 14:59	WG1790087
2-Methylnaphthalene	U	J4	7.18	10.0	1	12/18/2021 14:59	WG1790087
Styrene	U		0.118	1.00	1	12/18/2021 14:59	WG1790087
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	12/18/2021 14:59	WG1790087
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	12/18/2021 14:59	WG1790087
Tetrachloroethene	U		0.300	1.00	1	12/18/2021 14:59	WG1790087
Toluene	U		0.278	1.00	1	12/18/2021 14:59	WG1790087
1,2,3-Trichlorobenzene	U		0.230	1.00	1	12/18/2021 14:59	WG1790087
1,2,4-Trichlorobenzene	U		0.481	1.00	1	12/18/2021 14:59	WG1790087
1,1,1-Trichloroethane	U		0.149	1.00	1	12/18/2021 14:59	WG1790087
1,1,2-Trichloroethane	U		0.158	1.00	1	12/18/2021 14:59	WG1790087
Trichloroethene	0.558	J	0.190	1.00	1	12/18/2021 14:59	WG1790087
1,2,4-Trimethylbenzene	U		0.322	1.00	1	12/18/2021 14:59	WG1790087
1,3,5-Trimethylbenzene	U		0.104	1.00	1	12/18/2021 14:59	WG1790087
Vinyl acetate	U		0.692	10.0	1	12/18/2021 14:59	WG1790087
Vinyl chloride	U		0.234	1.00	1	12/18/2021 14:59	WG1790087
Xylenes, Total	U		0.174	3.00	1	12/18/2021 14:59	WG1790087
Di-isopropyl ether	U		0.105	1.00	1	12/18/2021 14:59	WG1790087
Ethanol	U		42.0	100	1	12/18/2021 14:59	WG1790087
3,3-Dimethyl-1-butanol	U		4.51	100	1	12/18/2021 14:59	WG1790087
Ethyl tert-butyl ether	U		0.101	1.00	1	12/18/2021 14:59	WG1790087
t-Amyl Alcohol	U		4.90	50.0	1	12/18/2021 14:59	WG1790087
tert-Butyl alcohol	U		4.06	5.00	1	12/18/2021 14:59	WG1790087
tert-Butyl Formate	U		4.51	20.0	1	12/18/2021 14:59	WG1790087
tert-Amyl Methyl Ether	U		0.195	1.00	1	12/18/2021 14:59	WG1790087
(S) 1,2-Dichloroethane-d4	*96.6*			*70.0-130*		*12/18/2021 14:59*	WG1790087
(S) Toluene-d8	*91.4*			*80.0-120*		*12/18/2021 14:59*	WG1790087
(S) 4-Bromofluorobenzene	*83.5*			*77.0-126*		*12/18/2021 14:59*	WG1790087

Volatile Organic Compounds (GC/MS) by Method 8260B-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	U		0.597	3.00	1	12/17/2021 20:52	WG1791341
(S) Toluene-d8	*100*			*77.0-127*		*12/17/2021 20:52*	WG1791341

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acenaphthene	U		0.0886	1.00	1	12/17/2021 05:53	WG1789878
Acenaphthylene	U		0.0921	1.00	1	12/17/2021 05:53	WG1789878
Anthracene	U		0.0804	1.00	1	12/17/2021 05:53	WG1789878
Benzidine	U		3.74	10.0	1	12/17/2021 05:53	WG1789878
Benzo(a)anthracene	U		0.199	1.00	1	12/17/2021 05:53	WG1789878
Benzo(b)fluoranthene	U		0.130	1.00	1	12/17/2021 05:53	WG1789878
Benzo(k)fluoranthene	U		0.120	1.00	1	12/17/2021 05:53	WG1789878
Benzo(g,h,i)perylene	U		0.121	1.00	1	12/17/2021 05:53	WG1789878
Benzo(a)pyrene	U		0.0381	1.00	1	12/17/2021 05:53	WG1789878
Bis(2-chlorethoxy)methane	U		0.116	10.0	1	12/17/2021 05:53	WG1789878
Bis(2-chloroethyl)ether	U		0.137	10.0	1	12/17/2021 05:53	WG1789878
2,2-Oxybis(1-Chloropropane)	U		0.210	10.0	1	12/17/2021 05:53	WG1789878
4-Bromophenyl-phenylether	U		0.0877	10.0	1	12/17/2021 05:53	WG1789878
2-Chloronaphthalene	U		0.0648	1.00	1	12/17/2021 05:53	WG1789878
4-Chlorophenyl-phenylether	U		0.0926	10.0	1	12/17/2021 05:53	WG1789878
Chrysene	U		0.130	1.00	1	12/17/2021 05:53	WG1789878
Dibenz(a,h)anthracene	U		0.0644	1.00	1	12/17/2021 05:53	WG1789878
1,2-Dichlorobenzene	U		0.0713	10.0	1	12/17/2021 05:53	WG1789878
1,3-Dichlorobenzene	U		0.132	10.0	1	12/17/2021 05:53	WG1789878
1,4-Dichlorobenzene	U		0.0942	10.0	1	12/17/2021 05:53	WG1789878
3,3-Dichlorobenzidine	U		0.212	10.0	1	12/17/2021 05:53	WG1789878
2,4-Dinitrotoluene	U		0.0983	10.0	1	12/17/2021 05:53	WG1789878
2,6-Dinitrotoluene	U		0.250	10.0	1	12/17/2021 05:53	WG1789878
Fluoranthene	U		0.102	1.00	1	12/17/2021 05:53	WG1789878
Fluorene	U		0.0844	1.00	1	12/17/2021 05:53	WG1789878
Hexachlorobenzene	U		0.0755	1.00	1	12/17/2021 05:53	WG1789878
Hexachloro-1,3-butadiene	U		0.0968	10.0	1	12/17/2021 05:53	WG1789878
Hexachlorocyclopentadiene	U		0.0598	10.0	1	12/17/2021 05:53	WG1789878
Hexachloroethane	U		0.127	10.0	1	12/17/2021 05:53	WG1789878
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	12/17/2021 05:53	WG1789878
Isophorone	U		0.143	10.0	1	12/17/2021 05:53	WG1789878
Naphthalene	U		0.159	1.00	1	12/17/2021 05:53	WG1789878
Nitrobenzene	U		0.297	10.0	1	12/17/2021 05:53	WG1789878
n-Nitrosodimethylamine	U		0.998	10.0	1	12/17/2021 05:53	WG1789878
n-Nitrosodiphenylamine	U		2.37	10.0	1	12/17/2021 05:53	WG1789878
n-Nitrosodi-n-propylamine	U		0.261	10.0	1	12/17/2021 05:53	WG1789878
Phenanthrene	U		0.112	1.00	1	12/17/2021 05:53	WG1789878
Benzylbutyl phthalate	U		0.765	3.00	1	12/17/2021 05:53	WG1789878
Bis(2-ethylhexyl)phthalate	U		0.895	3.00	1	12/17/2021 05:53	WG1789878
Di-n-butyl phthalate	U		0.453	3.00	1	12/17/2021 05:53	WG1789878
Diethyl phthalate	U		0.287	3.00	1	12/17/2021 05:53	WG1789878
Dimethyl phthalate	U		0.260	3.00	1	12/17/2021 05:53	WG1789878
Di-n-octyl phthalate	U		0.932	3.00	1	12/17/2021 05:53	WG1789878
Pyrene	U		0.107	1.00	1	12/17/2021 05:53	WG1789878
1,2,4-Trichlorobenzene	U		0.0698	10.0	1	12/17/2021 05:53	WG1789878
4-Chloro-3-methylphenol	U		0.131	10.0	1	12/17/2021 05:53	WG1789878
2-Chlorophenol	U		0.133	10.0	1	12/17/2021 05:53	WG1789878
2,4-Dichlorophenol	U		0.102	10.0	1	12/17/2021 05:53	WG1789878
2,4-Dimethylphenol	U		0.0636	10.0	1	12/17/2021 05:53	WG1789878
4,6-Dinitro-2-methylphenol	U		1.12	10.0	1	12/17/2021 05:53	WG1789878
2,4-Dinitrophenol	U		5.93	10.0	1	12/17/2021 05:53	WG1789878
2-Nitrophenol	U		0.117	10.0	1	12/17/2021 05:53	WG1789878
4-Nitrophenol	U		0.143	10.0	1	12/17/2021 05:53	WG1789878
Pentachlorophenol	U		0.313	10.0	1	12/17/2021 05:53	WG1789878
Phenol	U		4.33	10.0	1	12/17/2021 05:53	WG1789878
2,4,6-Trichlorophenol	U		0.100	10.0	1	12/17/2021 05:53	WG1789878

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
(S) 2-Fluorophenol	*42.4*			*10.0-120*		*12/17/2021 05:53*	WG1789878
(S) Phenol-d5	*26.9*			*10.0-120*		*12/17/2021 05:53*	WG1789878
(S) Nitrobenzene-d5	*69.1*			*10.0-127*		*12/17/2021 05:53*	WG1789878
(S) 2-Fluorobiphenyl	*76.6*			*10.0-130*		*12/17/2021 05:53*	WG1789878
(S) 2,4,6-Tribromophenol	*69.4*			*10.0-155*		*12/17/2021 05:53*	WG1789878
(S) p-Terphenyl-d14	*81.4*			*10.0-128*		*12/17/2021 05:53*	WG1789878

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.0190	0.0500	1	12/16/2021 14:20	WG1789902
Acenaphthene	U		0.0190	0.0500	1	12/16/2021 14:20	WG1789902
Acenaphthylene	U		0.0171	0.0500	1	12/16/2021 14:20	WG1789902
Benzo(a)anthracene	U		0.0203	0.0500	1	12/16/2021 14:20	WG1789902
Benzo(a)pyrene	U		0.0184	0.0500	1	12/16/2021 14:20	WG1789902
Benzo(b)fluoranthene	U		0.0168	0.0500	1	12/16/2021 14:20	WG1789902
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	12/16/2021 14:20	WG1789902
Benzo(k)fluoranthene	U		0.0202	0.0500	1	12/16/2021 14:20	WG1789902
Chrysene	U		0.0179	0.0500	1	12/16/2021 14:20	WG1789902
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	12/16/2021 14:20	WG1789902
Fluoranthene	U		0.0270	0.100	1	12/16/2021 14:20	WG1789902
Fluorene	U		0.0169	0.0500	1	12/16/2021 14:20	WG1789902
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	12/16/2021 14:20	WG1789902
Naphthalene	U		0.0917	0.250	1	12/16/2021 14:20	WG1789902
Phenanthrene	U		0.0180	0.0500	1	12/16/2021 14:20	WG1789902
Pyrene	U		0.0169	0.0500	1	12/16/2021 14:20	WG1789902
1-Methylnaphthalene	U		0.0687	0.250	1	12/16/2021 14:20	WG1789902
2-Methylnaphthalene	U		0.0674	0.250	1	12/16/2021 14:20	WG1789902
2-Chloronaphthalene	U		0.0682	0.250	1	12/16/2021 14:20	WG1789902
Tetraethyllead	U		0.0338	0.0500	1	12/16/2021 14:20	WG1789902
(S) Nitrobenzene-d5	*105*			*31.0-160*		*12/16/2021 14:20*	WG1789902
(S) 2-Fluorobiphenyl	*97.4*			*48.0-148*		*12/16/2021 14:20*	WG1789902
(S) p-Terphenyl-d14	*94.7*			*37.0-146*		*12/16/2021 14:20*	WG1789902

Wet Chemistry by Method 4500CN E-2016

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Cyanide	U		1.80	5.00	1	12/20/2021 16:29	WG1790337

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury,Dissolved	U		0.100	0.200	1	12/17/2021 13:49	WG1790263

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Arsenic,Dissolved	U		4.40	10.0	1	01/04/2022 23:25	WG1793384
Barium,Dissolved	26.4		0.736	5.00	1	01/04/2022 23:25	WG1793384
Boron,Dissolved	123	J	20.0	200	1	01/04/2022 23:25	WG1793384
Calcium,Dissolved	142000		79.3	1000	1	01/04/2022 23:25	WG1793384
Chromium,Dissolved	U		1.40	10.0	1	01/04/2022 23:25	WG1793384
Cobalt,Dissolved	1.48	J	0.840	10.0	1	01/04/2022 23:25	WG1793384
Iron,Dissolved	U		18.0	100	1	01/04/2022 23:25	WG1793384
Magnesium,Dissolved	25800		85.3	1000	1	01/04/2022 23:25	WG1793384
Manganese,Dissolved	1660		0.934	10.0	1	01/04/2022 23:25	WG1793384
Molybdenum,Dissolved	U		1.16	5.00	1	01/04/2022 23:25	WG1793384
Nickel,Dissolved	U		1.61	10.0	1	01/04/2022 23:25	WG1793384
Potassium,Dissolved	2310		261	2000	1	01/04/2022 23:25	WG1793384
Sodium,Dissolved	34800		504	3000	1	01/04/2022 23:25	WG1793384
Strontium,Dissolved	315		0.640	10.0	1	01/04/2022 23:25	WG1793384
Zinc,Dissolved	12.4	J	6.52	50.0	1	01/04/2022 23:25	WG1793384

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Aluminum,Dissolved	U		18.5	100	1	01/11/2022 03:52	WG1799108
Antimony,Dissolved	U		1.03	4.00	1	01/11/2022 03:52	WG1799108
Beryllium,Dissolved	U		0.190	2.00	1	01/11/2022 03:52	WG1799108
Cadmium,Dissolved	U		0.150	1.00	1	01/11/2022 03:52	WG1799108
Lead,Dissolved	U		0.849	2.00	1	01/11/2022 03:52	WG1799108
Selenium,Dissolved	U		0.300	2.00	1	01/11/2022 03:52	WG1799108
Silver,Dissolved	U		0.0700	2.00	1	01/11/2022 03:52	WG1799108
Thallium,Dissolved	U		0.121	2.00	1	01/11/2022 03:52	WG1799108
Titanium,Dissolved	U		2.18	20.0	1	01/11/2022 03:52	WG1799108
Vanadium,Dissolved	U		0.664	5.00	1	01/11/2022 03:52	WG1799108

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	12/18/2021 15:20	WG1790087
Benzene	U		0.0941	1.00	1	12/18/2021 15:20	WG1790087
Bromodichloromethane	U		0.136	1.00	1	12/18/2021 15:20	WG1790087
Bromoform	U		0.129	1.00	1	12/18/2021 15:20	WG1790087
Bromomethane	U		0.605	5.00	1	12/18/2021 15:20	WG1790087
Carbon disulfide	U		0.0962	1.00	1	12/18/2021 15:20	WG1790087
Carbon tetrachloride	U		0.128	1.00	1	12/18/2021 15:20	WG1790087
Chlorobenzene	U		0.116	1.00	1	12/18/2021 15:20	WG1790087
Chloroethane	U		0.192	5.00	1	12/18/2021 15:20	WG1790087
Chloroform	U		0.111	5.00	1	12/18/2021 15:20	WG1790087
Cyclohexane	U		0.188	1.00	1	12/18/2021 15:20	WG1790087

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2-Dichlorobenzene	6.10		0.107	1.00	1	12/18/2021 15:20	WG1790087
1,3-Dichlorobenzene	U		0.110	1.00	1	12/18/2021 15:20	WG1790087
1,4-Dichlorobenzene	1.98		0.120	1.00	1	12/18/2021 15:20	WG1790087
1,1-Dichloroethane	U		0.100	1.00	1	12/18/2021 15:20	WG1790087
1,2-Dichloroethane	U		0.0819	1.00	1	12/18/2021 15:20	WG1790087
1,1-Dichloroethene	U		0.188	1.00	1	12/18/2021 15:20	WG1790087
cis-1,2-Dichloroethene	U		0.126	1.00	1	12/18/2021 15:20	WG1790087
trans-1,2-Dichloroethene	U		0.149	1.00	1	12/18/2021 15:20	WG1790087
1,2-Dichloropropane	U		0.149	1.00	1	12/18/2021 15:20	WG1790087
1,3-Dichloropropane	U		0.110	1.00	1	12/18/2021 15:20	WG1790087
cis-1,3-Dichloropropene	U		0.111	1.00	1	12/18/2021 15:20	WG1790087
trans-1,3-Dichloropropene	U		0.118	1.00	1	12/18/2021 15:20	WG1790087
Ethylbenzene	U		0.137	1.00	1	12/18/2021 15:20	WG1790087
Hexachloro-1,3-butadiene	U		0.337	1.00	1	12/18/2021 15:20	WG1790087
n-Hexane	U		0.749	10.0	1	12/18/2021 15:20	WG1790087
Isopropylbenzene	U		0.105	1.00	1	12/18/2021 15:20	WG1790087
2-Butanone (MEK)	U		1.19	10.0	1	12/18/2021 15:20	WG1790087
Methylene Chloride	U		0.430	5.00	1	12/18/2021 15:20	WG1790087
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	12/18/2021 15:20	WG1790087
Methyl tert-butyl ether	U		0.101	1.00	1	12/18/2021 15:20	WG1790087
Naphthalene	U		1.00	5.00	1	12/18/2021 15:20	WG1790087
1-Methylnaphthalene	U	J4	7.30	10.0	1	12/18/2021 15:20	WG1790087
2-Methylnaphthalene	U	J4	7.18	10.0	1	12/18/2021 15:20	WG1790087
Styrene	U		0.118	1.00	1	12/18/2021 15:20	WG1790087
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	12/18/2021 15:20	WG1790087
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	12/18/2021 15:20	WG1790087
Tetrachloroethene	U		0.300	1.00	1	12/18/2021 15:20	WG1790087
Toluene	U		0.278	1.00	1	12/18/2021 15:20	WG1790087
1,2,3-Trichlorobenzene	U		0.230	1.00	1	12/18/2021 15:20	WG1790087
1,2,4-Trichlorobenzene	U		0.481	1.00	1	12/18/2021 15:20	WG1790087
1,1,1-Trichloroethane	U		0.149	1.00	1	12/18/2021 15:20	WG1790087
1,1,2-Trichloroethane	U		0.158	1.00	1	12/18/2021 15:20	WG1790087
Trichloroethene	0.454	J	0.190	1.00	1	12/18/2021 15:20	WG1790087
1,2,4-Trimethylbenzene	U		0.322	1.00	1	12/18/2021 15:20	WG1790087
1,3,5-Trimethylbenzene	U		0.104	1.00	1	12/18/2021 15:20	WG1790087
Vinyl acetate	U		0.692	10.0	1	12/18/2021 15:20	WG1790087
Vinyl chloride	U		0.234	1.00	1	12/18/2021 15:20	WG1790087
Xylenes, Total	U		0.174	3.00	1	12/18/2021 15:20	WG1790087
Di-isopropyl ether	U		0.105	1.00	1	12/18/2021 15:20	WG1790087
Ethanol	U		42.0	100	1	12/18/2021 15:20	WG1790087
3,3-Dimethyl-1-butanol	U		4.51	100	1	12/18/2021 15:20	WG1790087
Ethyl tert-butyl ether	U		0.101	1.00	1	12/18/2021 15:20	WG1790087
t-Amyl Alcohol	U		4.90	50.0	1	12/18/2021 15:20	WG1790087
tert-Butyl alcohol	U		4.06	5.00	1	12/18/2021 15:20	WG1790087
tert-Butyl Formate	U		4.51	20.0	1	12/18/2021 15:20	WG1790087
tert-Amyl Methyl Ether	U		0.195	1.00	1	12/18/2021 15:20	WG1790087
(S) 1,2-Dichloroethane-d4	*100*			*70.0-130*		*12/18/2021 15:20*	WG1790087
(S) Toluene-d8	*109*			*80.0-120*		*12/18/2021 15:20*	WG1790087
(S) 4-Bromofluorobenzene	*105*			*77.0-126*		*12/18/2021 15:20*	WG1790087

Volatile Organic Compounds (GC/MS) by Method 8260B-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	U		0.597	3.00	1	12/17/2021 21:12	WG1791341
(S) Toluene-d8	*101*			*77.0-127*		*12/17/2021 21:12*	WG1791341

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acenaphthene	U		0.0886	1.00	1	12/17/2021 06:15	WG1789878
Acenaphthylene	U		0.0921	1.00	1	12/17/2021 06:15	WG1789878
Anthracene	U		0.0804	1.00	1	12/17/2021 06:15	WG1789878
Benzidine	U		3.74	10.0	1	12/17/2021 06:15	WG1789878
Benzo(a)anthracene	U		0.199	1.00	1	12/17/2021 06:15	WG1789878
Benzo(b)fluoranthene	U		0.130	1.00	1	12/17/2021 06:15	WG1789878
Benzo(k)fluoranthene	U		0.120	1.00	1	12/17/2021 06:15	WG1789878
Benzo(g,h,i)perylene	U		0.121	1.00	1	12/17/2021 06:15	WG1789878
Benzo(a)pyrene	U		0.0381	1.00	1	12/17/2021 06:15	WG1789878
Bis(2-chlorethoxy)methane	U		0.116	10.0	1	12/17/2021 06:15	WG1789878
Bis(2-chloroethyl)ether	U		0.137	10.0	1	12/17/2021 06:15	WG1789878
2,2-Oxybis(1-Chloropropane)	U		0.210	10.0	1	12/17/2021 06:15	WG1789878
4-Bromophenyl-phenylether	U		0.0877	10.0	1	12/17/2021 06:15	WG1789878
2-Chloronaphthalene	U		0.0648	1.00	1	12/17/2021 06:15	WG1789878
4-Chlorophenyl-phenylether	U		0.0926	10.0	1	12/17/2021 06:15	WG1789878
Chrysene	U		0.130	1.00	1	12/17/2021 06:15	WG1789878
Dibenz(a,h)anthracene	U		0.0644	1.00	1	12/17/2021 06:15	WG1789878
1,2-Dichlorobenzene	3.42	J	0.0713	10.0	1	12/17/2021 06:15	WG1789878
1,3-Dichlorobenzene	U		0.132	10.0	1	12/17/2021 06:15	WG1789878
1,4-Dichlorobenzene	1.01	J	0.0942	10.0	1	12/17/2021 06:15	WG1789878
3,3-Dichlorobenzidine	U		0.212	10.0	1	12/17/2021 06:15	WG1789878
2,4-Dinitrotoluene	U		0.0983	10.0	1	12/17/2021 06:15	WG1789878
2,6-Dinitrotoluene	U		0.250	10.0	1	12/17/2021 06:15	WG1789878
Fluoranthene	U		0.102	1.00	1	12/17/2021 06:15	WG1789878
Fluorene	U		0.0844	1.00	1	12/17/2021 06:15	WG1789878
Hexachlorobenzene	U		0.0755	1.00	1	12/17/2021 06:15	WG1789878
Hexachloro-1,3-butadiene	U		0.0968	10.0	1	12/17/2021 06:15	WG1789878
Hexachlorocyclopentadiene	U		0.0598	10.0	1	12/17/2021 06:15	WG1789878
Hexachloroethane	U		0.127	10.0	1	12/17/2021 06:15	WG1789878
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	12/17/2021 06:15	WG1789878
Isophorone	U		0.143	10.0	1	12/17/2021 06:15	WG1789878
Naphthalene	U		0.159	1.00	1	12/17/2021 06:15	WG1789878
Nitrobenzene	U		0.297	10.0	1	12/17/2021 06:15	WG1789878
n-Nitrosodimethylamine	U		0.998	10.0	1	12/17/2021 06:15	WG1789878
n-Nitrosodiphenylamine	U		2.37	10.0	1	12/17/2021 06:15	WG1789878
n-Nitrosodi-n-propylamine	U		0.261	10.0	1	12/17/2021 06:15	WG1789878
Phenanthrene	U		0.112	1.00	1	12/17/2021 06:15	WG1789878
Benzylbutyl phthalate	U		0.765	3.00	1	12/17/2021 06:15	WG1789878
Bis(2-ethylhexyl)phthalate	U		0.895	3.00	1	12/17/2021 06:15	WG1789878
Di-n-butyl phthalate	U		0.453	3.00	1	12/17/2021 06:15	WG1789878
Diethyl phthalate	U		0.287	3.00	1	12/17/2021 06:15	WG1789878
Dimethyl phthalate	U		0.260	3.00	1	12/17/2021 06:15	WG1789878
Di-n-octyl phthalate	U		0.932	3.00	1	12/17/2021 06:15	WG1789878
Pyrene	U		0.107	1.00	1	12/17/2021 06:15	WG1789878
1,2,4-Trichlorobenzene	U		0.0698	10.0	1	12/17/2021 06:15	WG1789878
4-Chloro-3-methylphenol	U		0.131	10.0	1	12/17/2021 06:15	WG1789878
2-Chlorophenol	U		0.133	10.0	1	12/17/2021 06:15	WG1789878
2,4-Dichlorophenol	U		0.102	10.0	1	12/17/2021 06:15	WG1789878
2,4-Dimethylphenol	U		0.0636	10.0	1	12/17/2021 06:15	WG1789878
4,6-Dinitro-2-methylphenol	U		1.12	10.0	1	12/17/2021 06:15	WG1789878
2,4-Dinitrophenol	U		5.93	10.0	1	12/17/2021 06:15	WG1789878
2-Nitrophenol	U		0.117	10.0	1	12/17/2021 06:15	WG1789878
4-Nitrophenol	U		0.143	10.0	1	12/17/2021 06:15	WG1789878
Pentachlorophenol	U		0.313	10.0	1	12/17/2021 06:15	WG1789878
Phenol	U		4.33	10.0	1	12/17/2021 06:15	WG1789878
2,4,6-Trichlorophenol	U		0.100	10.0	1	12/17/2021 06:15	WG1789878

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
(S) 2-Fluorophenol	*43.3*			*10.0-120*		*12/17/2021 06:15*	WG1789878
(S) Phenol-d5	*26.8*			*10.0-120*		*12/17/2021 06:15*	WG1789878
(S) Nitrobenzene-d5	*68.9*			*10.0-127*		*12/17/2021 06:15*	WG1789878
(S) 2-Fluorobiphenyl	*76.9*			*10.0-130*		*12/17/2021 06:15*	WG1789878
(S) 2,4,6-Tribromophenol	*75.3*			*10.0-155*		*12/17/2021 06:15*	WG1789878
(S) p-Terphenyl-d14	*88.9*			*10.0-128*		*12/17/2021 06:15*	WG1789878

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Anthracene	U		0.0190	0.0500	1	12/16/2021 14:37	WG1789902
Acenaphthene	U		0.0190	0.0500	1	12/16/2021 14:37	WG1789902
Acenaphthylene	U		0.0171	0.0500	1	12/16/2021 14:37	WG1789902
Benzo(a)anthracene	U		0.0203	0.0500	1	12/16/2021 14:37	WG1789902
Benzo(a)pyrene	U		0.0184	0.0500	1	12/16/2021 14:37	WG1789902
Benzo(b)fluoranthene	U		0.0168	0.0500	1	12/16/2021 14:37	WG1789902
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	12/16/2021 14:37	WG1789902
Benzo(k)fluoranthene	U		0.0202	0.0500	1	12/16/2021 14:37	WG1789902
Chrysene	U		0.0179	0.0500	1	12/16/2021 14:37	WG1789902
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	12/16/2021 14:37	WG1789902
Fluoranthene	U		0.0270	0.100	1	12/16/2021 14:37	WG1789902
Fluorene	U		0.0169	0.0500	1	12/16/2021 14:37	WG1789902
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	12/16/2021 14:37	WG1789902
Naphthalene	U		0.0917	0.250	1	12/16/2021 14:37	WG1789902
Phenanthrene	U		0.0180	0.0500	1	12/16/2021 14:37	WG1789902
Pyrene	U		0.0169	0.0500	1	12/16/2021 14:37	WG1789902
1-Methylnaphthalene	U		0.0687	0.250	1	12/16/2021 14:37	WG1789902
2-Methylnaphthalene	U		0.0674	0.250	1	12/16/2021 14:37	WG1789902
2-Chloronaphthalene	U		0.0682	0.250	1	12/16/2021 14:37	WG1789902
Tetraethyllead	U		0.0338	0.0500	1	12/16/2021 14:37	WG1789902
(S) Nitrobenzene-d5	*101*			*31.0-160*		*12/16/2021 14:37*	WG1789902
(S) 2-Fluorobiphenyl	*98.9*			*48.0-148*		*12/16/2021 14:37*	WG1789902
(S) p-Terphenyl-d14	*94.7*			*37.0-146*		*12/16/2021 14:37*	WG1789902

Wet Chemistry by Method 4500CN E-2016

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Cyanide	U		1.80	5.00	1	12/21/2021 18:38	WG1791261

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury,Dissolved	U		0.100	0.200	1	12/17/2021 13:51	WG1790263

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Arsenic,Dissolved	U		4.40	10.0	1	01/04/2022 23:28	WG1793384
Barium,Dissolved	11.4	B	0.736	5.00	1	01/04/2022 23:28	WG1793384
Boron,Dissolved	99.9	J	20.0	200	1	01/04/2022 23:28	WG1793384
Calcium,Dissolved	82900		79.3	1000	1	01/04/2022 23:28	WG1793384
Chromium,Dissolved	U		1.40	10.0	1	01/04/2022 23:28	WG1793384
Cobalt,Dissolved	U		0.840	10.0	1	01/04/2022 23:28	WG1793384
Iron,Dissolved	U		18.0	100	1	01/04/2022 23:28	WG1793384
Magnesium,Dissolved	12700		85.3	1000	1	01/04/2022 23:28	WG1793384
Manganese,Dissolved	455		0.934	10.0	1	01/04/2022 23:28	WG1793384
Molybdenum,Dissolved	U		1.16	5.00	1	01/04/2022 23:28	WG1793384
Nickel,Dissolved	U		1.61	10.0	1	01/04/2022 23:28	WG1793384
Potassium,Dissolved	1600	J	261	2000	1	01/04/2022 23:28	WG1793384
Sodium,Dissolved	18800		504	3000	1	01/04/2022 23:28	WG1793384
Strontium,Dissolved	254		0.640	10.0	1	01/04/2022 23:28	WG1793384
Zinc,Dissolved	13.9	J	6.52	50.0	1	01/04/2022 23:28	WG1793384

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Aluminum,Dissolved	U		18.5	100	1	01/11/2022 03:55	WG1799108
Antimony,Dissolved	U		1.03	4.00	1	01/11/2022 03:55	WG1799108
Beryllium,Dissolved	U		0.190	2.00	1	01/11/2022 03:55	WG1799108
Cadmium,Dissolved	U		0.150	1.00	1	01/11/2022 03:55	WG1799108
Lead,Dissolved	U		0.849	2.00	1	01/11/2022 03:55	WG1799108
Selenium,Dissolved	U		0.300	2.00	1	01/11/2022 03:55	WG1799108
Silver,Dissolved	U		0.0700	2.00	1	01/11/2022 03:55	WG1799108
Thallium,Dissolved	U		0.121	2.00	1	01/11/2022 03:55	WG1799108
Titanium,Dissolved	U		2.18	20.0	1	01/11/2022 03:55	WG1799108
Vanadium,Dissolved	U		0.664	5.00	1	01/11/2022 03:55	WG1799108

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	12/18/2021 15:41	WG1790087
Benzene	U		0.0941	1.00	1	12/18/2021 15:41	WG1790087
Bromodichloromethane	U		0.136	1.00	1	12/18/2021 15:41	WG1790087
Bromoform	U		0.129	1.00	1	12/18/2021 15:41	WG1790087
Bromomethane	U		0.605	5.00	1	12/18/2021 15:41	WG1790087
Carbon disulfide	U		0.0962	1.00	1	12/18/2021 15:41	WG1790087
Carbon tetrachloride	U		0.128	1.00	1	12/18/2021 15:41	WG1790087
Chlorobenzene	0.840	J	0.116	1.00	1	12/18/2021 15:41	WG1790087
Chloroethane	U		0.192	5.00	1	12/18/2021 15:41	WG1790087
Chloroform	U		0.111	5.00	1	12/18/2021 15:41	WG1790087
Cyclohexane	U		0.188	1.00	1	12/18/2021 15:41	WG1790087

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2-Dichlorobenzene	U		0.107	1.00	1	12/18/2021 15:41	WG1790087
1,3-Dichlorobenzene	U		0.110	1.00	1	12/18/2021 15:41	WG1790087
1,4-Dichlorobenzene	U		0.120	1.00	1	12/18/2021 15:41	WG1790087
1,1-Dichloroethane	U		0.100	1.00	1	12/18/2021 15:41	WG1790087
1,2-Dichloroethane	U		0.0819	1.00	1	12/18/2021 15:41	WG1790087
1,1-Dichloroethene	U		0.188	1.00	1	12/18/2021 15:41	WG1790087
cis-1,2-Dichloroethene	0.186	J	0.126	1.00	1	12/18/2021 15:41	WG1790087
trans-1,2-Dichloroethene	U		0.149	1.00	1	12/18/2021 15:41	WG1790087
1,2-Dichloropropane	U		0.149	1.00	1	12/18/2021 15:41	WG1790087
1,3-Dichloropropane	U		0.110	1.00	1	12/18/2021 15:41	WG1790087
cis-1,3-Dichloropropene	U		0.111	1.00	1	12/18/2021 15:41	WG1790087
trans-1,3-Dichloropropene	U		0.118	1.00	1	12/18/2021 15:41	WG1790087
Ethylbenzene	U		0.137	1.00	1	12/18/2021 15:41	WG1790087
Hexachloro-1,3-butadiene	U		0.337	1.00	1	12/18/2021 15:41	WG1790087
n-Hexane	U		0.749	10.0	1	12/18/2021 15:41	WG1790087
Isopropylbenzene	U		0.105	1.00	1	12/18/2021 15:41	WG1790087
2-Butanone (MEK)	U		1.19	10.0	1	12/18/2021 15:41	WG1790087
Methylene Chloride	U		0.430	5.00	1	12/18/2021 15:41	WG1790087
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	12/18/2021 15:41	WG1790087
Methyl tert-butyl ether	U		0.101	1.00	1	12/18/2021 15:41	WG1790087
Naphthalene	U		1.00	5.00	1	12/18/2021 15:41	WG1790087
1-Methylnaphthalene	U	J4	7.30	10.0	1	12/18/2021 15:41	WG1790087
2-Methylnaphthalene	U	J4	7.18	10.0	1	12/18/2021 15:41	WG1790087
Styrene	U		0.118	1.00	1	12/18/2021 15:41	WG1790087
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	12/18/2021 15:41	WG1790087
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	12/18/2021 15:41	WG1790087
Tetrachloroethene	U		0.300	1.00	1	12/18/2021 15:41	WG1790087
Toluene	U		0.278	1.00	1	12/18/2021 15:41	WG1790087
1,2,3-Trichlorobenzene	U		0.230	1.00	1	12/18/2021 15:41	WG1790087
1,2,4-Trichlorobenzene	U		0.481	1.00	1	12/18/2021 15:41	WG1790087
1,1,1-Trichloroethane	U		0.149	1.00	1	12/18/2021 15:41	WG1790087
1,1,2-Trichloroethane	U		0.158	1.00	1	12/18/2021 15:41	WG1790087
Trichloroethene	U		0.190	1.00	1	12/18/2021 15:41	WG1790087
1,2,4-Trimethylbenzene	U		0.322	1.00	1	12/18/2021 15:41	WG1790087
1,3,5-Trimethylbenzene	U		0.104	1.00	1	12/18/2021 15:41	WG1790087
Vinyl acetate	U		0.692	10.0	1	12/18/2021 15:41	WG1790087
Vinyl chloride	1.59		0.234	1.00	1	12/18/2021 15:41	WG1790087
Xylenes, Total	U		0.174	3.00	1	12/18/2021 15:41	WG1790087
Di-isopropyl ether	U		0.105	1.00	1	12/18/2021 15:41	WG1790087
Ethanol	U		42.0	100	1	12/18/2021 15:41	WG1790087
3,3-Dimethyl-1-butanol	U		4.51	100	1	12/18/2021 15:41	WG1790087
Ethyl tert-butyl ether	U		0.101	1.00	1	12/18/2021 15:41	WG1790087
t-Amyl Alcohol	U		4.90	50.0	1	12/18/2021 15:41	WG1790087
tert-Butyl alcohol	U		4.06	5.00	1	12/18/2021 15:41	WG1790087
tert-Butyl Formate	U		4.51	20.0	1	12/18/2021 15:41	WG1790087
tert-Amyl Methyl Ether	U		0.195	1.00	1	12/18/2021 15:41	WG1790087
(S) 1,2-Dichloroethane-d4	*94.7*			*70.0-130*		*12/18/2021 15:41*	WG1790087
(S) Toluene-d8	*94.2*			*80.0-120*		*12/18/2021 15:41*	WG1790087
(S) 4-Bromofluorobenzene	*88.4*			*77.0-126*		*12/18/2021 15:41*	WG1790087

Volatile Organic Compounds (GC/MS) by Method 8260B-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	U		0.597	3.00	1	12/17/2021 21:32	WG1791341
(S) Toluene-d8	*101*			*77.0-127*		*12/17/2021 21:32*	WG1791341

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acenaphthene	U		0.0886	1.00	1	12/17/2021 06:36	WG1789878
Acenaphthylene	U		0.0921	1.00	1	12/17/2021 06:36	WG1789878
Anthracene	U		0.0804	1.00	1	12/17/2021 06:36	WG1789878
Benzidine	U		3.74	10.0	1	12/17/2021 06:36	WG1789878
Benzo(a)anthracene	U		0.199	1.00	1	12/17/2021 06:36	WG1789878
Benzo(b)fluoranthene	U		0.130	1.00	1	12/17/2021 06:36	WG1789878
Benzo(k)fluoranthene	U		0.120	1.00	1	12/17/2021 06:36	WG1789878
Benzo(g,h,i)perylene	U		0.121	1.00	1	12/17/2021 06:36	WG1789878
Benzo(a)pyrene	U		0.0381	1.00	1	12/17/2021 06:36	WG1789878
Bis(2-chlorethoxy)methane	U		0.116	10.0	1	12/17/2021 06:36	WG1789878
Bis(2-chloroethyl)ether	U		0.137	10.0	1	12/17/2021 06:36	WG1789878
2,2-Oxybis(1-Chloropropane)	U		0.210	10.0	1	12/17/2021 06:36	WG1789878
4-Bromophenyl-phenylether	U		0.0877	10.0	1	12/17/2021 06:36	WG1789878
2-Chloronaphthalene	U		0.0648	1.00	1	12/17/2021 06:36	WG1789878
4-Chlorophenyl-phenylether	U		0.0926	10.0	1	12/17/2021 06:36	WG1789878
Chrysene	U		0.130	1.00	1	12/17/2021 06:36	WG1789878
Dibenz(a,h)anthracene	U		0.0644	1.00	1	12/17/2021 06:36	WG1789878
1,2-Dichlorobenzene	U		0.0713	10.0	1	12/17/2021 06:36	WG1789878
1,3-Dichlorobenzene	U		0.132	10.0	1	12/17/2021 06:36	WG1789878
1,4-Dichlorobenzene	U		0.0942	10.0	1	12/17/2021 06:36	WG1789878
3,3-Dichlorobenzidine	U		0.212	10.0	1	12/17/2021 06:36	WG1789878
2,4-Dinitrotoluene	U		0.0983	10.0	1	12/17/2021 06:36	WG1789878
2,6-Dinitrotoluene	U		0.250	10.0	1	12/17/2021 06:36	WG1789878
Fluoranthene	U		0.102	1.00	1	12/17/2021 06:36	WG1789878
Fluorene	U		0.0844	1.00	1	12/17/2021 06:36	WG1789878
Hexachlorobenzene	U		0.0755	1.00	1	12/17/2021 06:36	WG1789878
Hexachloro-1,3-butadiene	U		0.0968	10.0	1	12/17/2021 06:36	WG1789878
Hexachlorocyclopentadiene	U		0.0598	10.0	1	12/17/2021 06:36	WG1789878
Hexachloroethane	U		0.127	10.0	1	12/17/2021 06:36	WG1789878
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	12/17/2021 06:36	WG1789878
Isophorone	U		0.143	10.0	1	12/17/2021 06:36	WG1789878
Naphthalene	U		0.159	1.00	1	12/17/2021 06:36	WG1789878
Nitrobenzene	U		0.297	10.0	1	12/17/2021 06:36	WG1789878
n-Nitrosodimethylamine	U		0.998	10.0	1	12/17/2021 06:36	WG1789878
n-Nitrosodiphenylamine	U		2.37	10.0	1	12/17/2021 06:36	WG1789878
n-Nitrosodi-n-propylamine	U		0.261	10.0	1	12/17/2021 06:36	WG1789878
Phenanthrene	U		0.112	1.00	1	12/17/2021 06:36	WG1789878
Benzylbutyl phthalate	U		0.765	3.00	1	12/17/2021 06:36	WG1789878
Bis(2-ethylhexyl)phthalate	U		0.895	3.00	1	12/17/2021 06:36	WG1789878
Di-n-butyl phthalate	U		0.453	3.00	1	12/17/2021 06:36	WG1789878
Diethyl phthalate	U		0.287	3.00	1	12/17/2021 06:36	WG1789878
Dimethyl phthalate	U		0.260	3.00	1	12/17/2021 06:36	WG1789878
Di-n-octyl phthalate	U		0.932	3.00	1	12/17/2021 06:36	WG1789878
Pyrene	U		0.107	1.00	1	12/17/2021 06:36	WG1789878
1,2,4-Trichlorobenzene	U		0.0698	10.0	1	12/17/2021 06:36	WG1789878
4-Chloro-3-methylphenol	U		0.131	10.0	1	12/17/2021 06:36	WG1789878
2-Chlorophenol	U		0.133	10.0	1	12/17/2021 06:36	WG1789878
2,4-Dichlorophenol	U		0.102	10.0	1	12/17/2021 06:36	WG1789878
2,4-Dimethylphenol	U		0.0636	10.0	1	12/17/2021 06:36	WG1789878
4,6-Dinitro-2-methylphenol	U		1.12	10.0	1	12/17/2021 06:36	WG1789878
2,4-Dinitrophenol	U		5.93	10.0	1	12/17/2021 06:36	WG1789878
2-Nitrophenol	U		0.117	10.0	1	12/17/2021 06:36	WG1789878
4-Nitrophenol	U		0.143	10.0	1	12/17/2021 06:36	WG1789878
Pentachlorophenol	U		0.313	10.0	1	12/17/2021 06:36	WG1789878
Phenol	U		4.33	10.0	1	12/17/2021 06:36	WG1789878
2,4,6-Trichlorophenol	U		0.100	10.0	1	12/17/2021 06:36	WG1789878

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
(S) 2-Fluorophenol	*48.2*			*10.0-120*		*12/17/2021 06:36*	WG1789878
(S) Phenol-d5	*30.8*			*10.0-120*		*12/17/2021 06:36*	WG1789878
(S) Nitrobenzene-d5	*76.1*			*10.0-127*		*12/17/2021 06:36*	WG1789878
(S) 2-Fluorobiphenyl	*81.3*			*10.0-130*		*12/17/2021 06:36*	WG1789878
(S) 2,4,6-Tribromophenol	*75.8*			*10.0-155*		*12/17/2021 06:36*	WG1789878
(S) p-Terphenyl-d14	*86.7*			*10.0-128*		*12/17/2021 06:36*	WG1789878

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Anthracene	U		0.0190	0.0500	1	12/16/2021 14:54	WG1789902
Acenaphthene	U		0.0190	0.0500	1	12/16/2021 14:54	WG1789902
Acenaphthylene	U		0.0171	0.0500	1	12/16/2021 14:54	WG1789902
Benzo(a)anthracene	U		0.0203	0.0500	1	12/16/2021 14:54	WG1789902
Benzo(a)pyrene	U		0.0184	0.0500	1	12/16/2021 14:54	WG1789902
Benzo(b)fluoranthene	U		0.0168	0.0500	1	12/16/2021 14:54	WG1789902
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	12/16/2021 14:54	WG1789902
Benzo(k)fluoranthene	U		0.0202	0.0500	1	12/16/2021 14:54	WG1789902
Chrysene	U		0.0179	0.0500	1	12/16/2021 14:54	WG1789902
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	12/16/2021 14:54	WG1789902
Fluoranthene	U		0.0270	0.100	1	12/16/2021 14:54	WG1789902
Fluorene	U		0.0169	0.0500	1	12/16/2021 14:54	WG1789902
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	12/16/2021 14:54	WG1789902
Naphthalene	U		0.0917	0.250	1	12/16/2021 14:54	WG1789902
Phenanthrene	U		0.0180	0.0500	1	12/16/2021 14:54	WG1789902
Pyrene	0.633		0.0169	0.0500	1	12/16/2021 14:54	WG1789902
1-Methylnaphthalene	U		0.0687	0.250	1	12/16/2021 14:54	WG1789902
2-Methylnaphthalene	U		0.0674	0.250	1	12/16/2021 14:54	WG1789902
2-Chloronaphthalene	U		0.0682	0.250	1	12/16/2021 14:54	WG1789902
Tetraethyllead	U		0.0338	0.0500	1	12/16/2021 14:54	WG1789902
(S) Nitrobenzene-d5	*103*			*31.0-160*		*12/16/2021 14:54*	WG1789902
(S) 2-Fluorobiphenyl	*98.4*			*48.0-148*		*12/16/2021 14:54*	WG1789902
(S) p-Terphenyl-d14	*95.3*			*37.0-146*		*12/16/2021 14:54*	WG1789902

Wet Chemistry by Method 4500CN E-2016

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cyanide	U		1.80	5.00	1	12/21/2021 18:40	WG1791261

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury,Dissolved	U		0.100	0.200	1	12/17/2021 13:53	WG1790263

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	U		4.40	10.0	1	01/04/2022 23:31	WG1793384
Barium,Dissolved	11.8	B	0.736	5.00	1	01/04/2022 23:31	WG1793384
Boron,Dissolved	91.3	J	20.0	200	1	01/04/2022 23:31	WG1793384
Calcium,Dissolved	74900		79.3	1000	1	01/04/2022 23:31	WG1793384
Chromium,Dissolved	U		1.40	10.0	1	01/04/2022 23:31	WG1793384
Cobalt,Dissolved	U		0.840	10.0	1	01/04/2022 23:31	WG1793384
Iron,Dissolved	U		18.0	100	1	01/04/2022 23:31	WG1793384
Magnesium,Dissolved	12400		85.3	1000	1	01/04/2022 23:31	WG1793384
Manganese,Dissolved	135		0.934	10.0	1	01/04/2022 23:31	WG1793384
Molybdenum,Dissolved	1.60	J	1.16	5.00	1	01/04/2022 23:31	WG1793384
Nickel,Dissolved	U		1.61	10.0	1	01/04/2022 23:31	WG1793384
Potassium,Dissolved	1410	J	261	2000	1	01/04/2022 23:31	WG1793384
Sodium,Dissolved	20500		504	3000	1	01/04/2022 23:31	WG1793384
Strontium,Dissolved	301		0.640	10.0	1	01/04/2022 23:31	WG1793384
Zinc,Dissolved	7.02	J	6.52	50.0	1	01/04/2022 23:31	WG1793384

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		18.5	100	1	01/11/2022 03:58	WG1799108
Antimony,Dissolved	U		1.03	4.00	1	01/11/2022 03:58	WG1799108
Beryllium,Dissolved	U		0.190	2.00	1	01/11/2022 03:58	WG1799108
Cadmium,Dissolved	U		0.150	1.00	1	01/11/2022 03:58	WG1799108
Lead,Dissolved	U		0.849	2.00	1	01/11/2022 03:58	WG1799108
Selenium,Dissolved	U		0.300	2.00	1	01/11/2022 03:58	WG1799108
Silver,Dissolved	U		0.0700	2.00	1	01/11/2022 03:58	WG1799108
Thallium,Dissolved	U		0.121	2.00	1	01/11/2022 03:58	WG1799108
Titanium,Dissolved	U		2.18	20.0	1	01/11/2022 03:58	WG1799108
Vanadium,Dissolved	U		0.664	5.00	1	01/11/2022 03:58	WG1799108

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	12/18/2021 16:02	WG1790087
Benzene	U		0.0941	1.00	1	12/18/2021 16:02	WG1790087
Bromodichloromethane	U		0.136	1.00	1	12/18/2021 16:02	WG1790087
Bromoform	U		0.129	1.00	1	12/18/2021 16:02	WG1790087
Bromomethane	U		0.605	5.00	1	12/18/2021 16:02	WG1790087
Carbon disulfide	U		0.0962	1.00	1	12/18/2021 16:02	WG1790087
Carbon tetrachloride	U		0.128	1.00	1	12/18/2021 16:02	WG1790087
Chlorobenzene	0.178	J	0.116	1.00	1	12/18/2021 16:02	WG1790087
Chloroethane	U		0.192	5.00	1	12/18/2021 16:02	WG1790087
Chloroform	U		0.111	5.00	1	12/18/2021 16:02	WG1790087
Cyclohexane	U		0.188	1.00	1	12/18/2021 16:02	WG1790087

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2-Dichlorobenzene	U		0.107	1.00	1	12/18/2021 16:02	WG1790087
1,3-Dichlorobenzene	U		0.110	1.00	1	12/18/2021 16:02	WG1790087
1,4-Dichlorobenzene	U		0.120	1.00	1	12/18/2021 16:02	WG1790087
1,1-Dichloroethane	U		0.100	1.00	1	12/18/2021 16:02	WG1790087
1,2-Dichloroethane	U		0.0819	1.00	1	12/18/2021 16:02	WG1790087
1,1-Dichloroethene	U		0.188	1.00	1	12/18/2021 16:02	WG1790087
cis-1,2-Dichloroethene	0.892	J	0.126	1.00	1	12/18/2021 16:02	WG1790087
trans-1,2-Dichloroethene	U		0.149	1.00	1	12/18/2021 16:02	WG1790087
1,2-Dichloropropane	U		0.149	1.00	1	12/18/2021 16:02	WG1790087
1,3-Dichloropropane	U		0.110	1.00	1	12/18/2021 16:02	WG1790087
cis-1,3-Dichloropropene	U		0.111	1.00	1	12/18/2021 16:02	WG1790087
trans-1,3-Dichloropropene	U		0.118	1.00	1	12/18/2021 16:02	WG1790087
Ethylbenzene	U		0.137	1.00	1	12/18/2021 16:02	WG1790087
Hexachloro-1,3-butadiene	U		0.337	1.00	1	12/18/2021 16:02	WG1790087
n-Hexane	U		0.749	10.0	1	12/18/2021 16:02	WG1790087
Isopropylbenzene	U		0.105	1.00	1	12/18/2021 16:02	WG1790087
2-Butanone (MEK)	U		1.19	10.0	1	12/18/2021 16:02	WG1790087
Methylene Chloride	U		0.430	5.00	1	12/18/2021 16:02	WG1790087
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	12/18/2021 16:02	WG1790087
Methyl tert-butyl ether	U		0.101	1.00	1	12/18/2021 16:02	WG1790087
Naphthalene	U		1.00	5.00	1	12/18/2021 16:02	WG1790087
1-Methylnaphthalene	U	J4	7.30	10.0	1	12/18/2021 16:02	WG1790087
2-Methylnaphthalene	U	J4	7.18	10.0	1	12/18/2021 16:02	WG1790087
Styrene	U		0.118	1.00	1	12/18/2021 16:02	WG1790087
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	12/18/2021 16:02	WG1790087
1,1,2,2-Tetrachloroethane	0.373	J	0.133	1.00	1	12/18/2021 16:02	WG1790087
Tetrachloroethene	0.398	J	0.300	1.00	1	12/18/2021 16:02	WG1790087
Toluene	U		0.278	1.00	1	12/18/2021 16:02	WG1790087
1,2,3-Trichlorobenzene	U		0.230	1.00	1	12/18/2021 16:02	WG1790087
1,2,4-Trichlorobenzene	U		0.481	1.00	1	12/18/2021 16:02	WG1790087
1,1,1-Trichloroethane	U		0.149	1.00	1	12/18/2021 16:02	WG1790087
1,1,2-Trichloroethane	U		0.158	1.00	1	12/18/2021 16:02	WG1790087
Trichloroethene	1.52		0.190	1.00	1	12/18/2021 16:02	WG1790087
1,2,4-Trimethylbenzene	U		0.322	1.00	1	12/18/2021 16:02	WG1790087
1,3,5-Trimethylbenzene	U		0.104	1.00	1	12/18/2021 16:02	WG1790087
Vinyl acetate	U		0.692	10.0	1	12/18/2021 16:02	WG1790087
Vinyl chloride	U		0.234	1.00	1	12/18/2021 16:02	WG1790087
Xylenes, Total	U		0.174	3.00	1	12/18/2021 16:02	WG1790087
Di-isopropyl ether	U		0.105	1.00	1	12/18/2021 16:02	WG1790087
Ethanol	U		42.0	100	1	12/18/2021 16:02	WG1790087
3,3-Dimethyl-1-butanol	U		4.51	100	1	12/18/2021 16:02	WG1790087
Ethyl tert-butyl ether	U		0.101	1.00	1	12/18/2021 16:02	WG1790087
t-Amyl Alcohol	U		4.90	50.0	1	12/18/2021 16:02	WG1790087
tert-Butyl alcohol	U		4.06	5.00	1	12/18/2021 16:02	WG1790087
tert-Butyl Formate	U		4.51	20.0	1	12/18/2021 16:02	WG1790087
tert-Amyl Methyl Ether	U		0.195	1.00	1	12/18/2021 16:02	WG1790087
(S) 1,2-Dichloroethane-d4	*95.0*			*70.0-130*		*12/18/2021 16:02*	WG1790087
(S) Toluene-d8	*123*	J1		*80.0-120*		*12/18/2021 16:02*	WG1790087
(S) 4-Bromofluorobenzene	*114*			*77.0-126*		*12/18/2021 16:02*	WG1790087

Volatile Organic Compounds (GC/MS) by Method 8260B-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	U		0.597	3.00	1	12/17/2021 21:51	WG1791341
(S) Toluene-d8	*100*			*77.0-127*		*12/17/2021 21:51*	WG1791341

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acenaphthene	U		0.0886	1.00	1	12/17/2021 06:57	WG1789878
Acenaphthylene	U		0.0921	1.00	1	12/17/2021 06:57	WG1789878
Anthracene	U		0.0804	1.00	1	12/17/2021 06:57	WG1789878
Benzidine	U		3.74	10.0	1	12/17/2021 06:57	WG1789878
Benzo(a)anthracene	U		0.199	1.00	1	12/17/2021 06:57	WG1789878
Benzo(b)fluoranthene	U		0.130	1.00	1	12/17/2021 06:57	WG1789878
Benzo(k)fluoranthene	U		0.120	1.00	1	12/17/2021 06:57	WG1789878
Benzo(g,h,i)perylene	U		0.121	1.00	1	12/17/2021 06:57	WG1789878
Benzo(a)pyrene	U		0.0381	1.00	1	12/17/2021 06:57	WG1789878
Bis(2-chlorethoxy)methane	U		0.116	10.0	1	12/17/2021 06:57	WG1789878
Bis(2-chloroethyl)ether	U		0.137	10.0	1	12/17/2021 06:57	WG1789878
2,2-Oxybis(1-Chloropropane)	U		0.210	10.0	1	12/17/2021 06:57	WG1789878
4-Bromophenyl-phenylether	U		0.0877	10.0	1	12/17/2021 06:57	WG1789878
2-Chloronaphthalene	U		0.0648	1.00	1	12/17/2021 06:57	WG1789878
4-Chlorophenyl-phenylether	U		0.0926	10.0	1	12/17/2021 06:57	WG1789878
Chrysene	U		0.130	1.00	1	12/17/2021 06:57	WG1789878
Dibenz(a,h)anthracene	U		0.0644	1.00	1	12/17/2021 06:57	WG1789878
1,2-Dichlorobenzene	U		0.0713	10.0	1	12/17/2021 06:57	WG1789878
1,3-Dichlorobenzene	U		0.132	10.0	1	12/17/2021 06:57	WG1789878
1,4-Dichlorobenzene	U		0.0942	10.0	1	12/17/2021 06:57	WG1789878
3,3-Dichlorobenzidine	U		0.212	10.0	1	12/17/2021 06:57	WG1789878
2,4-Dinitrotoluene	U		0.0983	10.0	1	12/17/2021 06:57	WG1789878
2,6-Dinitrotoluene	U		0.250	10.0	1	12/17/2021 06:57	WG1789878
Fluoranthene	U		0.102	1.00	1	12/17/2021 06:57	WG1789878
Fluorene	U		0.0844	1.00	1	12/17/2021 06:57	WG1789878
Hexachlorobenzene	U		0.0755	1.00	1	12/17/2021 06:57	WG1789878
Hexachloro-1,3-butadiene	U		0.0968	10.0	1	12/17/2021 06:57	WG1789878
Hexachlorocyclopentadiene	U		0.0598	10.0	1	12/17/2021 06:57	WG1789878
Hexachloroethane	U		0.127	10.0	1	12/17/2021 06:57	WG1789878
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	12/17/2021 06:57	WG1789878
Isophorone	U		0.143	10.0	1	12/17/2021 06:57	WG1789878
Naphthalene	U		0.159	1.00	1	12/17/2021 06:57	WG1789878
Nitrobenzene	U		0.297	10.0	1	12/17/2021 06:57	WG1789878
n-Nitrosodimethylamine	U		0.998	10.0	1	12/17/2021 06:57	WG1789878
n-Nitrosodiphenylamine	U		2.37	10.0	1	12/17/2021 06:57	WG1789878
n-Nitrosodi-n-propylamine	U		0.261	10.0	1	12/17/2021 06:57	WG1789878
Phenanthrene	U		0.112	1.00	1	12/17/2021 06:57	WG1789878
Benzylbutyl phthalate	U		0.765	3.00	1	12/17/2021 06:57	WG1789878
Bis(2-ethylhexyl)phthalate	U		0.895	3.00	1	12/17/2021 06:57	WG1789878
Di-n-butyl phthalate	U		0.453	3.00	1	12/17/2021 06:57	WG1789878
Diethyl phthalate	U		0.287	3.00	1	12/17/2021 06:57	WG1789878
Dimethyl phthalate	U		0.260	3.00	1	12/17/2021 06:57	WG1789878
Di-n-octyl phthalate	U		0.932	3.00	1	12/17/2021 06:57	WG1789878
Pyrene	U		0.107	1.00	1	12/17/2021 06:57	WG1789878
1,2,4-Trichlorobenzene	U		0.0698	10.0	1	12/17/2021 06:57	WG1789878
4-Chloro-3-methylphenol	U		0.131	10.0	1	12/17/2021 06:57	WG1789878
2-Chlorophenol	U		0.133	10.0	1	12/17/2021 06:57	WG1789878
2,4-Dichlorophenol	U		0.102	10.0	1	12/17/2021 06:57	WG1789878
2,4-Dimethylphenol	U		0.0636	10.0	1	12/17/2021 06:57	WG1789878
4,6-Dinitro-2-methylphenol	U		1.12	10.0	1	12/17/2021 06:57	WG1789878
2,4-Dinitrophenol	U		5.93	10.0	1	12/17/2021 06:57	WG1789878
2-Nitrophenol	U		0.117	10.0	1	12/17/2021 06:57	WG1789878
4-Nitrophenol	U		0.143	10.0	1	12/17/2021 06:57	WG1789878
Pentachlorophenol	U		0.313	10.0	1	12/17/2021 06:57	WG1789878
Phenol	U		4.33	10.0	1	12/17/2021 06:57	WG1789878
2,4,6-Trichlorophenol	U		0.100	10.0	1	12/17/2021 06:57	WG1789878

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
(S) 2-Fluorophenol	*41.4*			*10.0-120*		*12/17/2021 06:57*	WG1789878
(S) Phenol-d5	*25.3*			*10.0-120*		*12/17/2021 06:57*	WG1789878
(S) Nitrobenzene-d5	*68.9*			*10.0-127*		*12/17/2021 06:57*	WG1789878
(S) 2-Fluorobiphenyl	*76.4*			*10.0-130*		*12/17/2021 06:57*	WG1789878
(S) 2,4,6-Tribromophenol	*72.0*			*10.0-155*		*12/17/2021 06:57*	WG1789878
(S) p-Terphenyl-d14	*89.0*			*10.0-128*		*12/17/2021 06:57*	WG1789878

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Anthracene	U		0.0190	0.0500	1	12/16/2021 15:11	WG1789902
Acenaphthene	U		0.0190	0.0500	1	12/16/2021 15:11	WG1789902
Acenaphthylene	U		0.0171	0.0500	1	12/16/2021 15:11	WG1789902
Benzo(a)anthracene	U		0.0203	0.0500	1	12/16/2021 15:11	WG1789902
Benzo(a)pyrene	U		0.0184	0.0500	1	12/16/2021 15:11	WG1789902
Benzo(b)fluoranthene	U		0.0168	0.0500	1	12/16/2021 15:11	WG1789902
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	12/16/2021 15:11	WG1789902
Benzo(k)fluoranthene	U		0.0202	0.0500	1	12/16/2021 15:11	WG1789902
Chrysene	U		0.0179	0.0500	1	12/16/2021 15:11	WG1789902
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	12/16/2021 15:11	WG1789902
Fluoranthene	U		0.0270	0.100	1	12/16/2021 15:11	WG1789902
Fluorene	U		0.0169	0.0500	1	12/16/2021 15:11	WG1789902
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	12/16/2021 15:11	WG1789902
Naphthalene	U		0.0917	0.250	1	12/16/2021 15:11	WG1789902
Phenanthrene	U		0.0180	0.0500	1	12/16/2021 15:11	WG1789902
Pyrene	U		0.0169	0.0500	1	12/16/2021 15:11	WG1789902
1-Methylnaphthalene	U		0.0687	0.250	1	12/16/2021 15:11	WG1789902
2-Methylnaphthalene	U		0.0674	0.250	1	12/16/2021 15:11	WG1789902
2-Chloronaphthalene	U		0.0682	0.250	1	12/16/2021 15:11	WG1789902
Tetraethyllead	U		0.0338	0.0500	1	12/16/2021 15:11	WG1789902
(S) Nitrobenzene-d5	*102*			*31.0-160*		*12/16/2021 15:11*	WG1789902
(S) 2-Fluorobiphenyl	*97.4*			*48.0-148*		*12/16/2021 15:11*	WG1789902
(S) p-Terphenyl-d14	*94.7*			*37.0-146*		*12/16/2021 15:11*	WG1789902

Wet Chemistry by Method 4500CN E-2016

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Cyanide	U		1.80	5.00	1	12/21/2021 18:45	WG1791261

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury,Dissolved	U		0.100	0.200	1	12/17/2021 13:56	WG1790263

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Arsenic,Dissolved	U		4.40	10.0	1	01/04/2022 23:34	WG1793384
Barium,Dissolved	26.6		0.736	5.00	1	01/04/2022 23:34	WG1793384
Boron,Dissolved	338		20.0	200	1	01/04/2022 23:34	WG1793384
Calcium,Dissolved	156000		79.3	1000	1	01/04/2022 23:34	WG1793384
Chromium,Dissolved	U		1.40	10.0	1	01/04/2022 23:34	WG1793384
Cobalt,Dissolved	0.859	J	0.840	10.0	1	01/04/2022 23:34	WG1793384
Iron,Dissolved	U		18.0	100	1	01/04/2022 23:34	WG1793384
Magnesium,Dissolved	42400		85.3	1000	1	01/04/2022 23:34	WG1793384
Manganese,Dissolved	112		0.934	10.0	1	01/04/2022 23:34	WG1793384
Molybdenum,Dissolved	7.82		1.16	5.00	1	01/04/2022 23:34	WG1793384
Nickel,Dissolved	U		1.61	10.0	1	01/04/2022 23:34	WG1793384
Potassium,Dissolved	664	J	261	2000	1	01/04/2022 23:34	WG1793384
Sodium,Dissolved	21700		504	3000	1	01/04/2022 23:34	WG1793384
Strontium,Dissolved	532		0.640	10.0	1	01/04/2022 23:34	WG1793384
Zinc,Dissolved	14.3	J	6.52	50.0	1	01/04/2022 23:34	WG1793384

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Aluminum,Dissolved	26.5	J	18.5	100	1	01/11/2022 04:02	WG1799108
Antimony,Dissolved	U		1.03	4.00	1	01/11/2022 04:02	WG1799108
Beryllium,Dissolved	U		0.190	2.00	1	01/11/2022 04:02	WG1799108
Cadmium,Dissolved	U		0.150	1.00	1	01/11/2022 04:02	WG1799108
Lead,Dissolved	U		0.849	2.00	1	01/11/2022 04:02	WG1799108
Selenium,Dissolved	0.419	J	0.300	2.00	1	01/11/2022 04:02	WG1799108
Silver,Dissolved	U		0.0700	2.00	1	01/11/2022 04:02	WG1799108
Thallium,Dissolved	U		0.121	2.00	1	01/11/2022 04:02	WG1799108
Titanium,Dissolved	U		2.18	20.0	1	01/11/2022 04:02	WG1799108
Vanadium,Dissolved	0.936	J	0.664	5.00	1	01/11/2022 04:02	WG1799108

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	12/18/2021 16:23	WG1790087
Benzene	U		0.0941	1.00	1	12/18/2021 16:23	WG1790087
Bromodichloromethane	U		0.136	1.00	1	12/18/2021 16:23	WG1790087
Bromoform	U		0.129	1.00	1	12/18/2021 16:23	WG1790087
Bromomethane	U		0.605	5.00	1	12/18/2021 16:23	WG1790087
Carbon disulfide	U		0.0962	1.00	1	12/18/2021 16:23	WG1790087
Carbon tetrachloride	U		0.128	1.00	1	12/18/2021 16:23	WG1790087
Chlorobenzene	0.146	J	0.116	1.00	1	12/18/2021 16:23	WG1790087
Chloroethane	U		0.192	5.00	1	12/18/2021 16:23	WG1790087
Chloroform	U		0.111	5.00	1	12/18/2021 16:23	WG1790087
Cyclohexane	U		0.188	1.00	1	12/18/2021 16:23	WG1790087

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2-Dichlorobenzene	U		0.107	1.00	1	12/18/2021 16:23	WG1790087
1,3-Dichlorobenzene	U		0.110	1.00	1	12/18/2021 16:23	WG1790087
1,4-Dichlorobenzene	U		0.120	1.00	1	12/18/2021 16:23	WG1790087
1,1-Dichloroethane	U		0.100	1.00	1	12/18/2021 16:23	WG1790087
1,2-Dichloroethane	U		0.0819	1.00	1	12/18/2021 16:23	WG1790087
1,1-Dichloroethene	U		0.188	1.00	1	12/18/2021 16:23	WG1790087
cis-1,2-Dichloroethene	0.273	J	0.126	1.00	1	12/18/2021 16:23	WG1790087
trans-1,2-Dichloroethene	U		0.149	1.00	1	12/18/2021 16:23	WG1790087
1,2-Dichloropropane	U		0.149	1.00	1	12/18/2021 16:23	WG1790087
1,3-Dichloropropane	U		0.110	1.00	1	12/18/2021 16:23	WG1790087
cis-1,3-Dichloropropene	U		0.111	1.00	1	12/18/2021 16:23	WG1790087
trans-1,3-Dichloropropene	U		0.118	1.00	1	12/18/2021 16:23	WG1790087
Ethylbenzene	U		0.137	1.00	1	12/18/2021 16:23	WG1790087
Hexachloro-1,3-butadiene	U		0.337	1.00	1	12/18/2021 16:23	WG1790087
n-Hexane	U		0.749	10.0	1	12/18/2021 16:23	WG1790087
Isopropylbenzene	U		0.105	1.00	1	12/18/2021 16:23	WG1790087
2-Butanone (MEK)	U		1.19	10.0	1	12/18/2021 16:23	WG1790087
Methylene Chloride	U		0.430	5.00	1	12/18/2021 16:23	WG1790087
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	12/18/2021 16:23	WG1790087
Methyl tert-butyl ether	U		0.101	1.00	1	12/18/2021 16:23	WG1790087
Naphthalene	U		1.00	5.00	1	12/18/2021 16:23	WG1790087
1-Methylnaphthalene	U	J4	7.30	10.0	1	12/18/2021 16:23	WG1790087
2-Methylnaphthalene	U	J4	7.18	10.0	1	12/18/2021 16:23	WG1790087
Styrene	U		0.118	1.00	1	12/18/2021 16:23	WG1790087
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	12/18/2021 16:23	WG1790087
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	12/18/2021 16:23	WG1790087
Tetrachloroethene	U		0.300	1.00	1	12/18/2021 16:23	WG1790087
Toluene	U		0.278	1.00	1	12/18/2021 16:23	WG1790087
1,2,3-Trichlorobenzene	U		0.230	1.00	1	12/18/2021 16:23	WG1790087
1,2,4-Trichlorobenzene	U		0.481	1.00	1	12/18/2021 16:23	WG1790087
1,1,1-Trichloroethane	U		0.149	1.00	1	12/18/2021 16:23	WG1790087
1,1,2-Trichloroethane	U		0.158	1.00	1	12/18/2021 16:23	WG1790087
Trichloroethene	U		0.190	1.00	1	12/18/2021 16:23	WG1790087
1,2,4-Trimethylbenzene	U		0.322	1.00	1	12/18/2021 16:23	WG1790087
1,3,5-Trimethylbenzene	U		0.104	1.00	1	12/18/2021 16:23	WG1790087
Vinyl acetate	U		0.692	10.0	1	12/18/2021 16:23	WG1790087
Vinyl chloride	U		0.234	1.00	1	12/18/2021 16:23	WG1790087
Xylenes, Total	U		0.174	3.00	1	12/18/2021 16:23	WG1790087
Di-isopropyl ether	U		0.105	1.00	1	12/18/2021 16:23	WG1790087
Ethanol	U		42.0	100	1	12/18/2021 16:23	WG1790087
3,3-Dimethyl-1-butanol	U		4.51	100	1	12/18/2021 16:23	WG1790087
Ethyl tert-butyl ether	U		0.101	1.00	1	12/18/2021 16:23	WG1790087
t-Amyl Alcohol	U		4.90	50.0	1	12/18/2021 16:23	WG1790087
tert-Butyl alcohol	U		4.06	5.00	1	12/18/2021 16:23	WG1790087
tert-Butyl Formate	U		4.51	20.0	1	12/18/2021 16:23	WG1790087
tert-Amyl Methyl Ether	U		0.195	1.00	1	12/18/2021 16:23	WG1790087
(S) 1,2-Dichloroethane-d4	*95.3*			*70.0-130*		*12/18/2021 16:23*	WG1790087
(S) Toluene-d8	*102*			*80.0-120*		*12/18/2021 16:23*	WG1790087
(S) 4-Bromofluorobenzene	*106*			*77.0-126*		*12/18/2021 16:23*	WG1790087

Volatile Organic Compounds (GC/MS) by Method 8260B-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	U		0.597	3.00	1	12/17/2021 22:11	WG1791341
(S) Toluene-d8	*100*			*77.0-127*		*12/17/2021 22:11*	WG1791341

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acenaphthene	U		0.0886	1.00	1	12/17/2021 07:18	WG1789878
Acenaphthylene	U		0.0921	1.00	1	12/17/2021 07:18	WG1789878
Anthracene	U		0.0804	1.00	1	12/17/2021 07:18	WG1789878
Benzidine	U		3.74	10.0	1	12/17/2021 07:18	WG1789878
Benzo(a)anthracene	U		0.199	1.00	1	12/17/2021 07:18	WG1789878
Benzo(b)fluoranthene	U		0.130	1.00	1	12/17/2021 07:18	WG1789878
Benzo(k)fluoranthene	U		0.120	1.00	1	12/17/2021 07:18	WG1789878
Benzo(g,h,i)perylene	U		0.121	1.00	1	12/17/2021 07:18	WG1789878
Benzo(a)pyrene	U		0.0381	1.00	1	12/17/2021 07:18	WG1789878
Bis(2-chlorethoxy)methane	U		0.116	10.0	1	12/17/2021 07:18	WG1789878
Bis(2-chloroethyl)ether	U		0.137	10.0	1	12/17/2021 07:18	WG1789878
2,2-Oxybis(1-Chloropropane)	U		0.210	10.0	1	12/17/2021 07:18	WG1789878
4-Bromophenyl-phenylether	U		0.0877	10.0	1	12/17/2021 07:18	WG1789878
2-Chloronaphthalene	U		0.0648	1.00	1	12/17/2021 07:18	WG1789878
4-Chlorophenyl-phenylether	U		0.0926	10.0	1	12/17/2021 07:18	WG1789878
Chrysene	U		0.130	1.00	1	12/17/2021 07:18	WG1789878
Dibenz(a,h)anthracene	U		0.0644	1.00	1	12/17/2021 07:18	WG1789878
1,2-Dichlorobenzene	U		0.0713	10.0	1	12/17/2021 07:18	WG1789878
1,3-Dichlorobenzene	U		0.132	10.0	1	12/17/2021 07:18	WG1789878
1,4-Dichlorobenzene	U		0.0942	10.0	1	12/17/2021 07:18	WG1789878
3,3-Dichlorobenzidine	U		0.212	10.0	1	12/17/2021 07:18	WG1789878
2,4-Dinitrotoluene	U		0.0983	10.0	1	12/17/2021 07:18	WG1789878
2,6-Dinitrotoluene	U		0.250	10.0	1	12/17/2021 07:18	WG1789878
Fluoranthene	U		0.102	1.00	1	12/17/2021 07:18	WG1789878
Fluorene	U		0.0844	1.00	1	12/17/2021 07:18	WG1789878
Hexachlorobenzene	U		0.0755	1.00	1	12/17/2021 07:18	WG1789878
Hexachloro-1,3-butadiene	U		0.0968	10.0	1	12/17/2021 07:18	WG1789878
Hexachlorocyclopentadiene	U		0.0598	10.0	1	12/17/2021 07:18	WG1789878
Hexachloroethane	U		0.127	10.0	1	12/17/2021 07:18	WG1789878
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	12/17/2021 07:18	WG1789878
Isophorone	U		0.143	10.0	1	12/17/2021 07:18	WG1789878
Naphthalene	U		0.159	1.00	1	12/17/2021 07:18	WG1789878
Nitrobenzene	U		0.297	10.0	1	12/17/2021 07:18	WG1789878
n-Nitrosodimethylamine	U		0.998	10.0	1	12/17/2021 07:18	WG1789878
n-Nitrosodiphenylamine	U		2.37	10.0	1	12/17/2021 07:18	WG1789878
n-Nitrosodi-n-propylamine	U		0.261	10.0	1	12/17/2021 07:18	WG1789878
Phenanthrene	U		0.112	1.00	1	12/17/2021 07:18	WG1789878
Benzylbutyl phthalate	U		0.765	3.00	1	12/17/2021 07:18	WG1789878
Bis(2-ethylhexyl)phthalate	U		0.895	3.00	1	12/17/2021 07:18	WG1789878
Di-n-butyl phthalate	U		0.453	3.00	1	12/17/2021 07:18	WG1789878
Diethyl phthalate	U		0.287	3.00	1	12/17/2021 07:18	WG1789878
Dimethyl phthalate	U		0.260	3.00	1	12/17/2021 07:18	WG1789878
Di-n-octyl phthalate	U		0.932	3.00	1	12/17/2021 07:18	WG1789878
Pyrene	U		0.107	1.00	1	12/17/2021 07:18	WG1789878
1,2,4-Trichlorobenzene	U		0.0698	10.0	1	12/17/2021 07:18	WG1789878
4-Chloro-3-methylphenol	U		0.131	10.0	1	12/17/2021 07:18	WG1789878
2-Chlorophenol	U		0.133	10.0	1	12/17/2021 07:18	WG1789878
2,4-Dichlorophenol	U		0.102	10.0	1	12/17/2021 07:18	WG1789878
2,4-Dimethylphenol	U		0.0636	10.0	1	12/17/2021 07:18	WG1789878
4,6-Dinitro-2-methylphenol	U		1.12	10.0	1	12/17/2021 07:18	WG1789878
2,4-Dinitrophenol	U		5.93	10.0	1	12/17/2021 07:18	WG1789878
2-Nitrophenol	U		0.117	10.0	1	12/17/2021 07:18	WG1789878
4-Nitrophenol	U		0.143	10.0	1	12/17/2021 07:18	WG1789878
Pentachlorophenol	U		0.313	10.0	1	12/17/2021 07:18	WG1789878
Phenol	U		4.33	10.0	1	12/17/2021 07:18	WG1789878
2,4,6-Trichlorophenol	U		0.100	10.0	1	12/17/2021 07:18	WG1789878

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
(S) 2-Fluorophenol	*42.6*			*10.0-120*		*12/17/2021 07:18*	WG1789878
(S) Phenol-d5	*25.9*			*10.0-120*		*12/17/2021 07:18*	WG1789878
(S) Nitrobenzene-d5	*69.3*			*10.0-127*		*12/17/2021 07:18*	WG1789878
(S) 2-Fluorobiphenyl	*75.6*			*10.0-130*		*12/17/2021 07:18*	WG1789878
(S) 2,4,6-Tribromophenol	*72.7*			*10.0-155*		*12/17/2021 07:18*	WG1789878
(S) p-Terphenyl-d14	*83.2*			*10.0-128*		*12/17/2021 07:18*	WG1789878

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Anthracene	U		0.0190	0.0500	1	12/16/2021 15:29	WG1789902
Acenaphthene	U		0.0190	0.0500	1	12/16/2021 15:29	WG1789902
Acenaphthylene	U		0.0171	0.0500	1	12/16/2021 15:29	WG1789902
Benzo(a)anthracene	U		0.0203	0.0500	1	12/16/2021 15:29	WG1789902
Benzo(a)pyrene	U		0.0184	0.0500	1	12/16/2021 15:29	WG1789902
Benzo(b)fluoranthene	U		0.0168	0.0500	1	12/16/2021 15:29	WG1789902
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	12/16/2021 15:29	WG1789902
Benzo(k)fluoranthene	U		0.0202	0.0500	1	12/16/2021 15:29	WG1789902
Chrysene	U		0.0179	0.0500	1	12/16/2021 15:29	WG1789902
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	12/16/2021 15:29	WG1789902
Fluoranthene	U		0.0270	0.100	1	12/16/2021 15:29	WG1789902
Fluorene	U		0.0169	0.0500	1	12/16/2021 15:29	WG1789902
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	12/16/2021 15:29	WG1789902
Naphthalene	U		0.0917	0.250	1	12/16/2021 15:29	WG1789902
Phenanthrene	U		0.0180	0.0500	1	12/16/2021 15:29	WG1789902
Pyrene	0.0178	J	0.0169	0.0500	1	12/16/2021 15:29	WG1789902
1-Methylnaphthalene	U		0.0687	0.250	1	12/16/2021 15:29	WG1789902
2-Methylnaphthalene	U		0.0674	0.250	1	12/16/2021 15:29	WG1789902
2-Chloronaphthalene	U		0.0682	0.250	1	12/16/2021 15:29	WG1789902
Tetraethyllead	U		0.0338	0.0500	1	12/16/2021 15:29	WG1789902
(S) Nitrobenzene-d5	*101*			*31.0-160*		*12/16/2021 15:29*	WG1789902
(S) 2-Fluorobiphenyl	*97.4*			*48.0-148*		*12/16/2021 15:29*	WG1789902
(S) p-Terphenyl-d14	*95.8*			*37.0-146*		*12/16/2021 15:29*	WG1789902

Wet Chemistry by Method 4500CN E-2016

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cyanide	U		1.80	5.00	1	12/21/2021 18:46	WG1791261

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury,Dissolved	U		0.100	0.200	1	12/17/2021 13:58	WG1790263

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	U		4.40	10.0	1	01/04/2022 23:36	WG1793384
Barium,Dissolved	22.3		0.736	5.00	1	01/04/2022 23:36	WG1793384
Boron,Dissolved	131	J	20.0	200	1	01/04/2022 23:36	WG1793384
Calcium,Dissolved	130000		79.3	1000	1	01/04/2022 23:36	WG1793384
Chromium,Dissolved	U		1.40	10.0	1	01/04/2022 23:36	WG1793384
Cobalt,Dissolved	U		0.840	10.0	1	01/04/2022 23:36	WG1793384
Iron,Dissolved	U		18.0	100	1	01/04/2022 23:36	WG1793384
Magnesium,Dissolved	22500		85.3	1000	1	01/04/2022 23:36	WG1793384
Manganese,Dissolved	14.9	B	0.934	10.0	1	01/04/2022 23:36	WG1793384
Molybdenum,Dissolved	3.65	J	1.16	5.00	1	01/04/2022 23:36	WG1793384
Nickel,Dissolved	U		1.61	10.0	1	01/04/2022 23:36	WG1793384
Potassium,Dissolved	3140		261	2000	1	01/04/2022 23:36	WG1793384
Sodium,Dissolved	8110		504	3000	1	01/04/2022 23:36	WG1793384
Strontium,Dissolved	624		0.640	10.0	1	01/04/2022 23:36	WG1793384
Zinc,Dissolved	6.93	J	6.52	50.0	1	01/04/2022 23:36	WG1793384

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		18.5	100	1	01/11/2022 04:05	WG1799108
Antimony,Dissolved	U		1.03	4.00	1	01/11/2022 04:05	WG1799108
Beryllium,Dissolved	U		0.190	2.00	1	01/11/2022 04:05	WG1799108
Cadmium,Dissolved	U		0.150	1.00	1	01/11/2022 04:05	WG1799108
Lead,Dissolved	U		0.849	2.00	1	01/11/2022 04:05	WG1799108
Selenium,Dissolved	3.88		0.300	2.00	1	01/11/2022 04:05	WG1799108
Silver,Dissolved	U		0.0700	2.00	1	01/11/2022 04:05	WG1799108
Thallium,Dissolved	U		0.121	2.00	1	01/11/2022 04:05	WG1799108
Titanium,Dissolved	U		2.18	20.0	1	01/11/2022 04:05	WG1799108
Vanadium,Dissolved	0.688	J	0.664	5.00	1	01/11/2022 04:05	WG1799108

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	12/18/2021 16:45	WG1790087
Benzene	U		0.0941	1.00	1	12/18/2021 16:45	WG1790087
Bromodichloromethane	U		0.136	1.00	1	12/18/2021 16:45	WG1790087
Bromoform	U		0.129	1.00	1	12/18/2021 16:45	WG1790087
Bromomethane	U		0.605	5.00	1	12/18/2021 16:45	WG1790087
Carbon disulfide	U		0.0962	1.00	1	12/18/2021 16:45	WG1790087
Carbon tetrachloride	U		0.128	1.00	1	12/18/2021 16:45	WG1790087
Chlorobenzene	U		0.116	1.00	1	12/18/2021 16:45	WG1790087
Chloroethane	U		0.192	5.00	1	12/18/2021 16:45	WG1790087
Chloroform	U		0.111	5.00	1	12/18/2021 16:45	WG1790087
Cyclohexane	U		0.188	1.00	1	12/18/2021 16:45	WG1790087

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2-Dichlorobenzene	U		0.107	1.00	1	12/18/2021 16:45	WG1790087
1,3-Dichlorobenzene	U		0.110	1.00	1	12/18/2021 16:45	WG1790087
1,4-Dichlorobenzene	U		0.120	1.00	1	12/18/2021 16:45	WG1790087
1,1-Dichloroethane	U		0.100	1.00	1	12/18/2021 16:45	WG1790087
1,2-Dichloroethane	U		0.0819	1.00	1	12/18/2021 16:45	WG1790087
1,1-Dichloroethene	U		0.188	1.00	1	12/18/2021 16:45	WG1790087
cis-1,2-Dichloroethene	U		0.126	1.00	1	12/18/2021 16:45	WG1790087
trans-1,2-Dichloroethene	U		0.149	1.00	1	12/18/2021 16:45	WG1790087
1,2-Dichloropropane	U		0.149	1.00	1	12/18/2021 16:45	WG1790087
1,3-Dichloropropane	U		0.110	1.00	1	12/18/2021 16:45	WG1790087
cis-1,3-Dichloropropene	U		0.111	1.00	1	12/18/2021 16:45	WG1790087
trans-1,3-Dichloropropene	U		0.118	1.00	1	12/18/2021 16:45	WG1790087
Ethylbenzene	U		0.137	1.00	1	12/18/2021 16:45	WG1790087
Hexachloro-1,3-butadiene	U		0.337	1.00	1	12/18/2021 16:45	WG1790087
n-Hexane	U		0.749	10.0	1	12/18/2021 16:45	WG1790087
Isopropylbenzene	U		0.105	1.00	1	12/18/2021 16:45	WG1790087
2-Butanone (MEK)	U		1.19	10.0	1	12/18/2021 16:45	WG1790087
Methylene Chloride	U		0.430	5.00	1	12/18/2021 16:45	WG1790087
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	12/18/2021 16:45	WG1790087
Methyl tert-butyl ether	U		0.101	1.00	1	12/18/2021 16:45	WG1790087
Naphthalene	U		1.00	5.00	1	12/18/2021 16:45	WG1790087
1-Methylnaphthalene	U	J4	7.30	10.0	1	12/18/2021 16:45	WG1790087
2-Methylnaphthalene	U	J4	7.18	10.0	1	12/18/2021 16:45	WG1790087
Styrene	U		0.118	1.00	1	12/18/2021 16:45	WG1790087
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	12/18/2021 16:45	WG1790087
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	12/18/2021 16:45	WG1790087
Tetrachloroethene	U		0.300	1.00	1	12/18/2021 16:45	WG1790087
Toluene	U		0.278	1.00	1	12/18/2021 16:45	WG1790087
1,2,3-Trichlorobenzene	U		0.230	1.00	1	12/18/2021 16:45	WG1790087
1,2,4-Trichlorobenzene	U		0.481	1.00	1	12/18/2021 16:45	WG1790087
1,1,1-Trichloroethane	U		0.149	1.00	1	12/18/2021 16:45	WG1790087
1,1,2-Trichloroethane	U		0.158	1.00	1	12/18/2021 16:45	WG1790087
Trichloroethene	U		0.190	1.00	1	12/18/2021 16:45	WG1790087
1,2,4-Trimethylbenzene	U		0.322	1.00	1	12/18/2021 16:45	WG1790087
1,3,5-Trimethylbenzene	U		0.104	1.00	1	12/18/2021 16:45	WG1790087
Vinyl acetate	U		0.692	10.0	1	12/18/2021 16:45	WG1790087
Vinyl chloride	U		0.234	1.00	1	12/18/2021 16:45	WG1790087
Xylenes, Total	U		0.174	3.00	1	12/18/2021 16:45	WG1790087
Di-isopropyl ether	U		0.105	1.00	1	12/18/2021 16:45	WG1790087
Ethanol	U		42.0	100	1	12/18/2021 16:45	WG1790087
3,3-Dimethyl-1-butanol	U		4.51	100	1	12/18/2021 16:45	WG1790087
Ethyl tert-butyl ether	U		0.101	1.00	1	12/18/2021 16:45	WG1790087
t-Amyl Alcohol	U		4.90	50.0	1	12/18/2021 16:45	WG1790087
tert-Butyl alcohol	U		4.06	5.00	1	12/18/2021 16:45	WG1790087
tert-Butyl Formate	U		4.51	20.0	1	12/18/2021 16:45	WG1790087
tert-Amyl Methyl Ether	U		0.195	1.00	1	12/18/2021 16:45	WG1790087
(S) 1,2-Dichloroethane-d4	*98.7*			*70.0-130*		*12/18/2021 16:45*	WG1790087
(S) Toluene-d8	*89.9*			*80.0-120*		*12/18/2021 16:45*	WG1790087
(S) 4-Bromofluorobenzene	*87.9*			*77.0-126*		*12/18/2021 16:45*	WG1790087

Volatile Organic Compounds (GC/MS) by Method 8260B-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	U		0.597	3.00	1	12/17/2021 22:31	WG1791341
(S) Toluene-d8	*100*			*77.0-127*		*12/17/2021 22:31*	WG1791341

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acenaphthene	U		0.0886	1.00	1	12/17/2021 07:39	WG1789878
Acenaphthylene	U		0.0921	1.00	1	12/17/2021 07:39	WG1789878
Anthracene	U		0.0804	1.00	1	12/17/2021 07:39	WG1789878
Benzidine	U		3.74	10.0	1	12/17/2021 07:39	WG1789878
Benzo(a)anthracene	U		0.199	1.00	1	12/17/2021 07:39	WG1789878
Benzo(b)fluoranthene	U		0.130	1.00	1	12/17/2021 07:39	WG1789878
Benzo(k)fluoranthene	U		0.120	1.00	1	12/17/2021 07:39	WG1789878
Benzo(g,h,i)perylene	U		0.121	1.00	1	12/17/2021 07:39	WG1789878
Benzo(a)pyrene	U		0.0381	1.00	1	12/17/2021 07:39	WG1789878
Bis(2-chlorethoxy)methane	U		0.116	10.0	1	12/17/2021 07:39	WG1789878
Bis(2-chloroethyl)ether	U		0.137	10.0	1	12/17/2021 07:39	WG1789878
2,2-Oxybis(1-Chloropropane)	U		0.210	10.0	1	12/17/2021 07:39	WG1789878
4-Bromophenyl-phenylether	U		0.0877	10.0	1	12/17/2021 07:39	WG1789878
2-Chloronaphthalene	U		0.0648	1.00	1	12/17/2021 07:39	WG1789878
4-Chlorophenyl-phenylether	U		0.0926	10.0	1	12/17/2021 07:39	WG1789878
Chrysene	U		0.130	1.00	1	12/17/2021 07:39	WG1789878
Dibenz(a,h)anthracene	U		0.0644	1.00	1	12/17/2021 07:39	WG1789878
1,2-Dichlorobenzene	U		0.0713	10.0	1	12/17/2021 07:39	WG1789878
1,3-Dichlorobenzene	U		0.132	10.0	1	12/17/2021 07:39	WG1789878
1,4-Dichlorobenzene	U		0.0942	10.0	1	12/17/2021 07:39	WG1789878
3,3-Dichlorobenzidine	U		0.212	10.0	1	12/17/2021 07:39	WG1789878
2,4-Dinitrotoluene	U		0.0983	10.0	1	12/17/2021 07:39	WG1789878
2,6-Dinitrotoluene	U		0.250	10.0	1	12/17/2021 07:39	WG1789878
Fluoranthene	U		0.102	1.00	1	12/17/2021 07:39	WG1789878
Fluorene	U		0.0844	1.00	1	12/17/2021 07:39	WG1789878
Hexachlorobenzene	U		0.0755	1.00	1	12/17/2021 07:39	WG1789878
Hexachloro-1,3-butadiene	U		0.0968	10.0	1	12/17/2021 07:39	WG1789878
Hexachlorocyclopentadiene	U		0.0598	10.0	1	12/17/2021 07:39	WG1789878
Hexachloroethane	U		0.127	10.0	1	12/17/2021 07:39	WG1789878
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	12/17/2021 07:39	WG1789878
Isophorone	U		0.143	10.0	1	12/17/2021 07:39	WG1789878
Naphthalene	U		0.159	1.00	1	12/17/2021 07:39	WG1789878
Nitrobenzene	U		0.297	10.0	1	12/17/2021 07:39	WG1789878
n-Nitrosodimethylamine	U		0.998	10.0	1	12/17/2021 07:39	WG1789878
n-Nitrosodiphenylamine	U		2.37	10.0	1	12/17/2021 07:39	WG1789878
n-Nitrosodi-n-propylamine	U		0.261	10.0	1	12/17/2021 07:39	WG1789878
Phenanthrene	U		0.112	1.00	1	12/17/2021 07:39	WG1789878
Benzylbutyl phthalate	U		0.765	3.00	1	12/17/2021 07:39	WG1789878
Bis(2-ethylhexyl)phthalate	U		0.895	3.00	1	12/17/2021 07:39	WG1789878
Di-n-butyl phthalate	U		0.453	3.00	1	12/17/2021 07:39	WG1789878
Diethyl phthalate	U		0.287	3.00	1	12/17/2021 07:39	WG1789878
Dimethyl phthalate	U		0.260	3.00	1	12/17/2021 07:39	WG1789878
Di-n-octyl phthalate	U		0.932	3.00	1	12/17/2021 07:39	WG1789878
Pyrene	U		0.107	1.00	1	12/17/2021 07:39	WG1789878
1,2,4-Trichlorobenzene	U		0.0698	10.0	1	12/17/2021 07:39	WG1789878
4-Chloro-3-methylphenol	U		0.131	10.0	1	12/17/2021 07:39	WG1789878
2-Chlorophenol	U		0.133	10.0	1	12/17/2021 07:39	WG1789878
2,4-Dichlorophenol	U		0.102	10.0	1	12/17/2021 07:39	WG1789878
2,4-Dimethylphenol	U		0.0636	10.0	1	12/17/2021 07:39	WG1789878
4,6-Dinitro-2-methylphenol	U		1.12	10.0	1	12/17/2021 07:39	WG1789878
2,4-Dinitrophenol	U		5.93	10.0	1	12/17/2021 07:39	WG1789878
2-Nitrophenol	U		0.117	10.0	1	12/17/2021 07:39	WG1789878
4-Nitrophenol	U		0.143	10.0	1	12/17/2021 07:39	WG1789878
Pentachlorophenol	U		0.313	10.0	1	12/17/2021 07:39	WG1789878
Phenol	U		4.33	10.0	1	12/17/2021 07:39	WG1789878
2,4,6-Trichlorophenol	U		0.100	10.0	1	12/17/2021 07:39	WG1789878

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
(S) 2-Fluorophenol	*46.5*			*10.0-120*		*12/17/2021 07:39*	WG1789878
(S) Phenol-d5	*28.5*			*10.0-120*		*12/17/2021 07:39*	WG1789878
(S) Nitrobenzene-d5	*73.5*			*10.0-127*		*12/17/2021 07:39*	WG1789878
(S) 2-Fluorobiphenyl	*78.9*			*10.0-130*		*12/17/2021 07:39*	WG1789878
(S) 2,4,6-Tribromophenol	*73.1*			*10.0-155*		*12/17/2021 07:39*	WG1789878
(S) p-Terphenyl-d14	*88.9*			*10.0-128*		*12/17/2021 07:39*	WG1789878

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Anthracene	U		0.0190	0.0500	1	12/16/2021 15:46	WG1789902
Acenaphthene	U		0.0190	0.0500	1	12/16/2021 15:46	WG1789902
Acenaphthylene	U		0.0171	0.0500	1	12/16/2021 15:46	WG1789902
Benzo(a)anthracene	U		0.0203	0.0500	1	12/16/2021 15:46	WG1789902
Benzo(a)pyrene	U		0.0184	0.0500	1	12/16/2021 15:46	WG1789902
Benzo(b)fluoranthene	U		0.0168	0.0500	1	12/16/2021 15:46	WG1789902
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	12/16/2021 15:46	WG1789902
Benzo(k)fluoranthene	U		0.0202	0.0500	1	12/16/2021 15:46	WG1789902
Chrysene	U		0.0179	0.0500	1	12/16/2021 15:46	WG1789902
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	12/16/2021 15:46	WG1789902
Fluoranthene	U		0.0270	0.100	1	12/16/2021 15:46	WG1789902
Fluorene	U		0.0169	0.0500	1	12/16/2021 15:46	WG1789902
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	12/16/2021 15:46	WG1789902
Naphthalene	U		0.0917	0.250	1	12/16/2021 15:46	WG1789902
Phenanthrene	U		0.0180	0.0500	1	12/16/2021 15:46	WG1789902
Pyrene	U		0.0169	0.0500	1	12/16/2021 15:46	WG1789902
1-Methylnaphthalene	U		0.0687	0.250	1	12/16/2021 15:46	WG1789902
2-Methylnaphthalene	U		0.0674	0.250	1	12/16/2021 15:46	WG1789902
2-Chloronaphthalene	U		0.0682	0.250	1	12/16/2021 15:46	WG1789902
Tetraethyllead	U		0.0338	0.0500	1	12/16/2021 15:46	WG1789902
(S) Nitrobenzene-d5	*101*			*31.0-160*		*12/16/2021 15:46*	WG1789902
(S) 2-Fluorobiphenyl	*97.4*			*48.0-148*		*12/16/2021 15:46*	WG1789902
(S) p-Terphenyl-d14	*95.8*			*37.0-146*		*12/16/2021 15:46*	WG1789902

Wet Chemistry by Method 4500CN E-2016

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cyanide	U		1.80	5.00	1	12/21/2021 18:47	WG1791261

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury,Dissolved	U		0.100	0.200	1	12/17/2021 14:00	WG1790263

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	U		4.40	10.0	1	01/14/2022 02:08	WG1798458
Barium,Dissolved	19.1		0.736	5.00	1	01/14/2022 02:08	WG1798458
Boron,Dissolved	99.4	J	20.0	200	1	01/14/2022 02:08	WG1798458
Calcium,Dissolved	59800		79.3	1000	1	01/14/2022 02:08	WG1798458
Chromium,Dissolved	2.84	B J	1.40	10.0	1	01/14/2022 02:08	WG1798458
Cobalt,Dissolved	U		0.840	10.0	1	01/14/2022 02:08	WG1798458
Iron,Dissolved	U		18.0	100	1	01/14/2022 02:08	WG1798458
Magnesium,Dissolved	20500		85.3	1000	1	01/14/2022 02:08	WG1798458
Manganese,Dissolved	U		0.934	10.0	1	01/14/2022 02:08	WG1798458
Molybdenum,Dissolved	4.44	J	1.16	5.00	1	01/14/2022 02:08	WG1798458
Nickel,Dissolved	1.92	J	1.61	10.0	1	01/14/2022 02:08	WG1798458
Potassium,Dissolved	3090		261	2000	1	01/14/2022 02:08	WG1798458
Sodium,Dissolved	3840		504	3000	1	01/14/2022 02:08	WG1798458
Strontium,Dissolved	867		0.640	10.0	1	01/14/2022 02:08	WG1798458
Zinc,Dissolved	U		6.52	50.0	1	01/14/2022 02:08	WG1798458

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		18.5	100	1	01/12/2022 18:16	WG1800316
Antimony,Dissolved	U		1.03	4.00	1	01/12/2022 18:16	WG1800316
Beryllium,Dissolved	U		0.190	2.00	1	01/12/2022 18:16	WG1800316
Cadmium,Dissolved	U		0.150	1.00	1	01/12/2022 18:16	WG1800316
Lead,Dissolved	U		0.849	2.00	1	01/12/2022 18:16	WG1800316
Selenium,Dissolved	5.09		0.300	2.00	1	01/12/2022 18:16	WG1800316
Silver,Dissolved	U		0.0700	2.00	1	01/12/2022 18:16	WG1800316
Thallium,Dissolved	U		0.121	2.00	1	01/12/2022 18:16	WG1800316
Titanium,Dissolved	U		2.18	20.0	1	01/12/2022 18:16	WG1800316
Vanadium,Dissolved	U		0.664	5.00	1	01/12/2022 18:16	WG1800316

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	12/18/2021 17:06	WG1790087
Benzene	U		0.0941	1.00	1	12/18/2021 17:06	WG1790087
Bromodichloromethane	U		0.136	1.00	1	12/18/2021 17:06	WG1790087
Bromoform	U		0.129	1.00	1	12/18/2021 17:06	WG1790087
Bromomethane	U		0.605	5.00	1	12/18/2021 17:06	WG1790087
Carbon disulfide	U		0.0962	1.00	1	12/18/2021 17:06	WG1790087
Carbon tetrachloride	U		0.128	1.00	1	12/18/2021 17:06	WG1790087
Chlorobenzene	U		0.116	1.00	1	12/18/2021 17:06	WG1790087
Chloroethane	U		0.192	5.00	1	12/18/2021 17:06	WG1790087
Chloroform	U		0.111	5.00	1	12/18/2021 17:06	WG1790087
Cyclohexane	U		0.188	1.00	1	12/18/2021 17:06	WG1790087

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2-Dichlorobenzene	U		0.107	1.00	1	12/18/2021 17:06	WG1790087
1,3-Dichlorobenzene	U		0.110	1.00	1	12/18/2021 17:06	WG1790087
1,4-Dichlorobenzene	U		0.120	1.00	1	12/18/2021 17:06	WG1790087
1,1-Dichloroethane	U		0.100	1.00	1	12/18/2021 17:06	WG1790087
1,2-Dichloroethane	U		0.0819	1.00	1	12/18/2021 17:06	WG1790087
1,1-Dichloroethene	U		0.188	1.00	1	12/18/2021 17:06	WG1790087
cis-1,2-Dichloroethene	U		0.126	1.00	1	12/18/2021 17:06	WG1790087
trans-1,2-Dichloroethene	U		0.149	1.00	1	12/18/2021 17:06	WG1790087
1,2-Dichloropropane	U		0.149	1.00	1	12/18/2021 17:06	WG1790087
1,3-Dichloropropane	U		0.110	1.00	1	12/18/2021 17:06	WG1790087
cis-1,3-Dichloropropene	U		0.111	1.00	1	12/18/2021 17:06	WG1790087
trans-1,3-Dichloropropene	U		0.118	1.00	1	12/18/2021 17:06	WG1790087
Ethylbenzene	U		0.137	1.00	1	12/18/2021 17:06	WG1790087
Hexachloro-1,3-butadiene	U		0.337	1.00	1	12/18/2021 17:06	WG1790087
n-Hexane	U		0.749	10.0	1	12/18/2021 17:06	WG1790087
Isopropylbenzene	U		0.105	1.00	1	12/18/2021 17:06	WG1790087
2-Butanone (MEK)	U		1.19	10.0	1	12/18/2021 17:06	WG1790087
Methylene Chloride	U		0.430	5.00	1	12/18/2021 17:06	WG1790087
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	12/18/2021 17:06	WG1790087
Methyl tert-butyl ether	U		0.101	1.00	1	12/18/2021 17:06	WG1790087
Naphthalene	U		1.00	5.00	1	12/18/2021 17:06	WG1790087
1-Methylnaphthalene	U	J4	7.30	10.0	1	12/18/2021 17:06	WG1790087
2-Methylnaphthalene	U	J4	7.18	10.0	1	12/18/2021 17:06	WG1790087
Styrene	U		0.118	1.00	1	12/18/2021 17:06	WG1790087
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	12/18/2021 17:06	WG1790087
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	12/18/2021 17:06	WG1790087
Tetrachloroethene	U		0.300	1.00	1	12/18/2021 17:06	WG1790087
Toluene	U		0.278	1.00	1	12/18/2021 17:06	WG1790087
1,2,3-Trichlorobenzene	U		0.230	1.00	1	12/18/2021 17:06	WG1790087
1,2,4-Trichlorobenzene	U		0.481	1.00	1	12/18/2021 17:06	WG1790087
1,1,1-Trichloroethane	U		0.149	1.00	1	12/18/2021 17:06	WG1790087
1,1,2-Trichloroethane	U		0.158	1.00	1	12/18/2021 17:06	WG1790087
Trichloroethene	0.259	J	0.190	1.00	1	12/18/2021 17:06	WG1790087
1,2,4-Trimethylbenzene	U		0.322	1.00	1	12/18/2021 17:06	WG1790087
1,3,5-Trimethylbenzene	U		0.104	1.00	1	12/18/2021 17:06	WG1790087
Vinyl acetate	U		0.692	10.0	1	12/18/2021 17:06	WG1790087
Vinyl chloride	U		0.234	1.00	1	12/18/2021 17:06	WG1790087
Xylenes, Total	U		0.174	3.00	1	12/18/2021 17:06	WG1790087
Di-isopropyl ether	U		0.105	1.00	1	12/18/2021 17:06	WG1790087
Ethanol	U		42.0	100	1	12/18/2021 17:06	WG1790087
3,3-Dimethyl-1-butanol	U		4.51	100	1	12/18/2021 17:06	WG1790087
Ethyl tert-butyl ether	U		0.101	1.00	1	12/18/2021 17:06	WG1790087
t-Amyl Alcohol	U		4.90	50.0	1	12/18/2021 17:06	WG1790087
tert-Butyl alcohol	U		4.06	5.00	1	12/18/2021 17:06	WG1790087
tert-Butyl Formate	U		4.51	20.0	1	12/18/2021 17:06	WG1790087
tert-Amyl Methyl Ether	U		0.195	1.00	1	12/18/2021 17:06	WG1790087
(S) 1,2-Dichloroethane-d4	*93.2*			*70.0-130*		*12/18/2021 17:06*	WG1790087
(S) Toluene-d8	*132*	J1		*80.0-120*		*12/18/2021 17:06*	WG1790087
(S) 4-Bromofluorobenzene	*124*			*77.0-126*		*12/18/2021 17:06*	WG1790087

Volatile Organic Compounds (GC/MS) by Method 8260B-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	U		0.597	3.00	1	12/17/2021 22:51	WG1791341
(S) Toluene-d8	*100*			*77.0-127*		*12/17/2021 22:51*	WG1791341

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acenaphthene	U		0.0886	1.00	1	12/17/2021 08:00	WG1789878
Acenaphthylene	U		0.0921	1.00	1	12/17/2021 08:00	WG1789878
Anthracene	U		0.0804	1.00	1	12/17/2021 08:00	WG1789878
Benzidine	U		3.74	10.0	1	12/17/2021 08:00	WG1789878
Benzo(a)anthracene	U		0.199	1.00	1	12/17/2021 08:00	WG1789878
Benzo(b)fluoranthene	U		0.130	1.00	1	12/17/2021 08:00	WG1789878
Benzo(k)fluoranthene	U		0.120	1.00	1	12/17/2021 08:00	WG1789878
Benzo(g,h,i)perylene	U		0.121	1.00	1	12/17/2021 08:00	WG1789878
Benzo(a)pyrene	U		0.0381	1.00	1	12/17/2021 08:00	WG1789878
Bis(2-chlorethoxy)methane	U		0.116	10.0	1	12/17/2021 08:00	WG1789878
Bis(2-chloroethyl)ether	U		0.137	10.0	1	12/17/2021 08:00	WG1789878
2,2-Oxybis(1-Chloropropane)	U		0.210	10.0	1	12/17/2021 08:00	WG1789878
4-Bromophenyl-phenylether	U		0.0877	10.0	1	12/17/2021 08:00	WG1789878
2-Chloronaphthalene	U		0.0648	1.00	1	12/17/2021 08:00	WG1789878
4-Chlorophenyl-phenylether	U		0.0926	10.0	1	12/17/2021 08:00	WG1789878
Chrysene	U		0.130	1.00	1	12/17/2021 08:00	WG1789878
Dibenz(a,h)anthracene	U		0.0644	1.00	1	12/17/2021 08:00	WG1789878
1,2-Dichlorobenzene	U		0.0713	10.0	1	12/17/2021 08:00	WG1789878
1,3-Dichlorobenzene	U		0.132	10.0	1	12/17/2021 08:00	WG1789878
1,4-Dichlorobenzene	U		0.0942	10.0	1	12/17/2021 08:00	WG1789878
3,3-Dichlorobenzidine	U		0.212	10.0	1	12/17/2021 08:00	WG1789878
2,4-Dinitrotoluene	U		0.0983	10.0	1	12/17/2021 08:00	WG1789878
2,6-Dinitrotoluene	U		0.250	10.0	1	12/17/2021 08:00	WG1789878
Fluoranthene	U		0.102	1.00	1	12/17/2021 08:00	WG1789878
Fluorene	U		0.0844	1.00	1	12/17/2021 08:00	WG1789878
Hexachlorobenzene	U		0.0755	1.00	1	12/17/2021 08:00	WG1789878
Hexachloro-1,3-butadiene	U		0.0968	10.0	1	12/17/2021 08:00	WG1789878
Hexachlorocyclopentadiene	U		0.0598	10.0	1	12/17/2021 08:00	WG1789878
Hexachloroethane	U		0.127	10.0	1	12/17/2021 08:00	WG1789878
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	12/17/2021 08:00	WG1789878
Isophorone	U		0.143	10.0	1	12/17/2021 08:00	WG1789878
Naphthalene	U		0.159	1.00	1	12/17/2021 08:00	WG1789878
Nitrobenzene	U		0.297	10.0	1	12/17/2021 08:00	WG1789878
n-Nitrosodimethylamine	U		0.998	10.0	1	12/17/2021 08:00	WG1789878
n-Nitrosodiphenylamine	U		2.37	10.0	1	12/17/2021 08:00	WG1789878
n-Nitrosodi-n-propylamine	U		0.261	10.0	1	12/17/2021 08:00	WG1789878
Phenanthrene	U		0.112	1.00	1	12/17/2021 08:00	WG1789878
Benzylbutyl phthalate	U		0.765	3.00	1	12/17/2021 08:00	WG1789878
Bis(2-ethylhexyl)phthalate	U		0.895	3.00	1	12/17/2021 08:00	WG1789878
Di-n-butyl phthalate	U		0.453	3.00	1	12/17/2021 08:00	WG1789878
Diethyl phthalate	U		0.287	3.00	1	12/17/2021 08:00	WG1789878
Dimethyl phthalate	U		0.260	3.00	1	12/17/2021 08:00	WG1789878
Di-n-octyl phthalate	U		0.932	3.00	1	12/17/2021 08:00	WG1789878
Pyrene	U		0.107	1.00	1	12/17/2021 08:00	WG1789878
1,2,4-Trichlorobenzene	U		0.0698	10.0	1	12/17/2021 08:00	WG1789878
4-Chloro-3-methylphenol	U		0.131	10.0	1	12/17/2021 08:00	WG1789878
2-Chlorophenol	U		0.133	10.0	1	12/17/2021 08:00	WG1789878
2,4-Dichlorophenol	U		0.102	10.0	1	12/17/2021 08:00	WG1789878
2,4-Dimethylphenol	U		0.0636	10.0	1	12/17/2021 08:00	WG1789878
4,6-Dinitro-2-methylphenol	U		1.12	10.0	1	12/17/2021 08:00	WG1789878
2,4-Dinitrophenol	U		5.93	10.0	1	12/17/2021 08:00	WG1789878
2-Nitrophenol	U		0.117	10.0	1	12/17/2021 08:00	WG1789878
4-Nitrophenol	U		0.143	10.0	1	12/17/2021 08:00	WG1789878
Pentachlorophenol	U		0.313	10.0	1	12/17/2021 08:00	WG1789878
Phenol	U		4.33	10.0	1	12/17/2021 08:00	WG1789878
2,4,6-Trichlorophenol	U		0.100	10.0	1	12/17/2021 08:00	WG1789878

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
(S) 2-Fluorophenol	*45.8*			*10.0-120*		*12/17/2021 08:00*	WG1789878
(S) Phenol-d5	*28.6*			*10.0-120*		*12/17/2021 08:00*	WG1789878
(S) Nitrobenzene-d5	*69.0*			*10.0-127*		*12/17/2021 08:00*	WG1789878
(S) 2-Fluorobiphenyl	*76.4*			*10.0-130*		*12/17/2021 08:00*	WG1789878
(S) 2,4,6-Tribromophenol	*71.1*			*10.0-155*		*12/17/2021 08:00*	WG1789878
(S) p-Terphenyl-d14	*88.7*			*10.0-128*		*12/17/2021 08:00*	WG1789878

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.0190	0.0500	1	12/16/2021 16:03	WG1789902
Acenaphthene	U		0.0190	0.0500	1	12/16/2021 16:03	WG1789902
Acenaphthylene	U		0.0171	0.0500	1	12/16/2021 16:03	WG1789902
Benzo(a)anthracene	U		0.0203	0.0500	1	12/16/2021 16:03	WG1789902
Benzo(a)pyrene	U		0.0184	0.0500	1	12/16/2021 16:03	WG1789902
Benzo(b)fluoranthene	U		0.0168	0.0500	1	12/16/2021 16:03	WG1789902
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	12/16/2021 16:03	WG1789902
Benzo(k)fluoranthene	U		0.0202	0.0500	1	12/16/2021 16:03	WG1789902
Chrysene	U		0.0179	0.0500	1	12/16/2021 16:03	WG1789902
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	12/16/2021 16:03	WG1789902
Fluoranthene	U		0.0270	0.100	1	12/16/2021 16:03	WG1789902
Fluorene	U		0.0169	0.0500	1	12/16/2021 16:03	WG1789902
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	12/16/2021 16:03	WG1789902
Naphthalene	U		0.0917	0.250	1	12/16/2021 16:03	WG1789902
Phenanthrene	U		0.0180	0.0500	1	12/16/2021 16:03	WG1789902
Pyrene	U		0.0169	0.0500	1	12/16/2021 16:03	WG1789902
1-Methylnaphthalene	U		0.0687	0.250	1	12/16/2021 16:03	WG1789902
2-Methylnaphthalene	U		0.0674	0.250	1	12/16/2021 16:03	WG1789902
2-Chloronaphthalene	U		0.0682	0.250	1	12/16/2021 16:03	WG1789902
Tetraethyllead	U		0.0338	0.0500	1	12/16/2021 16:03	WG1789902
(S) Nitrobenzene-d5	*98.9*			*31.0-160*		*12/16/2021 16:03*	WG1789902
(S) 2-Fluorobiphenyl	*96.3*			*48.0-148*		*12/16/2021 16:03*	WG1789902
(S) p-Terphenyl-d14	*94.2*			*37.0-146*		*12/16/2021 16:03*	WG1789902

Wet Chemistry by Method 4500CN E-2016

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cyanide	U		1.80	5.00	1	12/21/2021 18:48	WG1791261

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury,Dissolved	U		0.100	0.200	1	12/17/2021 14:03	WG1790263

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	U		4.40	10.0	1	01/14/2022 02:17	WG1798458
Barium,Dissolved	42.7		0.736	5.00	1	01/14/2022 02:17	WG1798458
Boron,Dissolved	266		20.0	200	1	01/14/2022 02:17	WG1798458
Calcium,Dissolved	114000		79.3	1000	1	01/14/2022 02:17	WG1798458
Chromium,Dissolved	2.60	B J	1.40	10.0	1	01/14/2022 02:17	WG1798458
Cobalt,Dissolved	U		0.840	10.0	1	01/14/2022 02:17	WG1798458
Iron,Dissolved	19.9	B J	18.0	100	1	01/14/2022 02:17	WG1798458
Magnesium,Dissolved	19500		85.3	1000	1	01/14/2022 02:17	WG1798458
Manganese,Dissolved	0.964	J	0.934	10.0	1	01/14/2022 02:17	WG1798458
Molybdenum,Dissolved	7.45		1.16	5.00	1	01/14/2022 02:17	WG1798458
Nickel,Dissolved	3.17	J	1.61	10.0	1	01/14/2022 02:17	WG1798458
Potassium,Dissolved	8500		261	2000	1	01/14/2022 02:17	WG1798458
Sodium,Dissolved	38700		504	3000	1	01/14/2022 02:17	WG1798458
Strontium,Dissolved	320		0.640	10.0	1	01/14/2022 02:17	WG1798458
Zinc,Dissolved	7.12	J	6.52	50.0	1	01/14/2022 02:17	WG1798458

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	342		18.5	100	1	01/12/2022 18:20	WG1800316
Antimony,Dissolved	U		1.03	4.00	1	01/12/2022 18:20	WG1800316
Beryllium,Dissolved	U		0.190	2.00	1	01/12/2022 18:20	WG1800316
Cadmium,Dissolved	U		0.150	1.00	1	01/12/2022 18:20	WG1800316
Lead,Dissolved	U		0.849	2.00	1	01/12/2022 18:20	WG1800316
Selenium,Dissolved	0.351	J	0.300	2.00	1	01/12/2022 18:20	WG1800316
Silver,Dissolved	U		0.0700	2.00	1	01/12/2022 18:20	WG1800316
Thallium,Dissolved	U		0.121	2.00	1	01/12/2022 18:20	WG1800316
Titanium,Dissolved	U		2.18	20.0	1	01/12/2022 18:20	WG1800316
Vanadium,Dissolved	U		0.664	5.00	1	01/12/2022 18:20	WG1800316

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	12/18/2021 17:27	WG1790087
Benzene	U		0.0941	1.00	1	12/18/2021 17:27	WG1790087
Bromodichloromethane	U		0.136	1.00	1	12/18/2021 17:27	WG1790087
Bromoform	U		0.129	1.00	1	12/18/2021 17:27	WG1790087
Bromomethane	U		0.605	5.00	1	12/18/2021 17:27	WG1790087
Carbon disulfide	U		0.0962	1.00	1	12/18/2021 17:27	WG1790087
Carbon tetrachloride	U		0.128	1.00	1	12/18/2021 17:27	WG1790087
Chlorobenzene	U		0.116	1.00	1	12/18/2021 17:27	WG1790087
Chloroethane	U		0.192	5.00	1	12/18/2021 17:27	WG1790087
Chloroform	0.177	J	0.111	5.00	1	12/18/2021 17:27	WG1790087
Cyclohexane	U		0.188	1.00	1	12/18/2021 17:27	WG1790087

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2-Dichlorobenzene	U		0.107	1.00	1	12/18/2021 17:27	WG1790087
1,3-Dichlorobenzene	U		0.110	1.00	1	12/18/2021 17:27	WG1790087
1,4-Dichlorobenzene	U		0.120	1.00	1	12/18/2021 17:27	WG1790087
1,1-Dichloroethane	U		0.100	1.00	1	12/18/2021 17:27	WG1790087
1,2-Dichloroethane	U		0.0819	1.00	1	12/18/2021 17:27	WG1790087
1,1-Dichloroethene	U		0.188	1.00	1	12/18/2021 17:27	WG1790087
cis-1,2-Dichloroethene	U		0.126	1.00	1	12/18/2021 17:27	WG1790087
trans-1,2-Dichloroethene	U		0.149	1.00	1	12/18/2021 17:27	WG1790087
1,2-Dichloropropane	U		0.149	1.00	1	12/18/2021 17:27	WG1790087
1,3-Dichloropropane	U		0.110	1.00	1	12/18/2021 17:27	WG1790087
cis-1,3-Dichloropropene	U		0.111	1.00	1	12/18/2021 17:27	WG1790087
trans-1,3-Dichloropropene	U		0.118	1.00	1	12/18/2021 17:27	WG1790087
Ethylbenzene	U		0.137	1.00	1	12/18/2021 17:27	WG1790087
Hexachloro-1,3-butadiene	U		0.337	1.00	1	12/18/2021 17:27	WG1790087
n-Hexane	U		0.749	10.0	1	12/18/2021 17:27	WG1790087
Isopropylbenzene	U		0.105	1.00	1	12/18/2021 17:27	WG1790087
2-Butanone (MEK)	U		1.19	10.0	1	12/18/2021 17:27	WG1790087
Methylene Chloride	U		0.430	5.00	1	12/18/2021 17:27	WG1790087
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	12/18/2021 17:27	WG1790087
Methyl tert-butyl ether	U		0.101	1.00	1	12/18/2021 17:27	WG1790087
Naphthalene	U		1.00	5.00	1	12/18/2021 17:27	WG1790087
1-Methylnaphthalene	U	J4	7.30	10.0	1	12/18/2021 17:27	WG1790087
2-Methylnaphthalene	U	J4	7.18	10.0	1	12/18/2021 17:27	WG1790087
Styrene	U		0.118	1.00	1	12/18/2021 17:27	WG1790087
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	12/18/2021 17:27	WG1790087
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	12/18/2021 17:27	WG1790087
Tetrachloroethene	U		0.300	1.00	1	12/18/2021 17:27	WG1790087
Toluene	U		0.278	1.00	1	12/18/2021 17:27	WG1790087
1,2,3-Trichlorobenzene	U		0.230	1.00	1	12/18/2021 17:27	WG1790087
1,2,4-Trichlorobenzene	U		0.481	1.00	1	12/18/2021 17:27	WG1790087
1,1,1-Trichloroethane	0.416	J	0.149	1.00	1	12/18/2021 17:27	WG1790087
1,1,2-Trichloroethane	U		0.158	1.00	1	12/18/2021 17:27	WG1790087
Trichloroethene	0.970	J	0.190	1.00	1	12/18/2021 17:27	WG1790087
1,2,4-Trimethylbenzene	U		0.322	1.00	1	12/18/2021 17:27	WG1790087
1,3,5-Trimethylbenzene	U		0.104	1.00	1	12/18/2021 17:27	WG1790087
Vinyl acetate	U		0.692	10.0	1	12/18/2021 17:27	WG1790087
Vinyl chloride	U		0.234	1.00	1	12/18/2021 17:27	WG1790087
Xylenes, Total	U		0.174	3.00	1	12/18/2021 17:27	WG1790087
Di-isopropyl ether	U		0.105	1.00	1	12/18/2021 17:27	WG1790087
Ethanol	U		42.0	100	1	12/18/2021 17:27	WG1790087
3,3-Dimethyl-1-butanol	U		4.51	100	1	12/18/2021 17:27	WG1790087
Ethyl tert-butyl ether	U		0.101	1.00	1	12/18/2021 17:27	WG1790087
t-Amyl Alcohol	U		4.90	50.0	1	12/18/2021 17:27	WG1790087
tert-Butyl alcohol	U		4.06	5.00	1	12/18/2021 17:27	WG1790087
tert-Butyl Formate	U		4.51	20.0	1	12/18/2021 17:27	WG1790087
tert-Amyl Methyl Ether	U		0.195	1.00	1	12/18/2021 17:27	WG1790087
(S) 1,2-Dichloroethane-d4	*94.1*			*70.0-130*		*12/18/2021 17:27*	WG1790087
(S) Toluene-d8	*95.3*			*80.0-120*		*12/18/2021 17:27*	WG1790087
(S) 4-Bromofluorobenzene	*109*			*77.0-126*		*12/18/2021 17:27*	WG1790087

Volatile Organic Compounds (GC/MS) by Method 8260B-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	U		0.597	3.00	1	12/17/2021 23:11	WG1791341
(S) Toluene-d8	*100*			*77.0-127*		*12/17/2021 23:11*	WG1791341

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acenaphthene	U		0.0886	1.00	1	12/17/2021 08:21	WG1789878
Acenaphthylene	U		0.0921	1.00	1	12/17/2021 08:21	WG1789878
Anthracene	U		0.0804	1.00	1	12/17/2021 08:21	WG1789878
Benzidine	U		3.74	10.0	1	12/17/2021 08:21	WG1789878
Benzo(a)anthracene	U		0.199	1.00	1	12/17/2021 08:21	WG1789878
Benzo(b)fluoranthene	U		0.130	1.00	1	12/17/2021 08:21	WG1789878
Benzo(k)fluoranthene	U		0.120	1.00	1	12/17/2021 08:21	WG1789878
Benzo(g,h,i)perylene	U		0.121	1.00	1	12/17/2021 08:21	WG1789878
Benzo(a)pyrene	U		0.0381	1.00	1	12/17/2021 08:21	WG1789878
Bis(2-chlorethoxy)methane	U		0.116	10.0	1	12/17/2021 08:21	WG1789878
Bis(2-chloroethyl)ether	U		0.137	10.0	1	12/17/2021 08:21	WG1789878
2,2-Oxybis(1-Chloropropane)	U		0.210	10.0	1	12/17/2021 08:21	WG1789878
4-Bromophenyl-phenylether	U		0.0877	10.0	1	12/17/2021 08:21	WG1789878
2-Chloronaphthalene	U		0.0648	1.00	1	12/17/2021 08:21	WG1789878
4-Chlorophenyl-phenylether	U		0.0926	10.0	1	12/17/2021 08:21	WG1789878
Chrysene	U		0.130	1.00	1	12/17/2021 08:21	WG1789878
Dibenz(a,h)anthracene	U		0.0644	1.00	1	12/17/2021 08:21	WG1789878
1,2-Dichlorobenzene	U		0.0713	10.0	1	12/17/2021 08:21	WG1789878
1,3-Dichlorobenzene	U		0.132	10.0	1	12/17/2021 08:21	WG1789878
1,4-Dichlorobenzene	U		0.0942	10.0	1	12/17/2021 08:21	WG1789878
3,3-Dichlorobenzidine	U		0.212	10.0	1	12/17/2021 08:21	WG1789878
2,4-Dinitrotoluene	U		0.0983	10.0	1	12/17/2021 08:21	WG1789878
2,6-Dinitrotoluene	U		0.250	10.0	1	12/17/2021 08:21	WG1789878
Fluoranthene	U		0.102	1.00	1	12/17/2021 08:21	WG1789878
Fluorene	U		0.0844	1.00	1	12/17/2021 08:21	WG1789878
Hexachlorobenzene	U		0.0755	1.00	1	12/17/2021 08:21	WG1789878
Hexachloro-1,3-butadiene	U		0.0968	10.0	1	12/17/2021 08:21	WG1789878
Hexachlorocyclopentadiene	U		0.0598	10.0	1	12/17/2021 08:21	WG1789878
Hexachloroethane	U		0.127	10.0	1	12/17/2021 08:21	WG1789878
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	12/17/2021 08:21	WG1789878
Isophorone	U		0.143	10.0	1	12/17/2021 08:21	WG1789878
Naphthalene	U		0.159	1.00	1	12/17/2021 08:21	WG1789878
Nitrobenzene	U		0.297	10.0	1	12/17/2021 08:21	WG1789878
n-Nitrosodimethylamine	U		0.998	10.0	1	12/17/2021 08:21	WG1789878
n-Nitrosodiphenylamine	U		2.37	10.0	1	12/17/2021 08:21	WG1789878
n-Nitrosodi-n-propylamine	U		0.261	10.0	1	12/17/2021 08:21	WG1789878
Phenanthrene	U		0.112	1.00	1	12/17/2021 08:21	WG1789878
Benzylbutyl phthalate	U		0.765	3.00	1	12/17/2021 08:21	WG1789878
Bis(2-ethylhexyl)phthalate	U		0.895	3.00	1	12/17/2021 08:21	WG1789878
Di-n-butyl phthalate	U		0.453	3.00	1	12/17/2021 08:21	WG1789878
Diethyl phthalate	U		0.287	3.00	1	12/17/2021 08:21	WG1789878
Dimethyl phthalate	U		0.260	3.00	1	12/17/2021 08:21	WG1789878
Di-n-octyl phthalate	U		0.932	3.00	1	12/17/2021 08:21	WG1789878
Pyrene	U		0.107	1.00	1	12/17/2021 08:21	WG1789878
1,2,4-Trichlorobenzene	U		0.0698	10.0	1	12/17/2021 08:21	WG1789878
4-Chloro-3-methylphenol	U		0.131	10.0	1	12/17/2021 08:21	WG1789878
2-Chlorophenol	U		0.133	10.0	1	12/17/2021 08:21	WG1789878
2,4-Dichlorophenol	U		0.102	10.0	1	12/17/2021 08:21	WG1789878
2,4-Dimethylphenol	U		0.0636	10.0	1	12/17/2021 08:21	WG1789878
4,6-Dinitro-2-methylphenol	U		1.12	10.0	1	12/17/2021 08:21	WG1789878
2,4-Dinitrophenol	U		5.93	10.0	1	12/17/2021 08:21	WG1789878
2-Nitrophenol	U		0.117	10.0	1	12/17/2021 08:21	WG1789878
4-Nitrophenol	U		0.143	10.0	1	12/17/2021 08:21	WG1789878
Pentachlorophenol	U		0.313	10.0	1	12/17/2021 08:21	WG1789878
Phenol	U		4.33	10.0	1	12/17/2021 08:21	WG1789878
2,4,6-Trichlorophenol	U		0.100	10.0	1	12/17/2021 08:21	WG1789878

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
(S) 2-Fluorophenol	*45.8*			*10.0-120*		*12/17/2021 08:21*	WG1789878
(S) Phenol-d5	*28.0*			*10.0-120*		*12/17/2021 08:21*	WG1789878
(S) Nitrobenzene-d5	*73.1*			*10.0-127*		*12/17/2021 08:21*	WG1789878
(S) 2-Fluorobiphenyl	*80.2*			*10.0-130*		*12/17/2021 08:21*	WG1789878
(S) 2,4,6-Tribromophenol	*76.7*			*10.0-155*		*12/17/2021 08:21*	WG1789878
(S) p-Terphenyl-d14	*89.6*			*10.0-128*		*12/17/2021 08:21*	WG1789878

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Anthracene	U		0.0190	0.0500	1	12/16/2021 16:21	WG1789902
Acenaphthene	U		0.0190	0.0500	1	12/16/2021 16:21	WG1789902
Acenaphthylene	U		0.0171	0.0500	1	12/16/2021 16:21	WG1789902
Benzo(a)anthracene	U		0.0203	0.0500	1	12/16/2021 16:21	WG1789902
Benzo(a)pyrene	U		0.0184	0.0500	1	12/16/2021 16:21	WG1789902
Benzo(b)fluoranthene	U		0.0168	0.0500	1	12/16/2021 16:21	WG1789902
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	12/16/2021 16:21	WG1789902
Benzo(k)fluoranthene	U		0.0202	0.0500	1	12/16/2021 16:21	WG1789902
Chrysene	U		0.0179	0.0500	1	12/16/2021 16:21	WG1789902
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	12/16/2021 16:21	WG1789902
Fluoranthene	U		0.0270	0.100	1	12/16/2021 16:21	WG1789902
Fluorene	U		0.0169	0.0500	1	12/16/2021 16:21	WG1789902
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	12/16/2021 16:21	WG1789902
Naphthalene	U		0.0917	0.250	1	12/16/2021 16:21	WG1789902
Phenanthrene	U		0.0180	0.0500	1	12/16/2021 16:21	WG1789902
Pyrene	U		0.0169	0.0500	1	12/16/2021 16:21	WG1789902
1-Methylnaphthalene	U		0.0687	0.250	1	12/16/2021 16:21	WG1789902
2-Methylnaphthalene	U		0.0674	0.250	1	12/16/2021 16:21	WG1789902
2-Chloronaphthalene	U		0.0682	0.250	1	12/16/2021 16:21	WG1789902
Tetraethyllead	U		0.0338	0.0500	1	12/16/2021 16:21	WG1789902
(S) Nitrobenzene-d5	*104*			*31.0-160*		*12/16/2021 16:21*	WG1789902
(S) 2-Fluorobiphenyl	*97.9*			*48.0-148*		*12/16/2021 16:21*	WG1789902
(S) p-Terphenyl-d14	*93.2*			*37.0-146*		*12/16/2021 16:21*	WG1789902

Wet Chemistry by Method 4500CN E-2016

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cyanide	U		1.80	5.00	1	12/21/2021 18:49	WG1791261

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury,Dissolved	U		0.100	0.200	1	12/17/2021 14:05	WG1790263

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	U		4.40	10.0	1	01/14/2022 02:19	WG1798458
Barium,Dissolved	41.4		0.736	5.00	1	01/14/2022 02:19	WG1798458
Boron,Dissolved	269		20.0	200	1	01/14/2022 02:19	WG1798458
Calcium,Dissolved	118000		79.3	1000	1	01/14/2022 02:19	WG1798458
Chromium,Dissolved	2.17	B J	1.40	10.0	1	01/14/2022 02:19	WG1798458
Cobalt,Dissolved	U		0.840	10.0	1	01/14/2022 02:19	WG1798458
Iron,Dissolved	U		18.0	100	1	01/14/2022 02:19	WG1798458
Magnesium,Dissolved	19500		85.3	1000	1	01/14/2022 02:19	WG1798458
Manganese,Dissolved	U		0.934	10.0	1	01/14/2022 02:19	WG1798458
Molybdenum,Dissolved	7.68		1.16	5.00	1	01/14/2022 02:19	WG1798458
Nickel,Dissolved	3.31	J	1.61	10.0	1	01/14/2022 02:19	WG1798458
Potassium,Dissolved	8440		261	2000	1	01/14/2022 02:19	WG1798458
Sodium,Dissolved	39300		504	3000	1	01/14/2022 02:19	WG1798458
Strontium,Dissolved	318		0.640	10.0	1	01/14/2022 02:19	WG1798458
Zinc,Dissolved	6.56	J	6.52	50.0	1	01/14/2022 02:19	WG1798458

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		18.5	100	1	01/12/2022 18:23	WG1800316
Antimony,Dissolved	U		1.03	4.00	1	01/12/2022 18:23	WG1800316
Beryllium,Dissolved	U		0.190	2.00	1	01/12/2022 18:23	WG1800316
Cadmium,Dissolved	U		0.150	1.00	1	01/12/2022 18:23	WG1800316
Lead,Dissolved	U		0.849	2.00	1	01/12/2022 18:23	WG1800316
Selenium,Dissolved	U		0.300	2.00	1	01/12/2022 18:23	WG1800316
Silver,Dissolved	U		0.0700	2.00	1	01/12/2022 18:23	WG1800316
Thallium,Dissolved	U		0.121	2.00	1	01/12/2022 18:23	WG1800316
Titanium,Dissolved	U		2.18	20.0	1	01/12/2022 18:23	WG1800316
Vanadium,Dissolved	U		0.664	5.00	1	01/12/2022 18:23	WG1800316

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	12/18/2021 17:48	WG1790087
Benzene	U		0.0941	1.00	1	12/18/2021 17:48	WG1790087
Bromodichloromethane	U		0.136	1.00	1	12/18/2021 17:48	WG1790087
Bromoform	U		0.129	1.00	1	12/18/2021 17:48	WG1790087
Bromomethane	U		0.605	5.00	1	12/18/2021 17:48	WG1790087
Carbon disulfide	U		0.0962	1.00	1	12/18/2021 17:48	WG1790087
Carbon tetrachloride	U		0.128	1.00	1	12/18/2021 17:48	WG1790087
Chlorobenzene	U		0.116	1.00	1	12/18/2021 17:48	WG1790087
Chloroethane	U		0.192	5.00	1	12/18/2021 17:48	WG1790087
Chloroform	0.156	J	0.111	5.00	1	12/18/2021 17:48	WG1790087
Cyclohexane	U		0.188	1.00	1	12/18/2021 17:48	WG1790087

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2-Dichlorobenzene	U		0.107	1.00	1	12/18/2021 17:48	WG1790087
1,3-Dichlorobenzene	U		0.110	1.00	1	12/18/2021 17:48	WG1790087
1,4-Dichlorobenzene	U		0.120	1.00	1	12/18/2021 17:48	WG1790087
1,1-Dichloroethane	U		0.100	1.00	1	12/18/2021 17:48	WG1790087
1,2-Dichloroethane	U		0.0819	1.00	1	12/18/2021 17:48	WG1790087
1,1-Dichloroethene	U		0.188	1.00	1	12/18/2021 17:48	WG1790087
cis-1,2-Dichloroethene	U		0.126	1.00	1	12/18/2021 17:48	WG1790087
trans-1,2-Dichloroethene	U		0.149	1.00	1	12/18/2021 17:48	WG1790087
1,2-Dichloropropane	U		0.149	1.00	1	12/18/2021 17:48	WG1790087
1,3-Dichloropropane	U		0.110	1.00	1	12/18/2021 17:48	WG1790087
cis-1,3-Dichloropropene	U		0.111	1.00	1	12/18/2021 17:48	WG1790087
trans-1,3-Dichloropropene	U		0.118	1.00	1	12/18/2021 17:48	WG1790087
Ethylbenzene	U		0.137	1.00	1	12/18/2021 17:48	WG1790087
Hexachloro-1,3-butadiene	U		0.337	1.00	1	12/18/2021 17:48	WG1790087
n-Hexane	U		0.749	10.0	1	12/18/2021 17:48	WG1790087
Isopropylbenzene	U		0.105	1.00	1	12/18/2021 17:48	WG1790087
2-Butanone (MEK)	U		1.19	10.0	1	12/18/2021 17:48	WG1790087
Methylene Chloride	U		0.430	5.00	1	12/18/2021 17:48	WG1790087
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	12/18/2021 17:48	WG1790087
Methyl tert-butyl ether	U		0.101	1.00	1	12/18/2021 17:48	WG1790087
Naphthalene	U		1.00	5.00	1	12/18/2021 17:48	WG1790087
1-Methylnaphthalene	U	J4	7.30	10.0	1	12/18/2021 17:48	WG1790087
2-Methylnaphthalene	U	J4	7.18	10.0	1	12/18/2021 17:48	WG1790087
Styrene	U		0.118	1.00	1	12/18/2021 17:48	WG1790087
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	12/18/2021 17:48	WG1790087
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	12/18/2021 17:48	WG1790087
Tetrachloroethene	U		0.300	1.00	1	12/18/2021 17:48	WG1790087
Toluene	U		0.278	1.00	1	12/18/2021 17:48	WG1790087
1,2,3-Trichlorobenzene	U		0.230	1.00	1	12/18/2021 17:48	WG1790087
1,2,4-Trichlorobenzene	U		0.481	1.00	1	12/18/2021 17:48	WG1790087
1,1,1-Trichloroethane	0.435	J	0.149	1.00	1	12/18/2021 17:48	WG1790087
1,1,2-Trichloroethane	U		0.158	1.00	1	12/18/2021 17:48	WG1790087
Trichloroethene	1.17		0.190	1.00	1	12/18/2021 17:48	WG1790087
1,2,4-Trimethylbenzene	U		0.322	1.00	1	12/18/2021 17:48	WG1790087
1,3,5-Trimethylbenzene	U		0.104	1.00	1	12/18/2021 17:48	WG1790087
Vinyl acetate	U		0.692	10.0	1	12/18/2021 17:48	WG1790087
Vinyl chloride	U		0.234	1.00	1	12/18/2021 17:48	WG1790087
Xylenes, Total	U		0.174	3.00	1	12/18/2021 17:48	WG1790087
Di-isopropyl ether	U		0.105	1.00	1	12/18/2021 17:48	WG1790087
Ethanol	U		42.0	100	1	12/18/2021 17:48	WG1790087
3,3-Dimethyl-1-butanol	U		4.51	100	1	12/18/2021 17:48	WG1790087
Ethyl tert-butyl ether	U		0.101	1.00	1	12/18/2021 17:48	WG1790087
t-Amyl Alcohol	U		4.90	50.0	1	12/18/2021 17:48	WG1790087
tert-Butyl alcohol	U		4.06	5.00	1	12/18/2021 17:48	WG1790087
tert-Butyl Formate	U		4.51	20.0	1	12/18/2021 17:48	WG1790087
tert-Amyl Methyl Ether	U		0.195	1.00	1	12/18/2021 17:48	WG1790087
(S) 1,2-Dichloroethane-d4	*98.2*			*70.0-130*		*12/18/2021 17:48*	WG1790087
(S) Toluene-d8	*99.7*			*80.0-120*		*12/18/2021 17:48*	WG1790087
(S) 4-Bromofluorobenzene	*99.9*			*77.0-126*		*12/18/2021 17:48*	WG1790087

Volatile Organic Compounds (GC/MS) by Method 8260B-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	U		0.597	3.00	1	12/17/2021 23:30	WG1791341
(S) Toluene-d8	*100*			*77.0-127*		*12/17/2021 23:30*	WG1791341

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acenaphthene	U		0.0886	1.00	1	12/17/2021 08:42	WG1789878
Acenaphthylene	U		0.0921	1.00	1	12/17/2021 08:42	WG1789878
Anthracene	U		0.0804	1.00	1	12/17/2021 08:42	WG1789878
Benzidine	U		3.74	10.0	1	12/17/2021 08:42	WG1789878
Benzo(a)anthracene	U		0.199	1.00	1	12/17/2021 08:42	WG1789878
Benzo(b)fluoranthene	U		0.130	1.00	1	12/17/2021 08:42	WG1789878
Benzo(k)fluoranthene	U		0.120	1.00	1	12/17/2021 08:42	WG1789878
Benzo(g,h,i)perylene	U		0.121	1.00	1	12/17/2021 08:42	WG1789878
Benzo(a)pyrene	U		0.0381	1.00	1	12/17/2021 08:42	WG1789878
Bis(2-chlorethoxy)methane	U		0.116	10.0	1	12/17/2021 08:42	WG1789878
Bis(2-chloroethyl)ether	U		0.137	10.0	1	12/17/2021 08:42	WG1789878
2,2-Oxybis(1-Chloropropane)	U		0.210	10.0	1	12/17/2021 08:42	WG1789878
4-Bromophenyl-phenylether	U		0.0877	10.0	1	12/17/2021 08:42	WG1789878
2-Chloronaphthalene	U		0.0648	1.00	1	12/17/2021 08:42	WG1789878
4-Chlorophenyl-phenylether	U		0.0926	10.0	1	12/17/2021 08:42	WG1789878
Chrysene	U		0.130	1.00	1	12/17/2021 08:42	WG1789878
Dibenz(a,h)anthracene	U		0.0644	1.00	1	12/17/2021 08:42	WG1789878
1,2-Dichlorobenzene	U		0.0713	10.0	1	12/17/2021 08:42	WG1789878
1,3-Dichlorobenzene	U		0.132	10.0	1	12/17/2021 08:42	WG1789878
1,4-Dichlorobenzene	U		0.0942	10.0	1	12/17/2021 08:42	WG1789878
3,3-Dichlorobenzidine	U		0.212	10.0	1	12/17/2021 08:42	WG1789878
2,4-Dinitrotoluene	U		0.0983	10.0	1	12/17/2021 08:42	WG1789878
2,6-Dinitrotoluene	U		0.250	10.0	1	12/17/2021 08:42	WG1789878
Fluoranthene	U		0.102	1.00	1	12/17/2021 08:42	WG1789878
Fluorene	U		0.0844	1.00	1	12/17/2021 08:42	WG1789878
Hexachlorobenzene	U		0.0755	1.00	1	12/17/2021 08:42	WG1789878
Hexachloro-1,3-butadiene	U		0.0968	10.0	1	12/17/2021 08:42	WG1789878
Hexachlorocyclopentadiene	U		0.0598	10.0	1	12/17/2021 08:42	WG1789878
Hexachloroethane	U		0.127	10.0	1	12/17/2021 08:42	WG1789878
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	12/17/2021 08:42	WG1789878
Isophorone	U		0.143	10.0	1	12/17/2021 08:42	WG1789878
Naphthalene	U		0.159	1.00	1	12/17/2021 08:42	WG1789878
Nitrobenzene	U		0.297	10.0	1	12/17/2021 08:42	WG1789878
n-Nitrosodimethylamine	U		0.998	10.0	1	12/17/2021 08:42	WG1789878
n-Nitrosodiphenylamine	U		2.37	10.0	1	12/17/2021 08:42	WG1789878
n-Nitrosodi-n-propylamine	U		0.261	10.0	1	12/17/2021 08:42	WG1789878
Phenanthrene	U		0.112	1.00	1	12/17/2021 08:42	WG1789878
Benzylbutyl phthalate	U		0.765	3.00	1	12/17/2021 08:42	WG1789878
Bis(2-ethylhexyl)phthalate	U		0.895	3.00	1	12/17/2021 08:42	WG1789878
Di-n-butyl phthalate	U		0.453	3.00	1	12/17/2021 08:42	WG1789878
Diethyl phthalate	U		0.287	3.00	1	12/17/2021 08:42	WG1789878
Dimethyl phthalate	U		0.260	3.00	1	12/17/2021 08:42	WG1789878
Di-n-octyl phthalate	U		0.932	3.00	1	12/17/2021 08:42	WG1789878
Pyrene	U		0.107	1.00	1	12/17/2021 08:42	WG1789878
1,2,4-Trichlorobenzene	U		0.0698	10.0	1	12/17/2021 08:42	WG1789878
4-Chloro-3-methylphenol	U		0.131	10.0	1	12/17/2021 08:42	WG1789878
2-Chlorophenol	U		0.133	10.0	1	12/17/2021 08:42	WG1789878
2,4-Dichlorophenol	U		0.102	10.0	1	12/17/2021 08:42	WG1789878
2,4-Dimethylphenol	U		0.0636	10.0	1	12/17/2021 08:42	WG1789878
4,6-Dinitro-2-methylphenol	U		1.12	10.0	1	12/17/2021 08:42	WG1789878
2,4-Dinitrophenol	U		5.93	10.0	1	12/17/2021 08:42	WG1789878
2-Nitrophenol	U		0.117	10.0	1	12/17/2021 08:42	WG1789878
4-Nitrophenol	U		0.143	10.0	1	12/17/2021 08:42	WG1789878
Pentachlorophenol	U		0.313	10.0	1	12/17/2021 08:42	WG1789878
Phenol	U		4.33	10.0	1	12/17/2021 08:42	WG1789878
2,4,6-Trichlorophenol	U		0.100	10.0	1	12/17/2021 08:42	WG1789878

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
(S) 2-Fluorophenol	*44.3*			*10.0-120*		*12/17/2021 08:42*	WG1789878
(S) Phenol-d5	*27.8*			*10.0-120*		*12/17/2021 08:42*	WG1789878
(S) Nitrobenzene-d5	*72.2*			*10.0-127*		*12/17/2021 08:42*	WG1789878
(S) 2-Fluorobiphenyl	*78.9*			*10.0-130*		*12/17/2021 08:42*	WG1789878
(S) 2,4,6-Tribromophenol	*77.0*			*10.0-155*		*12/17/2021 08:42*	WG1789878
(S) p-Terphenyl-d14	*90.2*			*10.0-128*		*12/17/2021 08:42*	WG1789878

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.0190	0.0500	1	12/16/2021 16:38	WG1789902
Acenaphthene	U		0.0190	0.0500	1	12/16/2021 16:38	WG1789902
Acenaphthylene	U		0.0171	0.0500	1	12/16/2021 16:38	WG1789902
Benzo(a)anthracene	U		0.0203	0.0500	1	12/16/2021 16:38	WG1789902
Benzo(a)pyrene	U		0.0184	0.0500	1	12/16/2021 16:38	WG1789902
Benzo(b)fluoranthene	U		0.0168	0.0500	1	12/16/2021 16:38	WG1789902
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	12/16/2021 16:38	WG1789902
Benzo(k)fluoranthene	U		0.0202	0.0500	1	12/16/2021 16:38	WG1789902
Chrysene	U		0.0179	0.0500	1	12/16/2021 16:38	WG1789902
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	12/16/2021 16:38	WG1789902
Fluoranthene	U		0.0270	0.100	1	12/16/2021 16:38	WG1789902
Fluorene	U		0.0169	0.0500	1	12/16/2021 16:38	WG1789902
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	12/16/2021 16:38	WG1789902
Naphthalene	U		0.0917	0.250	1	12/16/2021 16:38	WG1789902
Phenanthrene	U		0.0180	0.0500	1	12/16/2021 16:38	WG1789902
Pyrene	U		0.0169	0.0500	1	12/16/2021 16:38	WG1789902
1-Methylnaphthalene	U		0.0687	0.250	1	12/16/2021 16:38	WG1789902
2-Methylnaphthalene	U		0.0674	0.250	1	12/16/2021 16:38	WG1789902
2-Chloronaphthalene	U		0.0682	0.250	1	12/16/2021 16:38	WG1789902
Tetraethyllead	U		0.0338	0.0500	1	12/16/2021 16:38	WG1789902
(S) Nitrobenzene-d5	*103*			*31.0-160*		*12/16/2021 16:38*	WG1789902
(S) 2-Fluorobiphenyl	*98.9*			*48.0-148*		*12/16/2021 16:38*	WG1789902
(S) p-Terphenyl-d14	*95.3*			*37.0-146*		*12/16/2021 16:38*	WG1789902

Wet Chemistry by Method 4500CN E-2016

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cyanide	U		1.80	5.00	1	12/21/2021 18:50	WG1791261

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury,Dissolved	U		0.100	0.200	1	12/17/2021 14:07	WG1790263

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	U		4.40	10.0	1	01/14/2022 02:22	WG1798458
Barium,Dissolved	20.8		0.736	5.00	1	01/14/2022 02:22	WG1798458
Boron,Dissolved	334		20.0	200	1	01/14/2022 02:22	WG1798458
Calcium,Dissolved	126000		79.3	1000	1	01/14/2022 02:22	WG1798458
Chromium,Dissolved	2.78	B J	1.40	10.0	1	01/14/2022 02:22	WG1798458
Cobalt,Dissolved	U		0.840	10.0	1	01/14/2022 02:22	WG1798458
Iron,Dissolved	22.4	B J	18.0	100	1	01/14/2022 02:22	WG1798458
Magnesium,Dissolved	42100		85.3	1000	1	01/14/2022 02:22	WG1798458
Manganese,Dissolved	1.49	J	0.934	10.0	1	01/14/2022 02:22	WG1798458
Molybdenum,Dissolved	8.80		1.16	5.00	1	01/14/2022 02:22	WG1798458
Nickel,Dissolved	2.27	J	1.61	10.0	1	01/14/2022 02:22	WG1798458
Potassium,Dissolved	846	J	261	2000	1	01/14/2022 02:22	WG1798458
Sodium,Dissolved	21700		504	3000	1	01/14/2022 02:22	WG1798458
Strontium,Dissolved	485		0.640	10.0	1	01/14/2022 02:22	WG1798458
Zinc,Dissolved	U		6.52	50.0	1	01/14/2022 02:22	WG1798458

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		18.5	100	1	01/12/2022 18:26	WG1800316
Antimony,Dissolved	U		1.03	4.00	1	01/12/2022 18:26	WG1800316
Beryllium,Dissolved	U		0.190	2.00	1	01/12/2022 18:26	WG1800316
Cadmium,Dissolved	U		0.150	1.00	1	01/12/2022 18:26	WG1800316
Lead,Dissolved	U		0.849	2.00	1	01/12/2022 18:26	WG1800316
Selenium,Dissolved	0.647	J	0.300	2.00	1	01/12/2022 18:26	WG1800316
Silver,Dissolved	U		0.0700	2.00	1	01/12/2022 18:26	WG1800316
Thallium,Dissolved	U		0.121	2.00	1	01/12/2022 18:26	WG1800316
Titanium,Dissolved	U		2.18	20.0	1	01/12/2022 18:26	WG1800316
Vanadium,Dissolved	0.872	J	0.664	5.00	1	01/12/2022 18:26	WG1800316

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	12/16/2021 19:58	WG1790652
Benzene	U		0.0941	1.00	1	12/16/2021 19:58	WG1790652
Bromodichloromethane	U		0.136	1.00	1	12/16/2021 19:58	WG1790652
Bromoform	U		0.129	1.00	1	12/16/2021 19:58	WG1790652
Bromomethane	U		0.605	5.00	1	12/16/2021 19:58	WG1790652
Carbon disulfide	U		0.0962	1.00	1	12/16/2021 19:58	WG1790652
Carbon tetrachloride	U		0.128	1.00	1	12/16/2021 19:58	WG1790652
Chlorobenzene	0.174	J	0.116	1.00	1	12/16/2021 19:58	WG1790652
Chloroethane	U		0.192	5.00	1	12/16/2021 19:58	WG1790652
Chloroform	U		0.111	5.00	1	12/16/2021 19:58	WG1790652
Cyclohexane	U		0.188	1.00	1	12/16/2021 19:58	WG1790652

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2-Dichlorobenzene	U		0.107	1.00	1	12/16/2021 19:58	WG1790652
1,3-Dichlorobenzene	U		0.110	1.00	1	12/16/2021 19:58	WG1790652
1,4-Dichlorobenzene	U		0.120	1.00	1	12/16/2021 19:58	WG1790652
1,1-Dichloroethane	U		0.100	1.00	1	12/16/2021 19:58	WG1790652
1,2-Dichloroethane	U		0.0819	1.00	1	12/16/2021 19:58	WG1790652
1,1-Dichloroethene	U		0.188	1.00	1	12/16/2021 19:58	WG1790652
cis-1,2-Dichloroethene	0.260	J	0.126	1.00	1	12/16/2021 19:58	WG1790652
trans-1,2-Dichloroethene	U		0.149	1.00	1	12/16/2021 19:58	WG1790652
1,2-Dichloropropane	U		0.149	1.00	1	12/16/2021 19:58	WG1790652
1,3-Dichloropropane	U		0.110	1.00	1	12/16/2021 19:58	WG1790652
cis-1,3-Dichloropropene	U		0.111	1.00	1	12/16/2021 19:58	WG1790652
trans-1,3-Dichloropropene	U		0.118	1.00	1	12/16/2021 19:58	WG1790652
Ethylbenzene	U		0.137	1.00	1	12/16/2021 19:58	WG1790652
Hexachloro-1,3-butadiene	U		0.337	1.00	1	12/16/2021 19:58	WG1790652
n-Hexane	U		0.749	10.0	1	12/16/2021 19:58	WG1790652
Isopropylbenzene	U		0.105	1.00	1	12/16/2021 19:58	WG1790652
2-Butanone (MEK)	U		1.19	10.0	1	12/16/2021 19:58	WG1790652
Methylene Chloride	U		0.430	5.00	1	12/16/2021 19:58	WG1790652
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	12/16/2021 19:58	WG1790652
Methyl tert-butyl ether	U		0.101	1.00	1	12/16/2021 19:58	WG1790652
Naphthalene	U		1.00	5.00	1	12/16/2021 19:58	WG1790652
1-Methylnaphthalene	U		7.30	10.0	1	12/16/2021 19:58	WG1790652
2-Methylnaphthalene	U		7.18	10.0	1	12/16/2021 19:58	WG1790652
Styrene	U		0.118	1.00	1	12/16/2021 19:58	WG1790652
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	12/16/2021 19:58	WG1790652
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	12/16/2021 19:58	WG1790652
Tetrachloroethene	U		0.300	1.00	1	12/16/2021 19:58	WG1790652
Toluene	U		0.278	1.00	1	12/16/2021 19:58	WG1790652
1,2,3-Trichlorobenzene	U		0.230	1.00	1	12/16/2021 19:58	WG1790652
1,2,4-Trichlorobenzene	U		0.481	1.00	1	12/16/2021 19:58	WG1790652
1,1,1-Trichloroethane	U		0.149	1.00	1	12/16/2021 19:58	WG1790652
1,1,2-Trichloroethane	U		0.158	1.00	1	12/16/2021 19:58	WG1790652
Trichloroethene	U		0.190	1.00	1	12/16/2021 19:58	WG1790652
1,2,4-Trimethylbenzene	0.481	J	0.322	1.00	1	12/16/2021 19:58	WG1790652
1,3,5-Trimethylbenzene	0.114	J	0.104	1.00	1	12/16/2021 19:58	WG1790652
Vinyl acetate	U		0.692	10.0	1	12/16/2021 19:58	WG1790652
Vinyl chloride	U		0.234	1.00	1	12/16/2021 19:58	WG1790652
Xylenes, Total	U		0.174	3.00	1	12/17/2021 16:55	WG1791331
Di-isopropyl ether	U		0.105	1.00	1	12/16/2021 19:58	WG1790652
Ethanol	U	J3	42.0	100	1	12/16/2021 19:58	WG1790652
3,3-Dimethyl-1-butanol	U		4.51	100	1	12/16/2021 19:58	WG1790652
Ethyl tert-butyl ether	U		0.101	1.00	1	12/16/2021 19:58	WG1790652
t-Amyl Alcohol	U		4.90	50.0	1	12/16/2021 19:58	WG1790652
tert-Butyl alcohol	U		4.06	5.00	1	12/16/2021 19:58	WG1790652
tert-Butyl Formate	U		4.51	20.0	1	12/16/2021 19:58	WG1790652
tert-Amyl Methyl Ether	U		0.195	1.00	1	12/16/2021 19:58	WG1790652
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*		*12/16/2021 19:58*	WG1790652
(S) 1,2-Dichloroethane-d4	*120*			*70.0-130*		*12/17/2021 16:55*	WG1791331
(S) Toluene-d8	*107*			*80.0-120*		*12/16/2021 19:58*	WG1790652
(S) Toluene-d8	*112*			*80.0-120*		*12/17/2021 16:55*	WG1791331
(S) 4-Bromofluorobenzene	*104*			*77.0-126*		*12/16/2021 19:58*	WG1790652
(S) 4-Bromofluorobenzene	*105*			*77.0-126*		*12/17/2021 16:55*	WG1791331

Volatile Organic Compounds (GC/MS) by Method 8260B-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	U		0.597	3.00	1	12/17/2021 23:50	WG1791341
(S) Toluene-d8	*100*			*77.0-127*		*12/17/2021 23:50*	WG1791341

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acenaphthene	U		0.0886	1.00	1	12/17/2021 12:09	WG1790526
Acenaphthylene	U	J3	0.0921	1.00	1	12/17/2021 12:09	WG1790526
Anthracene	U		0.0804	1.00	1	12/17/2021 12:09	WG1790526
Benzidine	U	J3	3.74	10.0	1	12/17/2021 12:09	WG1790526
Benzo(a)anthracene	U		0.199	1.00	1	12/17/2021 12:09	WG1790526
Benzo(b)fluoranthene	U		0.130	1.00	1	12/17/2021 12:09	WG1790526
Benzo(k)fluoranthene	U		0.120	1.00	1	12/17/2021 12:09	WG1790526
Benzo(g,h,i)perylene	U		0.121	1.00	1	12/17/2021 12:09	WG1790526
Benzo(a)pyrene	U		0.0381	1.00	1	12/17/2021 12:09	WG1790526
Bis(2-chlorethoxy)methane	U	J3	0.116	10.0	1	12/17/2021 12:09	WG1790526
Bis(2-chloroethyl)ether	U		0.137	10.0	1	12/17/2021 12:09	WG1790526
2,2-Oxybis(1-Chloropropane)	U	J3	0.210	10.0	1	12/17/2021 12:09	WG1790526
4-Bromophenyl-phenylether	U		0.0877	10.0	1	12/17/2021 12:09	WG1790526
2-Chloronaphthalene	U		0.0648	1.00	1	12/17/2021 12:09	WG1790526
4-Chlorophenyl-phenylether	U		0.0926	10.0	1	12/17/2021 12:09	WG1790526
Chrysene	U		0.130	1.00	1	12/17/2021 12:09	WG1790526
Dibenz(a,h)anthracene	U		0.0644	1.00	1	12/17/2021 12:09	WG1790526
1,2-Dichlorobenzene	U		0.0713	10.0	1	12/17/2021 12:09	WG1790526
1,3-Dichlorobenzene	U		0.132	10.0	1	12/17/2021 12:09	WG1790526
1,4-Dichlorobenzene	U		0.0942	10.0	1	12/17/2021 12:09	WG1790526
3,3-Dichlorobenzidine	U		0.212	10.0	1	12/17/2021 12:09	WG1790526
2,4-Dinitrotoluene	U		0.0983	10.0	1	12/17/2021 12:09	WG1790526
2,6-Dinitrotoluene	U		0.250	10.0	1	12/17/2021 12:09	WG1790526
Fluoranthene	U		0.102	1.00	1	12/17/2021 12:09	WG1790526
Fluorene	U		0.0844	1.00	1	12/17/2021 12:09	WG1790526
Hexachlorobenzene	U		0.0755	1.00	1	12/17/2021 12:09	WG1790526
Hexachloro-1,3-butadiene	U		0.0968	10.0	1	12/17/2021 12:09	WG1790526
Hexachlorocyclopentadiene	U		0.0598	10.0	1	12/17/2021 12:09	WG1790526
Hexachloroethane	U		0.127	10.0	1	12/17/2021 12:09	WG1790526
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	12/17/2021 12:09	WG1790526
Isophorone	U	J3	0.143	10.0	1	12/17/2021 12:09	WG1790526
Naphthalene	U		0.159	1.00	1	12/17/2021 12:09	WG1790526
Nitrobenzene	U		0.297	10.0	1	12/17/2021 12:09	WG1790526
n-Nitrosodimethylamine	1.28	J	0.998	10.0	1	12/17/2021 12:09	WG1790526
n-Nitrosodiphenylamine	U		2.37	10.0	1	12/17/2021 12:09	WG1790526
n-Nitrosodi-n-propylamine	U		0.261	10.0	1	12/17/2021 12:09	WG1790526
Phenanthrene	U		0.112	1.00	1	12/17/2021 12:09	WG1790526
Benzylbutyl phthalate	U		0.765	3.00	1	12/17/2021 12:09	WG1790526
Bis(2-ethylhexyl)phthalate	U		0.895	3.00	1	12/17/2021 12:09	WG1790526
Di-n-butyl phthalate	U		0.453	3.00	1	12/17/2021 12:09	WG1790526
Diethyl phthalate	U		0.287	3.00	1	12/17/2021 12:09	WG1790526
Dimethyl phthalate	U		0.260	3.00	1	12/17/2021 12:09	WG1790526
Di-n-octyl phthalate	U		0.932	3.00	1	12/17/2021 12:09	WG1790526
Pyrene	U		0.107	1.00	1	12/17/2021 12:09	WG1790526
1,2,4-Trichlorobenzene	U		0.0698	10.0	1	12/17/2021 12:09	WG1790526
4-Chloro-3-methylphenol	U	J3	0.131	10.0	1	12/17/2021 12:09	WG1790526
2-Chlorophenol	U		0.133	10.0	1	12/17/2021 12:09	WG1790526
2,4-Dichlorophenol	U	J3	0.102	10.0	1	12/17/2021 12:09	WG1790526
2,4-Dimethylphenol	U		0.0636	10.0	1	12/17/2021 12:09	WG1790526
4,6-Dinitro-2-methylphenol	U		1.12	10.0	1	12/17/2021 12:09	WG1790526

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
2,4-Dinitrophenol	U		5.93	10.0	1	12/17/2021 12:09	WG1790526
2-Nitrophenol	U		0.117	10.0	1	12/17/2021 12:09	WG1790526
4-Nitrophenol	U		0.143	10.0	1	12/17/2021 12:09	WG1790526
Pentachlorophenol	U		0.313	10.0	1	12/17/2021 12:09	WG1790526
Phenol	U		4.33	10.0	1	12/17/2021 12:09	WG1790526
2,4,6-Trichlorophenol	U		0.100	10.0	1	12/17/2021 12:09	WG1790526
(S) 2-Fluorophenol	*39.6*			*10.0-120*		*12/17/2021 12:09*	WG1790526
(S) Phenol-d5	*26.6*			*10.0-120*		*12/17/2021 12:09*	WG1790526
(S) Nitrobenzene-d5	*62.4*			*10.0-127*		*12/17/2021 12:09*	WG1790526
(S) 2-Fluorobiphenyl	*67.1*			*10.0-130*		*12/17/2021 12:09*	WG1790526
(S) 2,4,6-Tribromophenol	*45.8*			*10.0-155*		*12/17/2021 12:09*	WG1790526
(S) p-Terphenyl-d14	*76.3*			*10.0-128*		*12/17/2021 12:09*	WG1790526

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Anthracene	U		0.0190	0.0500	1	12/16/2021 16:55	WG1789902
Acenaphthene	U		0.0190	0.0500	1	12/16/2021 16:55	WG1789902
Acenaphthylene	U		0.0171	0.0500	1	12/16/2021 16:55	WG1789902
Benzo(a)anthracene	U		0.0203	0.0500	1	12/16/2021 16:55	WG1789902
Benzo(a)pyrene	U		0.0184	0.0500	1	12/16/2021 16:55	WG1789902
Benzo(b)fluoranthene	U		0.0168	0.0500	1	12/16/2021 16:55	WG1789902
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	12/16/2021 16:55	WG1789902
Benzo(k)fluoranthene	U		0.0202	0.0500	1	12/16/2021 16:55	WG1789902
Chrysene	U		0.0179	0.0500	1	12/16/2021 16:55	WG1789902
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	12/16/2021 16:55	WG1789902
Fluoranthene	U		0.0270	0.100	1	12/16/2021 16:55	WG1789902
Fluorene	U		0.0169	0.0500	1	12/16/2021 16:55	WG1789902
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	12/16/2021 16:55	WG1789902
Naphthalene	U		0.0917	0.250	1	12/16/2021 16:55	WG1789902
Phenanthrene	U		0.0180	0.0500	1	12/16/2021 16:55	WG1789902
Pyrene	U		0.0169	0.0500	1	12/16/2021 16:55	WG1789902
1-Methylnaphthalene	U		0.0687	0.250	1	12/16/2021 16:55	WG1789902
2-Methylnaphthalene	U		0.0674	0.250	1	12/16/2021 16:55	WG1789902
2-Chloronaphthalene	U		0.0682	0.250	1	12/16/2021 16:55	WG1789902
Tetraethyllead	U		0.0338	0.0500	1	12/16/2021 16:55	WG1789902
(S) Nitrobenzene-d5	*102*			*31.0-160*		*12/16/2021 16:55*	WG1789902
(S) 2-Fluorobiphenyl	*97.9*			*48.0-148*		*12/16/2021 16:55*	WG1789902
(S) p-Terphenyl-d14	*95.3*			*37.0-146*		*12/16/2021 16:55*	WG1789902

Wet Chemistry by Method 4500CN E-2016

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cyanide	U		1.80	5.00	1	12/21/2021 18:52	WG1791261

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury,Dissolved	U		0.100	0.200	1	12/17/2021 14:10	WG1790263

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	U		4.40	10.0	1	01/14/2022 02:25	WG1798458
Barium,Dissolved	11.7		0.736	5.00	1	01/14/2022 02:25	WG1798458
Boron,Dissolved	24.3	J	20.0	200	1	01/14/2022 02:25	WG1798458
Calcium,Dissolved	1030		79.3	1000	1	01/14/2022 02:25	WG1798458
Chromium,Dissolved	11.1	B	1.40	10.0	1	01/14/2022 02:25	WG1798458
Cobalt,Dissolved	U		0.840	10.0	1	01/14/2022 02:25	WG1798458
Iron,Dissolved	47.1	B J	18.0	100	1	01/14/2022 02:25	WG1798458
Magnesium,Dissolved	226	J	85.3	1000	1	01/14/2022 02:25	WG1798458
Manganese,Dissolved	1.89	J	0.934	10.0	1	01/14/2022 02:25	WG1798458
Molybdenum,Dissolved	U		1.16	5.00	1	01/14/2022 02:25	WG1798458
Nickel,Dissolved	4.72	J	1.61	10.0	1	01/14/2022 02:25	WG1798458
Potassium,Dissolved	U		261	2000	1	01/14/2022 02:25	WG1798458
Sodium,Dissolved	2480	J	504	3000	1	01/14/2022 02:25	WG1798458
Strontium,Dissolved	4.42	J	0.640	10.0	1	01/14/2022 02:25	WG1798458
Zinc,Dissolved	U		6.52	50.0	1	01/14/2022 02:25	WG1798458

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		18.5	100	1	01/12/2022 18:37	WG1800316
Antimony,Dissolved	U		1.03	4.00	1	01/12/2022 18:37	WG1800316
Beryllium,Dissolved	U		0.190	2.00	1	01/12/2022 18:37	WG1800316
Cadmium,Dissolved	U		0.150	1.00	1	01/12/2022 18:37	WG1800316
Lead,Dissolved	U		0.849	2.00	1	01/12/2022 18:37	WG1800316
Selenium,Dissolved	U		0.300	2.00	1	01/12/2022 18:37	WG1800316
Silver,Dissolved	U		0.0700	2.00	1	01/12/2022 18:37	WG1800316
Thallium,Dissolved	U		0.121	2.00	1	01/12/2022 18:37	WG1800316
Titanium,Dissolved	U		2.18	20.0	1	01/12/2022 18:37	WG1800316
Vanadium,Dissolved	U		0.664	5.00	1	01/12/2022 18:37	WG1800316

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	12/16/2021 14:54	WG1790652
Benzene	U		0.0941	1.00	1	12/16/2021 14:54	WG1790652
Bromodichloromethane	4.43		0.136	1.00	1	12/16/2021 14:54	WG1790652
Bromoform	U		0.129	1.00	1	12/16/2021 14:54	WG1790652
Bromomethane	U		0.605	5.00	1	12/16/2021 14:54	WG1790652
Carbon disulfide	0.0998	J	0.0962	1.00	1	12/16/2021 14:54	WG1790652
Carbon tetrachloride	U		0.128	1.00	1	12/16/2021 14:54	WG1790652
Chlorobenzene	U		0.116	1.00	1	12/16/2021 14:54	WG1790652
Chloroethane	U		0.192	5.00	1	12/16/2021 14:54	WG1790652
Chloroform	5.52		0.111	5.00	1	12/16/2021 14:54	WG1790652
Cyclohexane	U		0.188	1.00	1	12/16/2021 14:54	WG1790652

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2-Dichlorobenzene	U		0.107	1.00	1	12/16/2021 14:54	WG1790652
1,3-Dichlorobenzene	U		0.110	1.00	1	12/16/2021 14:54	WG1790652
1,4-Dichlorobenzene	U		0.120	1.00	1	12/16/2021 14:54	WG1790652
1,1-Dichloroethane	U		0.100	1.00	1	12/16/2021 14:54	WG1790652
1,2-Dichloroethane	U		0.0819	1.00	1	12/16/2021 14:54	WG1790652
1,1-Dichloroethene	U		0.188	1.00	1	12/16/2021 14:54	WG1790652
cis-1,2-Dichloroethene	U		0.126	1.00	1	12/16/2021 14:54	WG1790652
trans-1,2-Dichloroethene	U		0.149	1.00	1	12/16/2021 14:54	WG1790652
1,2-Dichloropropane	U		0.149	1.00	1	12/16/2021 14:54	WG1790652
1,3-Dichloropropane	U		0.110	1.00	1	12/16/2021 14:54	WG1790652
cis-1,3-Dichloropropene	U		0.111	1.00	1	12/16/2021 14:54	WG1790652
trans-1,3-Dichloropropene	U		0.118	1.00	1	12/16/2021 14:54	WG1790652
Ethylbenzene	U		0.137	1.00	1	12/16/2021 14:54	WG1790652
Hexachloro-1,3-butadiene	U		0.337	1.00	1	12/16/2021 14:54	WG1790652
n-Hexane	U		0.749	10.0	1	12/16/2021 14:54	WG1790652
Isopropylbenzene	U		0.105	1.00	1	12/16/2021 14:54	WG1790652
2-Butanone (MEK)	U		1.19	10.0	1	12/16/2021 14:54	WG1790652
Methylene Chloride	U		0.430	5.00	1	12/16/2021 14:54	WG1790652
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	12/16/2021 14:54	WG1790652
Methyl tert-butyl ether	U		0.101	1.00	1	12/16/2021 14:54	WG1790652
Naphthalene	U		1.00	5.00	1	12/16/2021 14:54	WG1790652
1-Methylnaphthalene	U		7.30	10.0	1	12/16/2021 14:54	WG1790652
2-Methylnaphthalene	U		7.18	10.0	1	12/16/2021 14:54	WG1790652
Styrene	U		0.118	1.00	1	12/16/2021 14:54	WG1790652
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	12/16/2021 14:54	WG1790652
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	12/16/2021 14:54	WG1790652
Tetrachloroethene	U		0.300	1.00	1	12/16/2021 14:54	WG1790652
Toluene	U		0.278	1.00	1	12/16/2021 14:54	WG1790652
1,2,3-Trichlorobenzene	U		0.230	1.00	1	12/16/2021 14:54	WG1790652
1,2,4-Trichlorobenzene	U		0.481	1.00	1	12/16/2021 14:54	WG1790652
1,1,1-Trichloroethane	U		0.149	1.00	1	12/16/2021 14:54	WG1790652
1,1,2-Trichloroethane	U		0.158	1.00	1	12/16/2021 14:54	WG1790652
Trichloroethene	U		0.190	1.00	1	12/16/2021 14:54	WG1790652
1,2,4-Trimethylbenzene	U		0.322	1.00	1	12/16/2021 14:54	WG1790652
1,3,5-Trimethylbenzene	U		0.104	1.00	1	12/16/2021 14:54	WG1790652
Vinyl acetate	U		0.692	10.0	1	12/16/2021 14:54	WG1790652
Vinyl chloride	U		0.234	1.00	1	12/16/2021 14:54	WG1790652
Xylenes, Total	U		0.174	3.00	1	12/16/2021 14:54	WG1790652
Di-isopropyl ether	U		0.105	1.00	1	12/16/2021 14:54	WG1790652
Ethanol	U	J3	42.0	100	1	12/16/2021 14:54	WG1790652
3,3-Dimethyl-1-butanol	U		4.51	100	1	12/16/2021 14:54	WG1790652
Ethyl tert-butyl ether	U		0.101	1.00	1	12/16/2021 14:54	WG1790652
t-Amyl Alcohol	U		4.90	50.0	1	12/16/2021 14:54	WG1790652
tert-Butyl alcohol	U		4.06	5.00	1	12/16/2021 14:54	WG1790652
tert-Butyl Formate	U		4.51	20.0	1	12/16/2021 14:54	WG1790652
tert-Amyl Methyl Ether	U		0.195	1.00	1	12/16/2021 14:54	WG1790652
(S) 1,2-Dichloroethane-d4	*99.7*			*70.0-130*		*12/16/2021 14:54*	WG1790652
(S) Toluene-d8	*108*			*80.0-120*		*12/16/2021 14:54*	WG1790652
(S) 4-Bromofluorobenzene	*106*			*77.0-126*		*12/16/2021 14:54*	WG1790652

Volatile Organic Compounds (GC/MS) by Method 8260B-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	U		0.597	3.00	1	12/17/2021 19:32	WG1791341
(S) Toluene-d8	*100*			*77.0-127*		*12/17/2021 19:32*	WG1791341

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acenaphthene	U		0.0886	1.00	1	12/17/2021 12:30	WG1790526
Acenaphthylene	U	J3	0.0921	1.00	1	12/17/2021 12:30	WG1790526
Anthracene	U		0.0804	1.00	1	12/17/2021 12:30	WG1790526
Benzidine	U	J3	3.74	10.0	1	12/17/2021 12:30	WG1790526
Benzo(a)anthracene	U		0.199	1.00	1	12/17/2021 12:30	WG1790526
Benzo(b)fluoranthene	U		0.130	1.00	1	12/17/2021 12:30	WG1790526
Benzo(k)fluoranthene	U		0.120	1.00	1	12/17/2021 12:30	WG1790526
Benzo(g,h,i)perylene	U		0.121	1.00	1	12/17/2021 12:30	WG1790526
Benzo(a)pyrene	U		0.0381	1.00	1	12/17/2021 12:30	WG1790526
Bis(2-chlorethoxy)methane	U	J3	0.116	10.0	1	12/17/2021 12:30	WG1790526
Bis(2-chloroethyl)ether	U		0.137	10.0	1	12/17/2021 12:30	WG1790526
2,2-Oxybis(1-Chloropropane)	U	J3	0.210	10.0	1	12/17/2021 12:30	WG1790526
4-Bromophenyl-phenylether	U		0.0877	10.0	1	12/17/2021 12:30	WG1790526
2-Chloronaphthalene	U		0.0648	1.00	1	12/17/2021 12:30	WG1790526
4-Chlorophenyl-phenylether	U		0.0926	10.0	1	12/17/2021 12:30	WG1790526
Chrysene	U		0.130	1.00	1	12/17/2021 12:30	WG1790526
Dibenz(a,h)anthracene	U		0.0644	1.00	1	12/17/2021 12:30	WG1790526
1,2-Dichlorobenzene	U		0.0713	10.0	1	12/17/2021 12:30	WG1790526
1,3-Dichlorobenzene	U		0.132	10.0	1	12/17/2021 12:30	WG1790526
1,4-Dichlorobenzene	U		0.0942	10.0	1	12/17/2021 12:30	WG1790526
3,3-Dichlorobenzidine	U		0.212	10.0	1	12/17/2021 12:30	WG1790526
2,4-Dinitrotoluene	U		0.0983	10.0	1	12/17/2021 12:30	WG1790526
2,6-Dinitrotoluene	U		0.250	10.0	1	12/17/2021 12:30	WG1790526
Fluoranthene	U		0.102	1.00	1	12/17/2021 12:30	WG1790526
Fluorene	U		0.0844	1.00	1	12/17/2021 12:30	WG1790526
Hexachlorobenzene	U		0.0755	1.00	1	12/17/2021 12:30	WG1790526
Hexachloro-1,3-butadiene	U		0.0968	10.0	1	12/17/2021 12:30	WG1790526
Hexachlorocyclopentadiene	U		0.0598	10.0	1	12/17/2021 12:30	WG1790526
Hexachloroethane	U		0.127	10.0	1	12/17/2021 12:30	WG1790526
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	12/17/2021 12:30	WG1790526
Isophorone	U	J3	0.143	10.0	1	12/17/2021 12:30	WG1790526
Naphthalene	U		0.159	1.00	1	12/17/2021 12:30	WG1790526
Nitrobenzene	U		0.297	10.0	1	12/17/2021 12:30	WG1790526
n-Nitrosodimethylamine	U		0.998	10.0	1	12/17/2021 12:30	WG1790526
n-Nitrosodiphenylamine	U		2.37	10.0	1	12/17/2021 12:30	WG1790526
n-Nitrosodi-n-propylamine	U		0.261	10.0	1	12/17/2021 12:30	WG1790526
Phenanthrene	U		0.112	1.00	1	12/17/2021 12:30	WG1790526
Benzylbutyl phthalate	U		0.765	3.00	1	12/17/2021 12:30	WG1790526
Bis(2-ethylhexyl)phthalate	U		0.895	3.00	1	12/17/2021 12:30	WG1790526
Di-n-butyl phthalate	U		0.453	3.00	1	12/17/2021 12:30	WG1790526
Diethyl phthalate	U		0.287	3.00	1	12/17/2021 12:30	WG1790526
Dimethyl phthalate	U		0.260	3.00	1	12/17/2021 12:30	WG1790526
Di-n-octyl phthalate	U		0.932	3.00	1	12/17/2021 12:30	WG1790526
Pyrene	U		0.107	1.00	1	12/17/2021 12:30	WG1790526
1,2,4-Trichlorobenzene	U		0.0698	10.0	1	12/17/2021 12:30	WG1790526
4-Chloro-3-methylphenol	U	J3	0.131	10.0	1	12/17/2021 12:30	WG1790526
2-Chlorophenol	U		0.133	10.0	1	12/17/2021 12:30	WG1790526
2,4-Dichlorophenol	U	J3	0.102	10.0	1	12/17/2021 12:30	WG1790526
2,4-Dimethylphenol	U		0.0636	10.0	1	12/17/2021 12:30	WG1790526
4,6-Dinitro-2-methylphenol	U		1.12	10.0	1	12/17/2021 12:30	WG1790526
2,4-Dinitrophenol	U		5.93	10.0	1	12/17/2021 12:30	WG1790526
2-Nitrophenol	U		0.117	10.0	1	12/17/2021 12:30	WG1790526
4-Nitrophenol	U		0.143	10.0	1	12/17/2021 12:30	WG1790526
Pentachlorophenol	U		0.313	10.0	1	12/17/2021 12:30	WG1790526
Phenol	U		4.33	10.0	1	12/17/2021 12:30	WG1790526
2,4,6-Trichlorophenol	U		0.100	10.0	1	12/17/2021 12:30	WG1790526

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
(S) 2-Fluorophenol	*43.1*			*10.0-120*		*12/17/2021 12:30*	WG1790526
(S) Phenol-d5	*27.0*			*10.0-120*		*12/17/2021 12:30*	WG1790526
(S) Nitrobenzene-d5	*60.2*			*10.0-127*		*12/17/2021 12:30*	WG1790526
(S) 2-Fluorobiphenyl	*62.9*			*10.0-130*		*12/17/2021 12:30*	WG1790526
(S) 2,4,6-Tribromophenol	*50.5*			*10.0-155*		*12/17/2021 12:30*	WG1790526
(S) p-Terphenyl-d14	*77.3*			*10.0-128*		*12/17/2021 12:30*	WG1790526

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Anthracene	U		0.0190	0.0500	1	12/16/2021 17:13	WG1789902
Acenaphthene	U		0.0190	0.0500	1	12/16/2021 17:13	WG1789902
Acenaphthylene	U		0.0171	0.0500	1	12/16/2021 17:13	WG1789902
Benzo(a)anthracene	U		0.0203	0.0500	1	12/16/2021 17:13	WG1789902
Benzo(a)pyrene	U		0.0184	0.0500	1	12/16/2021 17:13	WG1789902
Benzo(b)fluoranthene	U		0.0168	0.0500	1	12/16/2021 17:13	WG1789902
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	12/16/2021 17:13	WG1789902
Benzo(k)fluoranthene	U		0.0202	0.0500	1	12/16/2021 17:13	WG1789902
Chrysene	U		0.0179	0.0500	1	12/16/2021 17:13	WG1789902
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	12/16/2021 17:13	WG1789902
Fluoranthene	U		0.0270	0.100	1	12/16/2021 17:13	WG1789902
Fluorene	U		0.0169	0.0500	1	12/16/2021 17:13	WG1789902
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	12/16/2021 17:13	WG1789902
Naphthalene	U		0.0917	0.250	1	12/16/2021 17:13	WG1789902
Phenanthrene	U		0.0180	0.0500	1	12/16/2021 17:13	WG1789902
Pyrene	U		0.0169	0.0500	1	12/16/2021 17:13	WG1789902
1-Methylnaphthalene	U		0.0687	0.250	1	12/16/2021 17:13	WG1789902
2-Methylnaphthalene	U		0.0674	0.250	1	12/16/2021 17:13	WG1789902
2-Chloronaphthalene	U		0.0682	0.250	1	12/16/2021 17:13	WG1789902
Tetraethyllead	U		0.0338	0.0500	1	12/16/2021 17:13	WG1789902
(S) Nitrobenzene-d5	*98.9*			*31.0-160*		*12/16/2021 17:13*	WG1789902
(S) 2-Fluorobiphenyl	*98.9*			*48.0-148*		*12/16/2021 17:13*	WG1789902
(S) p-Terphenyl-d14	*96.8*			*37.0-146*		*12/16/2021 17:13*	WG1789902

Wet Chemistry by Method 4500CN E-2016

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Cyanide	U		1.80	5.00	1	12/21/2021 18:54	WG1791261

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury,Dissolved	U		0.100	0.200	1	12/17/2021 14:16	WG1790263

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Arsenic,Dissolved	U		4.40	10.0	1	01/14/2022 02:28	WG1798458
Barium,Dissolved	1.78	J	0.736	5.00	1	01/14/2022 02:28	WG1798458
Boron,Dissolved	22.7	J	20.0	200	1	01/14/2022 02:28	WG1798458
Calcium,Dissolved	1000		79.3	1000	1	01/14/2022 02:28	WG1798458
Chromium,Dissolved	2.55	B J	1.40	10.0	1	01/14/2022 02:28	WG1798458
Cobalt,Dissolved	U		0.840	10.0	1	01/14/2022 02:28	WG1798458
Iron,Dissolved	U		18.0	100	1	01/14/2022 02:28	WG1798458
Magnesium,Dissolved	216	J	85.3	1000	1	01/14/2022 02:28	WG1798458
Manganese,Dissolved	1.02	J	0.934	10.0	1	01/14/2022 02:28	WG1798458
Molybdenum,Dissolved	U		1.16	5.00	1	01/14/2022 02:28	WG1798458
Nickel,Dissolved	1.63	J	1.61	10.0	1	01/14/2022 02:28	WG1798458
Potassium,Dissolved	U		261	2000	1	01/14/2022 02:28	WG1798458
Sodium,Dissolved	2410	J	504	3000	1	01/14/2022 02:28	WG1798458
Strontium,Dissolved	3.05	J	0.640	10.0	1	01/14/2022 02:28	WG1798458
Zinc,Dissolved	U		6.52	50.0	1	01/14/2022 02:28	WG1798458

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Aluminum,Dissolved	U		18.5	100	1	01/12/2022 18:40	WG1800316
Antimony,Dissolved	U		1.03	4.00	1	01/12/2022 18:40	WG1800316
Beryllium,Dissolved	U		0.190	2.00	1	01/12/2022 18:40	WG1800316
Cadmium,Dissolved	U		0.150	1.00	1	01/12/2022 18:40	WG1800316
Lead,Dissolved	U		0.849	2.00	1	01/12/2022 18:40	WG1800316
Selenium,Dissolved	U		0.300	2.00	1	01/12/2022 18:40	WG1800316
Silver,Dissolved	U		0.0700	2.00	1	01/12/2022 18:40	WG1800316
Thallium,Dissolved	U		0.121	2.00	1	01/12/2022 18:40	WG1800316
Titanium,Dissolved	U		2.18	20.0	1	01/12/2022 18:40	WG1800316
Vanadium,Dissolved	U		0.664	5.00	1	01/12/2022 18:40	WG1800316

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	12/17/2021 21:08	WG1791434
Benzene	U		0.0941	1.00	1	12/17/2021 21:08	WG1791434
Bromodichloromethane	5.07		0.136	1.00	1	12/17/2021 21:08	WG1791434
Bromoform	U		0.129	1.00	1	12/17/2021 21:08	WG1791434
Bromomethane	U		0.605	5.00	1	12/17/2021 21:08	WG1791434
Carbon disulfide	U		0.0962	1.00	1	12/17/2021 21:08	WG1791434
Carbon tetrachloride	U		0.128	1.00	1	12/17/2021 21:08	WG1791434
Chlorobenzene	U		0.116	1.00	1	12/17/2021 21:08	WG1791434
Chloroethane	U		0.192	5.00	1	12/17/2021 21:08	WG1791434
Chloroform	5.44		0.111	5.00	1	12/17/2021 21:08	WG1791434
Cyclohexane	U		0.188	1.00	1	12/17/2021 21:08	WG1791434

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2-Dichlorobenzene	U		0.107	1.00	1	12/17/2021 21:08	WG1791434
1,3-Dichlorobenzene	U		0.110	1.00	1	12/17/2021 21:08	WG1791434
1,4-Dichlorobenzene	U		0.120	1.00	1	12/17/2021 21:08	WG1791434
1,1-Dichloroethane	U		0.100	1.00	1	12/17/2021 21:08	WG1791434
1,2-Dichloroethane	U		0.0819	1.00	1	12/17/2021 21:08	WG1791434
1,1-Dichloroethene	U		0.188	1.00	1	12/17/2021 21:08	WG1791434
cis-1,2-Dichloroethene	U		0.126	1.00	1	12/17/2021 21:08	WG1791434
trans-1,2-Dichloroethene	U		0.149	1.00	1	12/17/2021 21:08	WG1791434
1,2-Dichloropropane	U		0.149	1.00	1	12/17/2021 21:08	WG1791434
1,3-Dichloropropane	U		0.110	1.00	1	12/17/2021 21:08	WG1791434
cis-1,3-Dichloropropene	U		0.111	1.00	1	12/17/2021 21:08	WG1791434
trans-1,3-Dichloropropene	U		0.118	1.00	1	12/17/2021 21:08	WG1791434
Ethylbenzene	U		0.137	1.00	1	12/17/2021 21:08	WG1791434
Hexachloro-1,3-butadiene	U		0.337	1.00	1	12/17/2021 21:08	WG1791434
n-Hexane	U		0.749	10.0	1	12/17/2021 21:08	WG1791434
Isopropylbenzene	U		0.105	1.00	1	12/17/2021 21:08	WG1791434
2-Butanone (MEK)	U		1.19	10.0	1	12/17/2021 21:08	WG1791434
Methylene Chloride	U		0.430	5.00	1	12/17/2021 21:08	WG1791434
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	12/17/2021 21:08	WG1791434
Methyl tert-butyl ether	U		0.101	1.00	1	12/17/2021 21:08	WG1791434
Naphthalene	U		1.00	5.00	1	12/17/2021 21:08	WG1791434
1-Methylnaphthalene	U		7.30	10.0	1	12/17/2021 21:08	WG1791434
2-Methylnaphthalene	U		7.18	10.0	1	12/17/2021 21:08	WG1791434
Styrene	U		0.118	1.00	1	12/17/2021 21:08	WG1791434
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	12/17/2021 21:08	WG1791434
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	12/17/2021 21:08	WG1791434
Tetrachloroethene	U		0.300	1.00	1	12/17/2021 21:08	WG1791434
Toluene	U		0.278	1.00	1	12/17/2021 21:08	WG1791434
1,2,3-Trichlorobenzene	U		0.230	1.00	1	12/17/2021 21:08	WG1791434
1,2,4-Trichlorobenzene	U		0.481	1.00	1	12/17/2021 21:08	WG1791434
1,1,1-Trichloroethane	U		0.149	1.00	1	12/17/2021 21:08	WG1791434
1,1,2-Trichloroethane	U		0.158	1.00	1	12/17/2021 21:08	WG1791434
Trichloroethene	U		0.190	1.00	1	12/17/2021 21:08	WG1791434
1,2,4-Trimethylbenzene	U		0.322	1.00	1	12/17/2021 21:08	WG1791434
1,3,5-Trimethylbenzene	U		0.104	1.00	1	12/17/2021 21:08	WG1791434
Vinyl acetate	U		0.692	10.0	1	12/17/2021 21:08	WG1791434
Vinyl chloride	U		0.234	1.00	1	12/17/2021 21:08	WG1791434
Xylenes, Total	U		0.174	3.00	1	12/17/2021 21:08	WG1791434
Di-isopropyl ether	U		0.105	1.00	1	12/17/2021 21:08	WG1791434
Ethanol	U		42.0	100	1	12/17/2021 21:08	WG1791434
3,3-Dimethyl-1-butanol	U		4.51	100	1	12/22/2021 13:36	WG1793365
Ethyl tert-butyl ether	U		0.101	1.00	1	12/17/2021 21:08	WG1791434
t-Amyl Alcohol	U		4.90	50.0	1	12/17/2021 21:08	WG1791434
tert-Butyl alcohol	U		4.06	5.00	1	12/17/2021 21:08	WG1791434
tert-Butyl Formate	U		4.51	20.0	1	12/22/2021 13:36	WG1793365
tert-Amyl Methyl Ether	U		0.195	1.00	1	12/17/2021 21:08	WG1791434
(S) 1,2-Dichloroethane-d4	*120*			*70.0-130*		*12/17/2021 21:08*	WG1791434
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*		*12/22/2021 13:36*	WG1793365
(S) Toluene-d8	*113*			*80.0-120*		*12/17/2021 21:08*	WG1791434
(S) Toluene-d8	*106*			*80.0-120*		*12/22/2021 13:36*	WG1793365
(S) 4-Bromofluorobenzene	*105*			*77.0-126*		*12/17/2021 21:08*	WG1791434
(S) 4-Bromofluorobenzene	*105*			*77.0-126*		*12/22/2021 13:36*	WG1793365

Volatile Organic Compounds (GC/MS) by Method 8260B-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	U		0.597	3.00	1	12/17/2021 19:52	WG1791341
(S) Toluene-d8	*100*			*77.0-127*		*12/17/2021 19:52*	WG1791341

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0886	1.00	1	12/17/2021 12:52	WG1790526
Acenaphthylene	U	J3	0.0921	1.00	1	12/17/2021 12:52	WG1790526
Anthracene	U		0.0804	1.00	1	12/17/2021 12:52	WG1790526
Benzidine	U	J3	3.74	10.0	1	12/17/2021 12:52	WG1790526
Benzo(a)anthracene	U		0.199	1.00	1	12/17/2021 12:52	WG1790526
Benzo(b)fluoranthene	U		0.130	1.00	1	12/17/2021 12:52	WG1790526
Benzo(k)fluoranthene	U		0.120	1.00	1	12/17/2021 12:52	WG1790526
Benzo(g,h,i)perylene	U		0.121	1.00	1	12/17/2021 12:52	WG1790526
Benzo(a)pyrene	U		0.0381	1.00	1	12/17/2021 12:52	WG1790526
Bis(2-chlorethoxy)methane	U	J3	0.116	10.0	1	12/17/2021 12:52	WG1790526
Bis(2-chloroethyl)ether	U		0.137	10.0	1	12/17/2021 12:52	WG1790526
2,2-Oxybis(1-Chloropropane)	U	J3	0.210	10.0	1	12/17/2021 12:52	WG1790526
4-Bromophenyl-phenylether	U		0.0877	10.0	1	12/17/2021 12:52	WG1790526
2-Chloronaphthalene	U		0.0648	1.00	1	12/17/2021 12:52	WG1790526
4-Chlorophenyl-phenylether	U		0.0926	10.0	1	12/17/2021 12:52	WG1790526
Chrysene	U		0.130	1.00	1	12/17/2021 12:52	WG1790526
Dibenz(a,h)anthracene	U		0.0644	1.00	1	12/17/2021 12:52	WG1790526
1,2-Dichlorobenzene	U		0.0713	10.0	1	12/17/2021 12:52	WG1790526
1,3-Dichlorobenzene	U		0.132	10.0	1	12/17/2021 12:52	WG1790526
1,4-Dichlorobenzene	U		0.0942	10.0	1	12/17/2021 12:52	WG1790526
3,3-Dichlorobenzidine	U		0.212	10.0	1	12/17/2021 12:52	WG1790526
2,4-Dinitrotoluene	U		0.0983	10.0	1	12/17/2021 12:52	WG1790526
2,6-Dinitrotoluene	U		0.250	10.0	1	12/17/2021 12:52	WG1790526
Fluoranthene	U		0.102	1.00	1	12/17/2021 12:52	WG1790526
Fluorene	U		0.0844	1.00	1	12/17/2021 12:52	WG1790526
Hexachlorobenzene	U		0.0755	1.00	1	12/17/2021 12:52	WG1790526
Hexachloro-1,3-butadiene	U		0.0968	10.0	1	12/17/2021 12:52	WG1790526
Hexachlorocyclopentadiene	U		0.0598	10.0	1	12/17/2021 12:52	WG1790526
Hexachloroethane	U		0.127	10.0	1	12/17/2021 12:52	WG1790526
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	12/17/2021 12:52	WG1790526
Isophorone	U	J3	0.143	10.0	1	12/17/2021 12:52	WG1790526
Naphthalene	U		0.159	1.00	1	12/17/2021 12:52	WG1790526
Nitrobenzene	U		0.297	10.0	1	12/17/2021 12:52	WG1790526
n-Nitrosodimethylamine	U		0.998	10.0	1	12/17/2021 12:52	WG1790526
n-Nitrosodiphenylamine	U		2.37	10.0	1	12/17/2021 12:52	WG1790526
n-Nitrosodi-n-propylamine	U		0.261	10.0	1	12/17/2021 12:52	WG1790526
Phenanthrene	U		0.112	1.00	1	12/17/2021 12:52	WG1790526
Benzylbutyl phthalate	U		0.765	3.00	1	12/17/2021 12:52	WG1790526
Bis(2-ethylhexyl)phthalate	U		0.895	3.00	1	12/17/2021 12:52	WG1790526
Di-n-butyl phthalate	U		0.453	3.00	1	12/17/2021 12:52	WG1790526
Diethyl phthalate	U		0.287	3.00	1	12/17/2021 12:52	WG1790526
Dimethyl phthalate	U		0.260	3.00	1	12/17/2021 12:52	WG1790526
Di-n-octyl phthalate	U		0.932	3.00	1	12/17/2021 12:52	WG1790526
Pyrene	U		0.107	1.00	1	12/17/2021 12:52	WG1790526
1,2,4-Trichlorobenzene	U		0.0698	10.0	1	12/17/2021 12:52	WG1790526
4-Chloro-3-methylphenol	U	J3	0.131	10.0	1	12/17/2021 12:52	WG1790526
2-Chlorophenol	U		0.133	10.0	1	12/17/2021 12:52	WG1790526
2,4-Dichlorophenol	U	J3	0.102	10.0	1	12/17/2021 12:52	WG1790526
2,4-Dimethylphenol	U		0.0636	10.0	1	12/17/2021 12:52	WG1790526
4,6-Dinitro-2-methylphenol	U		1.12	10.0	1	12/17/2021 12:52	WG1790526

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
2,4-Dinitrophenol	U		5.93	10.0	1	12/17/2021 12:52	WG1790526
2-Nitrophenol	U		0.117	10.0	1	12/17/2021 12:52	WG1790526
4-Nitrophenol	U		0.143	10.0	1	12/17/2021 12:52	WG1790526
Pentachlorophenol	U		0.313	10.0	1	12/17/2021 12:52	WG1790526
Phenol	U		4.33	10.0	1	12/17/2021 12:52	WG1790526
2,4,6-Trichlorophenol	U		0.100	10.0	1	12/17/2021 12:52	WG1790526
(S) 2-Fluorophenol	*45.7*			*10.0-120*		*12/17/2021 12:52*	WG1790526
(S) Phenol-d5	*27.1*			*10.0-120*		*12/17/2021 12:52*	WG1790526
(S) Nitrobenzene-d5	*63.8*			*10.0-127*		*12/17/2021 12:52*	WG1790526
(S) 2-Fluorobiphenyl	*65.7*			*10.0-130*		*12/17/2021 12:52*	WG1790526
(S) 2,4,6-Tribromophenol	*49.7*			*10.0-155*		*12/17/2021 12:52*	WG1790526
(S) p-Terphenyl-d14	*81.4*			*10.0-128*		*12/17/2021 12:52*	WG1790526

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Anthracene	U		0.0190	0.0500	1	12/16/2021 22:05	WG1790534
Acenaphthene	U		0.0190	0.0500	1	12/16/2021 22:05	WG1790534
Acenaphthylene	U		0.0171	0.0500	1	12/16/2021 22:05	WG1790534
Benzo(a)anthracene	U		0.0203	0.0500	1	12/16/2021 22:05	WG1790534
Benzo(a)pyrene	U		0.0184	0.0500	1	12/16/2021 22:05	WG1790534
Benzo(b)fluoranthene	U		0.0168	0.0500	1	12/16/2021 22:05	WG1790534
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	12/16/2021 22:05	WG1790534
Benzo(k)fluoranthene	U		0.0202	0.0500	1	12/16/2021 22:05	WG1790534
Chrysene	U		0.0179	0.0500	1	12/16/2021 22:05	WG1790534
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	12/16/2021 22:05	WG1790534
Fluoranthene	U		0.0270	0.100	1	12/16/2021 22:05	WG1790534
Fluorene	U		0.0169	0.0500	1	12/16/2021 22:05	WG1790534
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	12/16/2021 22:05	WG1790534
Naphthalene	U		0.0917	0.250	1	12/16/2021 22:05	WG1790534
Phenanthrene	U		0.0180	0.0500	1	12/16/2021 22:05	WG1790534
Pyrene	U		0.0169	0.0500	1	12/16/2021 22:05	WG1790534
1-Methylnaphthalene	U		0.0687	0.250	1	12/16/2021 22:05	WG1790534
2-Methylnaphthalene	U		0.0674	0.250	1	12/16/2021 22:05	WG1790534
2-Chloronaphthalene	U		0.0682	0.250	1	12/16/2021 22:05	WG1790534
Tetraethyllead	U		0.0338	0.0500	1	12/16/2021 22:05	WG1790534
(S) Nitrobenzene-d5	*98.0*			*31.0-160*		*12/16/2021 22:05*	WG1790534
(S) 2-Fluorobiphenyl	*95.0*			*48.0-148*		*12/16/2021 22:05*	WG1790534
(S) p-Terphenyl-d14	*101*			*37.0-146*		*12/16/2021 22:05*	WG1790534

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	12/17/2021 19:43	WG1791434
Benzene	U		0.0941	1.00	1	12/17/2021 19:43	WG1791434
Bromodichloromethane	U		0.136	1.00	1	12/17/2021 19:43	WG1791434
Bromoform	U		0.129	1.00	1	12/17/2021 19:43	WG1791434
Bromomethane	U		0.605	5.00	1	12/17/2021 19:43	WG1791434
Carbon disulfide	U		0.0962	1.00	1	12/17/2021 19:43	WG1791434
Carbon tetrachloride	U		0.128	1.00	1	12/17/2021 19:43	WG1791434
Chlorobenzene	U		0.116	1.00	1	12/17/2021 19:43	WG1791434
Chloroethane	U		0.192	5.00	1	12/17/2021 19:43	WG1791434
Chloroform	U		0.111	5.00	1	12/17/2021 19:43	WG1791434
Cyclohexane	U		0.188	1.00	1	12/17/2021 19:43	WG1791434
1,2-Dichlorobenzene	U		0.107	1.00	1	12/17/2021 19:43	WG1791434
1,3-Dichlorobenzene	U		0.110	1.00	1	12/17/2021 19:43	WG1791434
1,4-Dichlorobenzene	U		0.120	1.00	1	12/17/2021 19:43	WG1791434
1,1-Dichloroethane	U		0.100	1.00	1	12/17/2021 19:43	WG1791434
1,2-Dichloroethane	U		0.0819	1.00	1	12/17/2021 19:43	WG1791434
1,1-Dichloroethene	U		0.188	1.00	1	12/17/2021 19:43	WG1791434
cis-1,2-Dichloroethene	U		0.126	1.00	1	12/17/2021 19:43	WG1791434
trans-1,2-Dichloroethene	U		0.149	1.00	1	12/17/2021 19:43	WG1791434
1,2-Dichloropropane	U		0.149	1.00	1	12/17/2021 19:43	WG1791434
1,3-Dichloropropane	U		0.110	1.00	1	12/17/2021 19:43	WG1791434
cis-1,3-Dichloropropene	U		0.111	1.00	1	12/17/2021 19:43	WG1791434
trans-1,3-Dichloropropene	U		0.118	1.00	1	12/17/2021 19:43	WG1791434
Ethylbenzene	U		0.137	1.00	1	12/17/2021 19:43	WG1791434
Hexachloro-1,3-butadiene	U		0.337	1.00	1	12/17/2021 19:43	WG1791434
n-Hexane	U		0.749	10.0	1	12/17/2021 19:43	WG1791434
Isopropylbenzene	U		0.105	1.00	1	12/17/2021 19:43	WG1791434
2-Butanone (MEK)	U		1.19	10.0	1	12/17/2021 19:43	WG1791434
Methylene Chloride	U		0.430	5.00	1	12/17/2021 19:43	WG1791434
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	12/17/2021 19:43	WG1791434
Methyl tert-butyl ether	U		0.101	1.00	1	12/17/2021 19:43	WG1791434
Naphthalene	U		1.00	5.00	1	12/17/2021 19:43	WG1791434
1-Methylnaphthalene	U		7.30	10.0	1	12/17/2021 19:43	WG1791434
2-Methylnaphthalene	U		7.18	10.0	1	12/17/2021 19:43	WG1791434
Styrene	U		0.118	1.00	1	12/17/2021 19:43	WG1791434
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	12/17/2021 19:43	WG1791434
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	12/17/2021 19:43	WG1791434
Tetrachloroethene	U		0.300	1.00	1	12/17/2021 19:43	WG1791434
Toluene	U		0.278	1.00	1	12/17/2021 19:43	WG1791434
1,2,3-Trichlorobenzene	U		0.230	1.00	1	12/17/2021 19:43	WG1791434
1,2,4-Trichlorobenzene	U		0.481	1.00	1	12/17/2021 19:43	WG1791434
1,1,1-Trichloroethane	U		0.149	1.00	1	12/17/2021 19:43	WG1791434
1,1,2-Trichloroethane	U		0.158	1.00	1	12/17/2021 19:43	WG1791434
Trichloroethene	U		0.190	1.00	1	12/17/2021 19:43	WG1791434
1,2,4-Trimethylbenzene	U		0.322	1.00	1	12/17/2021 19:43	WG1791434
1,3,5-Trimethylbenzene	U		0.104	1.00	1	12/17/2021 19:43	WG1791434
Vinyl acetate	U		0.692	10.0	1	12/17/2021 19:43	WG1791434
Vinyl chloride	U		0.234	1.00	1	12/17/2021 19:43	WG1791434
Xylenes, Total	U		0.174	3.00	1	12/17/2021 19:43	WG1791434
Di-isopropyl ether	U		0.105	1.00	1	12/17/2021 19:43	WG1791434
Ethanol	U		42.0	100	1	12/17/2021 19:43	WG1791434
3,3-Dimethyl-1-butanol	U		4.51	100	1	12/22/2021 13:15	WG1793365
Ethyl tert-butyl ether	U		0.101	1.00	1	12/17/2021 19:43	WG1791434
t-Amyl Alcohol	U		4.90	50.0	1	12/17/2021 19:43	WG1791434
tert-Butyl alcohol	U		4.06	5.00	1	12/17/2021 19:43	WG1791434
tert-Butyl Formate	U		4.51	20.0	1	12/22/2021 13:15	WG1793365

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
tert-Amyl Methyl Ether	U		0.195	1.00	1	12/17/2021 19:43	WG1791434
(S) 1,2-Dichloroethane-d4	*119*			*70.0-130*		*12/17/2021 19:43*	WG1791434
(S) 1,2-Dichloroethane-d4	*109*			*70.0-130*		*12/22/2021 13:15*	WG1793365
(S) Toluene-d8	*111*			*80.0-120*		*12/17/2021 19:43*	WG1791434
(S) Toluene-d8	*102*			*80.0-120*		*12/22/2021 13:15*	WG1793365
(S) 4-Bromofluorobenzene	*101*			*77.0-126*		*12/17/2021 19:43*	WG1791434
(S) 4-Bromofluorobenzene	*112*			*77.0-126*		*12/22/2021 13:15*	WG1793365

Volatile Organic Compounds (GC/MS) by Method 8260B-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	U		0.597	3.00	1	12/17/2021 19:12	WG1791341
(S) Toluene-d8	*98.9*			*77.0-127*		*12/17/2021 19:12*	WG1791341

QUALITY CONTROL SUMMARY

L1442051-01,02,03,04

Method Blank (MB)

(MB) R3742844-1 12/20/21 15:04

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Cyanide	U		1.80	5.00

L1440897-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1440897-01 12/20/21 15:10 • (DUP) R3742844-3 12/20/21 15:11

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	U	U	1	0.000		20

L1441217-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1441217-01 12/20/21 16:08 • (DUP) R3742844-6 12/20/21 16:09

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3742844-2 12/20/21 15:05

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cyanide	100	109	109	87.1-120	

L1441162-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1441162-01 12/20/21 16:05 • (MS) R3742844-4 12/20/21 16:06 • (MSD) R3742844-5 12/20/21 16:07

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	100	U	99.7	92.4	99.7	92.4	1	90.0-110			7.60	20

L1441370-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1441370-02 12/20/21 16:10 • (MS) R3742844-7 12/20/21 16:11 • (MSD) R3742844-8 12/20/21 16:12

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	100	U	103	99.6	103	99.6	1	90.0-110			3.36	20

Method Blank (MB)

(MB) R3743479-1 12/21/21 18:33

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Cyanide	U		1.80	5.00

L1442051-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1442051-05 12/21/21 18:38 • (DUP) R3743479-3 12/21/21 18:39

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Cyanide	U	U	1	0.000		20

L1442051-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1442051-13 12/21/21 18:52 • (DUP) R3743479-6 12/21/21 18:53

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Cyanide	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3743479-2 12/21/21 18:34

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Cyanide	100	101	101	87.1-120	

L1442051-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1442051-06 12/21/21 18:40 • (MS) R3743479-4 12/21/21 18:41 • (MSD) R3743479-5 12/21/21 18:42

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Cyanide	100	U	98.0	96.3	98.0	96.3	1	90.0-110			1.75	20

L1442051-14 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1442051-14 12/21/21 18:54 • (MS) R3743479-7 12/21/21 18:55 • (MSD) R3743479-8 12/21/21 18:58

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Cyanide	100	U	95.6	96.1	95.6	96.1	1	90.0-110			0.522	20

Method Blank (MB)

(MB) R3742070-1 12/17/21 13:21

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury,Dissolved	U		0.100	0.200

Laboratory Control Sample (LCS)

(LCS) R3742070-4 12/17/21 14:59

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury,Dissolved	3.00	3.32	111	80.0-120	

L1440825-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1440825-01 12/17/21 13:26 • (MS) R3742070-2 12/17/21 13:28 • (MSD) R3742070-3 12/17/21 13:30

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury,Dissolved	3.00	U	2.99	3.04	99.5	101	1	75.0-125			1.69	20

Method Blank (MB)

(MB) R3747587-1 01/04/22 22:18

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Arsenic,Dissolved	U		4.40	10.0
Barium,Dissolved	1.82	J	0.736	5.00
Boron,Dissolved	U		20.0	200
Calcium,Dissolved	U		79.3	1000
Chromium,Dissolved	U		1.40	10.0
Cobalt,Dissolved	U		0.840	10.0
Iron,Dissolved	122		18.0	100
Magnesium,Dissolved	U		85.3	1000
Manganese,Dissolved	4.81	J	0.934	10.0
Molybdenum,Dissolved	U		1.16	5.00
Nickel,Dissolved	U		1.61	10.0
Potassium,Dissolved	U		261	2000
Sodium,Dissolved	589	J	504	3000
Strontium,Dissolved	U		0.640	10.0
Zinc,Dissolved	U		6.52	50.0

Laboratory Control Sample (LCS)

(LCS) R3747587-2 01/04/22 22:20

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic,Dissolved	1000	914	91.4	80.0-120	
Barium,Dissolved	1000	985	98.5	80.0-120	
Boron,Dissolved	1000	946	94.6	80.0-120	
Calcium,Dissolved	10000	9600	96.0	80.0-120	
Chromium,Dissolved	1000	954	95.4	80.0-120	
Cobalt,Dissolved	1000	969	96.9	80.0-120	
Iron,Dissolved	10000	9500	95.0	80.0-120	
Magnesium,Dissolved	10000	9360	93.6	80.0-120	
Manganese,Dissolved	1000	957	95.7	80.0-120	
Molybdenum,Dissolved	1000	986	98.6	80.0-120	
Nickel,Dissolved	1000	957	95.7	80.0-120	
Potassium,Dissolved	10000	8890	88.9	80.0-120	
Sodium,Dissolved	10000	10100	101	80.0-120	
Strontium,Dissolved	1000	974	97.4	80.0-120	
Zinc,Dissolved	1000	919	91.9	80.0-120	

L1432866-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1432866-01 01/04/22 22:24 • (MS) R3747587-4 01/04/22 22:30 • (MSD) R3747587-5 01/04/22 22:33

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic,Dissolved	1000	U	1160	1160	116	116	1	75.0-125			0.0479	20
Barium,Dissolved	1000	422000	418000	416000	0.000	0.000	1	75.0-125	E V	E V	0.256	20
Boron,Dissolved	1000	216	1210	1240	99.5	102	1	75.0-125			2.08	20
Calcium,Dissolved	10000	4300000	4290000	4350000	0.000	452	1	75.0-125	E V	E V	1.39	20
Chromium,Dissolved	1000	19.8	901	908	88.1	88.8	1	75.0-125			0.745	20
Cobalt,Dissolved	1000	43.4	971	970	92.8	92.7	1	75.0-125	V3	V3	0.123	20
Iron,Dissolved	10000	319000	320000	322000	10.9	31.8	1	75.0-125	V	V	0.652	20
Magnesium,Dissolved	10000	287000	294000	291000	65.1	38.1	1	75.0-125	V	V	0.922	20
Manganese,Dissolved	1000	7340	7940	8010	59.3	66.6	1	75.0-125	V	V	0.918	20
Molybdenum,Dissolved	1000	8.20	968	969	95.9	96.1	1	75.0-125			0.187	20
Nickel,Dissolved	1000	2.44	876	878	87.4	87.5	1	75.0-125	V3	V3	0.164	20
Potassium,Dissolved	10000	114000	95100	92900	0.000	0.000	1	75.0-125	V	V	2.31	20
Sodium,Dissolved	10000	11900000	11600000	11700000	0.000	0.000	1	75.0-125	E V	E V	0.419	20
Zinc,Dissolved	1000	176	876	878	70.0	70.1	1	75.0-125	J6	J6	0.189	20

Method Blank (MB)

(MB) R3749950-1 01/14/22 01:44

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Arsenic,Dissolved	U		4.40	10.0
Barium,Dissolved	U		0.736	5.00
Boron,Dissolved	U		20.0	200
Calcium,Dissolved	U		79.3	1000
Chromium,Dissolved	1.78	J	1.40	10.0
Cobalt,Dissolved	U		0.840	10.0
Iron,Dissolved	48.9	J	18.0	100
Magnesium,Dissolved	U		85.3	1000
Manganese,Dissolved	U		0.934	10.0
Molybdenum,Dissolved	U		1.16	5.00
Nickel,Dissolved	U		1.61	10.0
Potassium,Dissolved	U		261	2000
Sodium,Dissolved	U		504	3000
Strontium,Dissolved	U		0.640	10.0
Zinc,Dissolved	U		6.52	50.0

Laboratory Control Sample (LCS)

(LCS) R3749950-2 01/14/22 01:46

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic,Dissolved	1000	947	94.7	80.0-120	
Barium,Dissolved	1000	996	99.6	80.0-120	
Boron,Dissolved	1000	983	98.3	80.0-120	
Calcium,Dissolved	10000	9670	96.7	80.0-120	
Chromium,Dissolved	1000	981	98.1	80.0-120	
Cobalt,Dissolved	1000	994	99.4	80.0-120	
Iron,Dissolved	10000	9670	96.7	80.0-120	
Magnesium,Dissolved	10000	9600	96.0	80.0-120	
Manganese,Dissolved	1000	988	98.8	80.0-120	
Molybdenum,Dissolved	1000	1020	102	80.0-120	
Nickel,Dissolved	1000	991	99.1	80.0-120	
Potassium,Dissolved	10000	9560	95.6	80.0-120	
Sodium,Dissolved	10000	10500	105	80.0-120	
Strontium,Dissolved	1000	1010	101	80.0-120	
Zinc,Dissolved	1000	963	96.3	80.0-120	

L1443849-24 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1443849-24 01/14/22 01:49 • (MS) R3749950-4 01/14/22 01:55 • (MSD) R3749950-5 01/14/22 01:57

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic,Dissolved	1000	U	967	965	96.7	96.5	1	75.0-125			0.230	20
Barium,Dissolved	1000	57.2	1040	1050	98.6	98.8	1	75.0-125			0.197	20
Boron,Dissolved	1000	34.5	1010	1020	97.2	98.5	1	75.0-125			1.28	20
Calcium,Dissolved	10000	81000	88600	88700	76.0	76.3	1	75.0-125			0.0367	20
Chromium,Dissolved	1000	2.75	964	966	96.1	96.3	1	75.0-125			0.259	20
Cobalt,Dissolved	1000	U	997	1000	99.7	100	1	75.0-125			0.280	20
Iron,Dissolved	10000	38.1	9610	9710	95.7	96.7	1	75.0-125			1.03	20
Magnesium,Dissolved	10000	6940	16200	16300	92.8	93.6	1	75.0-125			0.506	20
Manganese,Dissolved	1000	208	1160	1170	95.5	95.9	1	75.0-125			0.326	20
Molybdenum,Dissolved	1000	U	1020	1030	102	103	1	75.0-125			0.413	20
Nickel,Dissolved	1000	1.87	991	996	98.9	99.5	1	75.0-125			0.578	20
Potassium,Dissolved	10000	2780	12100	12200	92.8	94.2	1	75.0-125			1.16	20
Sodium,Dissolved	10000	4320	14000	14200	96.6	98.9	1	75.0-125			1.59	20
Strontium,Dissolved	1000	143	1150	1150	101	101	1	75.0-125			0.130	20
Zinc,Dissolved	1000	U	959	961	95.9	96.1	1	75.0-125			0.244	20

L1443849-31 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1443849-31 01/14/22 02:00 • (MS) R3749950-6 01/14/22 02:03 • (MSD) R3749950-7 01/14/22 02:05

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic,Dissolved	1000	U	977	980	97.7	98.0	1	75.0-125			0.377	20
Barium,Dissolved	1000	136	1120	1120	98.2	98.7	1	75.0-125			0.409	20
Boron,Dissolved	1000	28.4	989	1000	96.1	97.4	1	75.0-125			1.32	20
Calcium,Dissolved	10000	98400	106000	106000	78.7	72.5	1	75.0-125		V	0.587	20
Chromium,Dissolved	1000	2.88	955	964	95.2	96.1	1	75.0-125			0.908	20
Cobalt,Dissolved	1000	U	1000	1000	100	100	1	75.0-125			0.00279	20
Iron,Dissolved	10000	33.4	9470	9510	94.3	94.7	1	75.0-125			0.391	20
Magnesium,Dissolved	10000	33400	42200	41800	88.0	84.2	1	75.0-125			0.906	20
Manganese,Dissolved	1000	U	960	968	96.0	96.8	1	75.0-125			0.770	20
Molybdenum,Dissolved	1000	U	1020	1030	102	103	1	75.0-125			0.438	20
Nickel,Dissolved	1000	U	999	1000	99.9	100	1	75.0-125			0.120	20
Potassium,Dissolved	10000	1260	10700	10800	94.5	95.1	1	75.0-125			0.523	20
Sodium,Dissolved	10000	20900	28700	28800	78.0	79.2	1	75.0-125			0.417	20
Strontium,Dissolved	1000	244	1240	1240	100	99.9	1	75.0-125			0.213	20
Zinc,Dissolved	1000	U	963	963	96.3	96.3	1	75.0-125			0.0599	20

Method Blank (MB)

(MB) R3748720-1 01/11/22 02:58

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Aluminum,Dissolved	U		18.5	100
Antimony,Dissolved	U		1.03	4.00
Beryllium,Dissolved	U		0.190	2.00
Cadmium,Dissolved	U		0.150	1.00
Lead,Dissolved	U		0.849	2.00
Selenium,Dissolved	U		0.300	2.00
Silver,Dissolved	U		0.0700	2.00
Thallium,Dissolved	U		0.121	2.00
Titanium,Dissolved	U		2.18	20.0
Vanadium,Dissolved	U		0.664	5.00

Laboratory Control Sample (LCS)

(LCS) R3748720-2 01/11/22 03:01

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aluminum,Dissolved	5000	5060	101	80.0-120	
Antimony,Dissolved	50.0	49.0	98.0	80.0-120	
Beryllium,Dissolved	50.0	50.1	100	80.0-120	
Cadmium,Dissolved	50.0	50.0	100	80.0-120	
Lead,Dissolved	50.0	47.0	94.0	80.0-120	
Selenium,Dissolved	50.0	45.3	90.5	80.0-120	
Silver,Dissolved	50.0	49.6	99.2	80.0-120	
Thallium,Dissolved	50.0	47.1	94.3	80.0-120	
Titanium,Dissolved	50.0	49.5	99.0	80.0-120	
Vanadium,Dissolved	50.0	51.1	102	80.0-120	

L1441741-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1441741-02 01/11/22 03:05 • (MS) R3748720-4 01/11/22 03:11 • (MSD) R3748720-5 01/11/22 03:15

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum,Dissolved	5000	29.5	4830	4790	96.6	95.7	1	75.0-125			0.950	20
Antimony,Dissolved	50.0	U	47.3	48.0	94.5	96.1	1	75.0-125			1.62	20
Beryllium,Dissolved	50.0	U	47.5	47.9	95.0	95.8	1	75.0-125			0.921	20
Cadmium,Dissolved	50.0	U	47.1	46.1	94.3	92.2	1	75.0-125			2.24	20
Lead,Dissolved	50.0	U	44.5	49.2	89.0	98.4	1	75.0-125			10.0	20
Selenium,Dissolved	50.0	U	44.9	43.4	89.9	86.7	1	75.0-125			3.58	20
Silver,Dissolved	50.0	U	48.1	48.0	96.3	96.0	1	75.0-125			0.289	20

L1441741-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1441741-02 01/11/22 03:05 • (MS) R3748720-4 01/11/22 03:11 • (MSD) R3748720-5 01/11/22 03:15

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Thallium,Dissolved	50.0	U	45.5	44.1	90.9	88.2	1	75.0-125			3.02	20
Titanium,Dissolved	50.0	U	46.2	48.2	92.4	96.3	1	75.0-125			4.15	20
Vanadium,Dissolved	50.0	U	47.9	48.2	95.9	96.4	1	75.0-125			0.548	20

Method Blank (MB)

(MB) R3749399-1 01/12/22 17:56

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Aluminum,Dissolved	U		18.5	100
Antimony,Dissolved	U		1.03	4.00
Beryllium,Dissolved	U		0.190	2.00
Cadmium,Dissolved	U		0.150	1.00
Lead,Dissolved	U		0.849	2.00
Selenium,Dissolved	U		0.300	2.00
Silver,Dissolved	U		0.0700	2.00
Thallium,Dissolved	U		0.121	2.00
Titanium,Dissolved	U		2.18	20.0
Vanadium,Dissolved	U		0.664	5.00

Laboratory Control Sample (LCS)

(LCS) R3749399-2 01/12/22 17:59

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aluminum,Dissolved	5000	5080	102	80.0-120	
Antimony,Dissolved	50.0	50.1	100	80.0-120	
Beryllium,Dissolved	50.0	52.5	105	80.0-120	
Cadmium,Dissolved	50.0	48.9	97.8	80.0-120	
Lead,Dissolved	50.0	48.2	96.3	80.0-120	
Selenium,Dissolved	50.0	47.5	95.0	80.0-120	
Silver,Dissolved	50.0	51.2	102	80.0-120	
Thallium,Dissolved	50.0	46.1	92.3	80.0-120	
Titanium,Dissolved	50.0	46.0	92.0	80.0-120	
Vanadium,Dissolved	50.0	50.6	101	80.0-120	

L1442908-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1442908-01 01/12/22 18:03 • (MS) R3749399-4 01/12/22 18:09 • (MSD) R3749399-5 01/12/22 18:13

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum,Dissolved	5000	27.2	4930	4870	98.1	96.8	1	75.0-125			1.38	20
Antimony,Dissolved	50.0	U	53.6	53.8	107	108	1	75.0-125			0.298	20
Beryllium,Dissolved	50.0	U	50.6	52.2	101	104	1	75.0-125			2.94	20
Cadmium,Dissolved	50.0	U	48.9	49.0	97.9	98.0	1	75.0-125			0.131	20
Lead,Dissolved	50.0	U	49.6	49.1	99.2	98.2	1	75.0-125			1.03	20
Selenium,Dissolved	50.0	0.543	50.1	50.8	99.2	101	1	75.0-125			1.37	20
Silver,Dissolved	50.0	U	51.5	52.4	103	105	1	75.0-125			1.73	20

L1442908-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1442908-01 01/12/22 18:03 • (MS) R3749399-4 01/12/22 18:09 • (MSD) R3749399-5 01/12/22 18:13

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Thallium,Dissolved	50.0	U	46.9	47.0	93.9	94.0	1	75.0-125			0.0953	20
Titanium,Dissolved	50.0	U	53.7	50.4	107	101	1	75.0-125			6.52	20
Vanadium,Dissolved	50.0	4.84	54.2	56.7	98.7	104	1	75.0-125			4.50	20

Method Blank (MB)

(MB) R3742946-3 12/18/21 11:28

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		11.3	50.0
Benzene	U		0.0941	1.00
Bromodichloromethane	U		0.136	1.00
Bromoform	U		0.129	1.00
Bromomethane	U		0.605	5.00
Carbon disulfide	U		0.0962	1.00
Carbon tetrachloride	U		0.128	1.00
Chlorobenzene	U		0.116	1.00
Chloroethane	U		0.192	5.00
Chloroform	U		0.111	5.00
Cyclohexane	U		0.188	1.00
1,2-Dichlorobenzene	U		0.107	1.00
1,3-Dichlorobenzene	U		0.110	1.00
1,4-Dichlorobenzene	U		0.120	1.00
1,1-Dichloroethane	U		0.100	1.00
1,2-Dichloroethane	U		0.0819	1.00
1,1-Dichloroethene	U		0.188	1.00
cis-1,2-Dichloroethene	U		0.126	1.00
trans-1,2-Dichloroethene	U		0.149	1.00
1,2-Dichloropropane	U		0.149	1.00
1,3-Dichloropropane	U		0.110	1.00
cis-1,3-Dichloropropene	U		0.111	1.00
trans-1,3-Dichloropropene	U		0.118	1.00
Di-isopropyl ether	U		0.105	1.00
Ethylbenzene	U		0.137	1.00
Ethanol	U		42.0	100
Hexachloro-1,3-butadiene	U		0.337	1.00
n-Hexane	U		0.749	10.0
Isopropylbenzene	U		0.105	1.00
2-Butanone (MEK)	U		1.19	10.0
Methylene Chloride	U		0.430	5.00
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0
Methyl tert-butyl ether	U		0.101	1.00
1-Methylnaphthalene	U		7.30	10.0
2-Methylnaphthalene	U		7.18	10.0
Naphthalene	U		1.00	5.00
Styrene	U		0.118	1.00
1,1,1,2-Tetrachloroethane	U		0.147	1.00
1,1,2,2-Tetrachloroethane	U		0.133	1.00
Tetrachloroethene	U		0.300	1.00

Method Blank (MB)

(MB) R3742946-3 12/18/21 11:28

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Toluene	U		0.278	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.481	1.00
1,1,1-Trichloroethane	U		0.149	1.00
1,1,2-Trichloroethane	U		0.158	1.00
Trichloroethene	U		0.190	1.00
1,2,4-Trimethylbenzene	U		0.322	1.00
1,3,5-Trimethylbenzene	U		0.104	1.00
Vinyl acetate	U		0.692	10.0
Vinyl chloride	U		0.234	1.00
Xylenes, Total	U		0.174	3.00
tert-Amyl Methyl Ether	U		0.195	1.00
Ethyl tert-butyl ether	U		0.101	1.00
tert-Butyl alcohol	U		4.06	5.00
3,3-Dimethyl-1-butanol	U		4.51	100
t-Amyl Alcohol	U		4.90	50.0
tert-Butyl formate	U		4.51	20.0
(S) Toluene-d8	*91.6*			*80.0-120*
(S) 4-Bromofluorobenzene	*115*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*95.2*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3742946-1 12/18/21 10:25

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
t-Amyl Alcohol	25.0	18.2	72.8	50.0-160	
Acetone	25.0	19.4	77.6	19.0-160	
Benzene	5.00	5.31	106	70.0-123	
Bromodichloromethane	5.00	5.36	107	75.0-120	
Bromoform	5.00	4.57	91.4	68.0-132	
Bromomethane	5.00	2.38	47.6	10.0-160	
Carbon disulfide	5.00	5.61	112	61.0-128	
Carbon tetrachloride	5.00	5.65	113	68.0-126	
Chlorobenzene	5.00	4.92	98.4	80.0-121	
Chloroethane	5.00	4.91	98.2	47.0-150	
Chloroform	5.00	5.28	106	73.0-120	
Cyclohexane	5.00	5.56	111	71.0-124	
1,2-Dichlorobenzene	5.00	5.50	110	79.0-121	

Laboratory Control Sample (LCS)

(LCS) R3742946-1 12/18/21 10:25

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,3-Dichlorobenzene	5.00	5.22	104	79.0-120	
1,4-Dichlorobenzene	5.00	5.26	105	79.0-120	
1,1-Dichloroethane	5.00	5.20	104	70.0-126	
1,2-Dichloroethane	5.00	5.08	102	70.0-128	
1,1-Dichloroethene	5.00	5.42	108	71.0-124	
cis-1,2-Dichloroethene	5.00	5.03	101	73.0-120	
trans-1,2-Dichloroethene	5.00	5.48	110	73.0-120	
1,2-Dichloropropane	5.00	5.07	101	77.0-125	
1,3-Dichloropropane	5.00	4.92	98.4	80.0-120	
cis-1,3-Dichloropropene	5.00	5.49	110	80.0-123	
trans-1,3-Dichloropropene	5.00	4.86	97.2	78.0-124	
Di-isopropyl ether	5.00	4.89	97.8	58.0-138	
Ethylbenzene	5.00	4.91	98.2	79.0-123	
Hexachloro-1,3-butadiene	5.00	5.32	106	54.0-138	
n-Hexane	5.00	5.44	109	57.0-133	
Isopropylbenzene	5.00	4.85	97.0	76.0-127	
2-Butanone (MEK)	25.0	18.4	73.6	44.0-160	
Methylene Chloride	5.00	5.18	104	67.0-120	
4-Methyl-2-pentanone (MIBK)	25.0	20.0	80.0	68.0-142	
Methyl tert-butyl ether	5.00	5.03	101	68.0-125	
1-Methylnaphthalene	5.00	0.595	11.9	14.0-154	J4
2-Methylnaphthalene	5.00	0.731	14.6	15.0-159	J4
Naphthalene	5.00	3.28	65.6	54.0-135	
Styrene	5.00	4.90	98.0	73.0-130	
1,1,1,2-Tetrachloroethane	5.00	5.02	100	75.0-125	
1,1,2,2-Tetrachloroethane	5.00	5.74	115	65.0-130	
Tetrachloroethene	5.00	5.27	105	72.0-132	
Toluene	5.00	4.92	98.4	79.0-120	
1,2,3-Trichlorobenzene	5.00	4.25	85.0	50.0-138	
1,2,4-Trichlorobenzene	5.00	4.50	90.0	57.0-137	
1,1,1-Trichloroethane	5.00	5.62	112	73.0-124	
1,1,2-Trichloroethane	5.00	5.02	100	80.0-120	
Trichloroethene	5.00	5.23	105	78.0-124	
1,2,4-Trimethylbenzene	5.00	4.85	97.0	76.0-121	
1,3,5-Trimethylbenzene	5.00	5.65	113	76.0-122	
Vinyl acetate	25.0	28.8	115	11.0-160	
Vinyl chloride	5.00	5.28	106	67.0-131	
Xylenes, Total	15.0	14.4	96.0	79.0-123	
tert-Amyl Methyl Ether	5.00	5.24	105	66.0-125	
Ethyl tert-butyl ether	5.00	5.10	102	63.0-138	

Laboratory Control Sample (LCS)

(LCS) R3742946-1 12/18/21 10:25

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
ethanol	250	129	51.6	10.0-160	
tert-Butyl alcohol	25.0	15.8	63.2	27.0-160	
(S) Toluene-d8			*91.8*	*80.0-120*	
(S) 4-Bromofluorobenzene			*102*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*92.5*	*70.0-130*	

Laboratory Control Sample (LCS)

(LCS) R3742946-2 12/18/21 10:46

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
3,3-Dimethyl-1-butanol	100	85.4	85.4	55.0-148	
tert-Butyl Formate	100	112	112	10.0-160	
(S) Toluene-d8			*120*	*80.0-120*	
(S) 4-Bromofluorobenzene			*110*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*105*	*70.0-130*	

Method Blank (MB)

(MB) R3742012-4 12/16/21 13:40

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		11.3	50.0
Benzene	U		0.0941	1.00
Bromodichloromethane	U		0.136	1.00
Bromoform	U		0.129	1.00
Bromomethane	U		0.605	5.00
Carbon disulfide	U		0.0962	1.00
Carbon tetrachloride	U		0.128	1.00
Chlorobenzene	U		0.116	1.00
Chloroethane	U		0.192	5.00
Chloroform	U		0.111	5.00
Cyclohexane	U		0.188	1.00
1,2-Dichlorobenzene	U		0.107	1.00
1,3-Dichlorobenzene	U		0.110	1.00
1,4-Dichlorobenzene	U		0.120	1.00
1,1-Dichloroethane	U		0.100	1.00
1,2-Dichloroethane	U		0.0819	1.00
1,1-Dichloroethene	U		0.188	1.00
cis-1,2-Dichloroethene	U		0.126	1.00
trans-1,2-Dichloroethene	U		0.149	1.00
1,2-Dichloropropane	U		0.149	1.00
1,3-Dichloropropane	U		0.110	1.00
cis-1,3-Dichloropropene	U		0.111	1.00
trans-1,3-Dichloropropene	U		0.118	1.00
Di-isopropyl ether	U		0.105	1.00
Ethylbenzene	U		0.137	1.00
Ethanol	U		42.0	100
Hexachloro-1,3-butadiene	U		0.337	1.00
n-Hexane	U		0.749	10.0
Isopropylbenzene	U		0.105	1.00
2-Butanone (MEK)	U		1.19	10.0
Methylene Chloride	U		0.430	5.00
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0
Methyl tert-butyl ether	U		0.101	1.00
1-Methylnaphthalene	U		7.30	10.0
2-Methylnaphthalene	U		7.18	10.0
Naphthalene	U		1.00	5.00
Styrene	U		0.118	1.00
1,1,1,2-Tetrachloroethane	U		0.147	1.00
1,1,2,2-Tetrachloroethane	U		0.133	1.00
Tetrachloroethene	U		0.300	1.00

Method Blank (MB)

(MB) R3742012-4 12/16/21 13:40

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Toluene	U		0.278	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.481	1.00
1,1,1-Trichloroethane	U		0.149	1.00
1,1,2-Trichloroethane	U		0.158	1.00
Trichloroethene	U		0.190	1.00
1,2,4-Trimethylbenzene	U		0.322	1.00
1,3,5-Trimethylbenzene	U		0.104	1.00
Vinyl acetate	U		0.692	10.0
Vinyl chloride	U		0.234	1.00
Xylenes, Total	U		0.174	3.00
tert-Amyl Methyl Ether	U		0.195	1.00
Ethyl tert-butyl ether	U		0.101	1.00
tert-Butyl alcohol	U		4.06	5.00
3,3-Dimethyl-1-butanol	U		4.51	100
t-Amyl Alcohol	U		4.90	50.0
tert-Butyl formate	U		4.51	20.0
(S) Toluene-d8	*107*			*80.0-120*
(S) 4-Bromofluorobenzene	*107*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*98.8*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3742012-1 12/16/21 10:26 • (LCSD) R3742012-2 12/16/21 10:47

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
t-Amyl Alcohol	25.0	23.9	25.8	95.6	103	50.0-160			7.65	25
Acetone	25.0	19.7	20.8	78.8	83.2	19.0-160			5.43	27
Benzene	5.00	5.18	5.15	104	103	70.0-123			0.581	20
Bromodichloromethane	5.00	5.03	4.91	101	98.2	75.0-120			2.41	20
Bromoform	5.00	5.07	5.11	101	102	68.0-132			0.786	20
Bromomethane	5.00	4.47	4.43	89.4	88.6	10.0-160			0.899	25
Carbon disulfide	5.00	5.40	5.25	108	105	61.0-128			2.82	20
Carbon tetrachloride	5.00	5.96	5.86	119	117	68.0-126			1.69	20
Chlorobenzene	5.00	5.40	5.24	108	105	80.0-121			3.01	20
Chloroethane	5.00	4.95	4.87	99.0	97.4	47.0-150			1.63	20
Chloroform	5.00	5.05	4.96	101	99.2	73.0-120			1.80	20
Cyclohexane	5.00	5.87	5.72	117	114	71.0-124			2.59	20
1,2-Dichlorobenzene	5.00	5.18	5.27	104	105	79.0-121			1.72	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3742012-1 12/16/21 10:26 • (LCSD) R3742012-2 12/16/21 10:47

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,3-Dichlorobenzene	5.00	5.23	5.31	105	106	79.0-120			1.52	20
1,4-Dichlorobenzene	5.00	5.16	5.12	103	102	79.0-120			0.778	20
1,1-Dichloroethane	5.00	5.24	5.22	105	104	70.0-126			0.382	20
1,2-Dichloroethane	5.00	5.11	5.08	102	102	70.0-128			0.589	20
1,1-Dichloroethene	5.00	5.57	5.20	111	104	71.0-124			6.87	20
cis-1,2-Dichloroethene	5.00	5.09	5.11	102	102	73.0-120			0.392	20
trans-1,2-Dichloroethene	5.00	5.12	5.07	102	101	73.0-120			0.981	20
1,2-Dichloropropane	5.00	5.23	5.36	105	107	77.0-125			2.46	20
1,3-Dichloropropane	5.00	5.51	5.45	110	109	80.0-120			1.09	20
cis-1,3-Dichloropropene	5.00	5.34	5.35	107	107	80.0-123			0.187	20
trans-1,3-Dichloropropene	5.00	5.39	5.34	108	107	78.0-124			0.932	20
Di-isopropyl ether	5.00	5.02	4.99	100	99.8	58.0-138			0.599	20
Ethylbenzene	5.00	5.43	5.38	109	108	79.0-123			0.925	20
Hexachloro-1,3-butadiene	5.00	5.48	5.75	110	115	54.0-138			4.81	20
n-Hexane	5.00	5.64	5.63	113	113	57.0-133			0.177	20
Isopropylbenzene	5.00	5.47	5.45	109	109	76.0-127			0.366	20
2-Butanone (MEK)	25.0	23.9	24.9	95.6	99.6	44.0-160			4.10	20
Methylene Chloride	5.00	5.04	5.05	101	101	67.0-120			0.198	20
4-Methyl-2-pentanone (MIBK)	25.0	27.0	26.8	108	107	68.0-142			0.744	20
Methyl tert-butyl ether	5.00	5.17	5.21	103	104	68.0-125			0.771	20
1-Methylnaphthalene	5.00	4.30	5.44	86.0	109	14.0-154			23.4	40
2-Methylnaphthalene	5.00	4.47	5.65	89.4	113	15.0-159			23.3	40
Naphthalene	5.00	5.05	5.42	101	108	54.0-135			7.07	20
Styrene	5.00	5.27	5.29	105	106	73.0-130			0.379	20
1,1,1,2-Tetrachloroethane	5.00	5.43	5.50	109	110	75.0-125			1.28	20
1,1,2,2-Tetrachloroethane	5.00	5.27	5.40	105	108	65.0-130			2.44	20
Tetrachloroethene	5.00	5.57	5.49	111	110	72.0-132			1.45	20
Toluene	5.00	5.20	5.17	104	103	79.0-120			0.579	20
1,2,3-Trichlorobenzene	5.00	5.28	5.50	106	110	50.0-138			4.08	20
1,2,4-Trichlorobenzene	5.00	5.23	5.34	105	107	57.0-137			2.08	20
1,1,1-Trichloroethane	5.00	5.50	5.41	110	108	73.0-124			1.65	20
1,1,2-Trichloroethane	5.00	5.13	5.12	103	102	80.0-120			0.195	20
Trichloroethene	5.00	5.31	5.45	106	109	78.0-124			2.60	20
1,2,4-Trimethylbenzene	5.00	5.07	5.15	101	103	76.0-121			1.57	20
1,3,5-Trimethylbenzene	5.00	5.31	5.15	106	103	76.0-122			3.06	20
Vinyl acetate	25.0	30.2	30.1	121	120	11.0-160			0.332	20
Vinyl chloride	5.00	5.60	5.49	112	110	67.0-131			1.98	20
Xylenes, Total	15.0	16.4	16.5	109	110	79.0-123			0.608	20
ethanol	250	49.0	85.4	19.6	34.2	10.0-160		J3	54.2	30
tert-Butyl alcohol	25.0	16.8	20.2	67.2	80.8	27.0-160			18.4	30

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3742012-1 12/16/21 10:26 • (LCSD) R3742012-2 12/16/21 10:47

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
tert-Amyl Methyl Ether	5.00	5.26	5.22	105	104	66.0-125			0.763	20
Ethyl tert-butyl ether	5.00	5.42	5.55	108	111	63.0-138			2.37	20
(S) Toluene-d8				*106*	*105*	*80.0-120*				
(S) 4-Bromofluorobenzene				*106*	*105*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*101*	*102*	*70.0-130*				

Laboratory Control Sample (LCS)

(LCS) R3742012-3 12/16/21 11:07

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
3,3-Dimethyl-1-butanol	100	90.2	90.2	55.0-148	
tert-Butyl Formate	100	90.5	90.5	10.0-160	
(S) Toluene-d8			*106*	*80.0-120*	
(S) 4-Bromofluorobenzene			*106*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*100*	*70.0-130*	

Method Blank (MB)

(MB) R3742331-2 12/17/21 15:50

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Xylenes, Total	U		0.174	3.00
(S) Toluene-d8	*113*			*80.0-120*
(S) 4-Bromofluorobenzene	*102*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*121*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3742331-1 12/17/21 15:08

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Xylenes, Total	15.0	14.2	94.7	79.0-123	
(S) Toluene-d8			*111*	*80.0-120*	
(S) 4-Bromofluorobenzene			*105*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*124*	*70.0-130*	

Method Blank (MB)

(MB) R3742334-2 12/17/21 15:50

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
1,1,1,2-Tetrachloroethane	U		0.147	1.00
1,1,1-Trichloroethane	U		0.149	1.00
1,1,2,2-Tetrachloroethane	U		0.133	1.00
1,1,2-Trichloroethane	U		0.158	1.00
1,1-Dichloroethane	U		0.100	1.00
1,1-Dichloroethene	U		0.188	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.481	1.00
1,2,4-Trimethylbenzene	U		0.322	1.00
1,2-Dichlorobenzene	U		0.107	1.00
1,2-Dichloroethane	U		0.0819	1.00
1,2-Dichloropropane	U		0.149	1.00
1,3,5-Trimethylbenzene	U		0.104	1.00
1,3-Dichlorobenzene	U		0.110	1.00
1,3-Dichloropropane	U		0.110	1.00
1,4-Dichlorobenzene	U		0.120	1.00
1-Methylnaphthalene	U		7.30	10.0
2-Butanone (MEK)	U		1.19	10.0
2-Methylnaphthalene	U		7.18	10.0
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0
Acetone	U		11.3	50.0
Benzene	U		0.0941	1.00
Bromodichloromethane	U		0.136	1.00
Bromoform	U		0.129	1.00
Bromomethane	U		0.605	5.00
Carbon disulfide	U		0.0962	1.00
Carbon tetrachloride	U		0.128	1.00
Chlorobenzene	U		0.116	1.00
Chloroethane	U		0.192	5.00
Chloroform	U		0.111	5.00
cis-1,2-Dichloroethene	U		0.126	1.00
cis-1,3-Dichloropropene	U		0.111	1.00
Cyclohexane	U		0.188	1.00
Di-isopropyl ether	U		0.105	1.00
Ethanol	U		42.0	100
Ethyl tert-butyl ether	U		0.101	1.00
Ethylbenzene	U		0.137	1.00
Hexachloro-1,3-butadiene	U		0.337	1.00
Isopropylbenzene	U		0.105	1.00
Methyl tert-butyl ether	U		0.101	1.00

Method Blank (MB)

(MB) R3742334-2 12/17/21 15:50

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Methylene Chloride	U		0.430	5.00
Naphthalene	U		1.00	5.00
n-Hexane	U		0.749	10.0
Styrene	U		0.118	1.00
t-Amyl Alcohol	U		4.90	50.0
tert-Amyl Methyl Ether	U		0.195	1.00
tert-Butyl alcohol	U		4.06	5.00
Tetrachloroethene	U		0.300	1.00
Toluene	U		0.278	1.00
trans-1,2-Dichloroethene	U		0.149	1.00
trans-1,3-Dichloropropene	U		0.118	1.00
Trichloroethene	U		0.190	1.00
Vinyl acetate	U		0.692	10.0
Vinyl chloride	U		0.234	1.00
Xylenes, Total	U		0.174	3.00
(S) 1,2-Dichloroethane-d4	*121*			*70.0-130*
(S) 4-Bromofluorobenzene	*102*			*77.0-126*
(S) Toluene-d8	*113*			*80.0-120*

Laboratory Control Sample (LCS)

(LCS) R3742334-1 12/17/21 15:08

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,1,1,2-Tetrachloroethane	5.00	5.00	100	75.0-125	
1,1,1-Trichloroethane	5.00	5.21	104	73.0-124	
1,1,2,2-Tetrachloroethane	5.00	4.56	91.2	65.0-130	
1,1,2-Trichloroethane	5.00	4.93	98.6	80.0-120	
1,1-Dichloroethane	5.00	5.58	112	70.0-126	
1,1-Dichloroethene	5.00	4.84	96.8	71.0-124	
1,2,3-Trichlorobenzene	5.00	4.43	88.6	50.0-138	
1,2,4-Trichlorobenzene	5.00	4.07	81.4	57.0-137	
1,2,4-Trimethylbenzene	5.00	4.09	81.8	76.0-121	
1,2-Dichlorobenzene	5.00	4.02	80.4	79.0-121	
1,2-Dichloroethane	5.00	5.20	104	70.0-128	
1,2-Dichloropropane	5.00	5.11	102	77.0-125	
1,3,5-Trimethylbenzene	5.00	4.32	86.4	76.0-122	
1,3-Dichlorobenzene	5.00	4.21	84.2	79.0-120	
1,3-Dichloropropane	5.00	4.78	95.6	80.0-120	

Laboratory Control Sample (LCS)

(LCS) R3742334-1 12/17/21 15:08

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,4-Dichlorobenzene	5.00	4.42	88.4	79.0-120	
1-Methylnaphthalene	5.00	3.42	68.4	14.0-154	
2-Butanone (MEK)	25.0	30.4	122	44.0-160	
2-Methylnaphthalene	5.00	3.24	64.8	15.0-159	
4-Methyl-2-pentanone (MIBK)	25.0	27.0	108	68.0-142	
Acetone	25.0	31.2	125	19.0-160	
Benzene	5.00	5.33	107	70.0-123	
Bromodichloromethane	5.00	5.62	112	75.0-120	
Bromoform	5.00	5.16	103	68.0-132	
Bromomethane	5.00	2.82	56.4	10.0-160	
Carbon disulfide	5.00	4.83	96.6	61.0-128	
Carbon tetrachloride	5.00	5.45	109	68.0-126	
Chlorobenzene	5.00	4.57	91.4	80.0-121	
Chloroethane	5.00	5.50	110	47.0-150	
Chloroform	5.00	5.17	103	73.0-120	
cis-1,2-Dichloroethene	5.00	5.21	104	73.0-120	
cis-1,3-Dichloropropene	5.00	5.45	109	80.0-123	
Di-isopropyl ether	5.00	5.55	111	58.0-138	
Ethanol	250	299	120	10.0-160	
Ethylbenzene	5.00	4.69	93.8	79.0-123	
Hexachloro-1,3-butadiene	5.00	4.46	89.2	54.0-138	
Isopropylbenzene	5.00	4.49	89.8	76.0-127	
Methyl tert-butyl ether	5.00	5.41	108	68.0-125	
Methylene Chloride	5.00	5.35	107	67.0-120	
Naphthalene	5.00	3.71	74.2	54.0-135	
n-Hexane	5.00	4.19	83.8	57.0-133	
Styrene	5.00	4.68	93.6	73.0-130	
tert-Butyl alcohol	25.0	31.6	126	27.0-160	
Tetrachloroethene	5.00	4.49	89.8	72.0-132	
Toluene	5.00	4.77	95.4	79.0-120	
trans-1,2-Dichloroethene	5.00	5.26	105	73.0-120	
trans-1,3-Dichloropropene	5.00	4.93	98.6	78.0-124	
Trichloroethene	5.00	5.55	111	78.0-124	
Vinyl acetate	25.0	32.3	129	11.0-160	
Vinyl chloride	5.00	5.10	102	67.0-131	
Xylenes, Total	15.0	14.2	94.7	79.0-123	
t-Amyl Alcohol	25.0	32.0	128	50.0-160	
Cyclohexane	5.00	4.70	94.0	71.0-124	
tert-Amyl Methyl Ether	5.00	5.40	108	66.0-125	
Ethyl tert-butyl ether	5.00	5.45	109	63.0-138	

Laboratory Control Sample (LCS)

(LCS) R3742334-1 12/17/21 15:08

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
(S) 1,2-Dichloroethane-d4			*124*	*70.0-130*	
(S) 4-Bromofluorobenzene			*105*	*77.0-126*	
(S) Toluene-d8			*111*	*80.0-120*	

L1442825-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1442825-06 12/18/21 01:00 • (MS) R3742334-3 12/18/21 01:21 • (MSD) R3742334-4 12/18/21 01:42

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,1,1-Trichloroethane	50.0	U	63.7	63.6	127	127	10	23.0-160			0.157	28
1,1,2,2-Tetrachloroethane	50.0	U	53.9	59.1	108	118	10	33.0-150			9.20	28
1,1,2-Trichloroethane	50.0	U	57.5	60.5	115	121	10	35.0-147			5.08	27
1,1-Dichloroethane	50.0	U	63.2	64.0	126	128	10	25.0-158			1.26	27
1,1-Dichloroethene	50.0	U	52.5	50.9	105	102	10	11.0-160			3.09	29
1,2-Dichlorobenzene	50.0	U	50.8	51.9	102	104	10	34.0-149			2.14	28
1,2-Dichloroethane	50.0	U	58.3	58.6	117	117	10	29.0-151			0.513	27
1,2-Dichloropropane	50.0	U	61.4	58.4	123	117	10	30.0-156			5.01	27
1,3-Dichlorobenzene	50.0	U	45.8	51.2	91.6	102	10	36.0-146			11.1	27
1,4-Dichlorobenzene	50.0	U	48.5	49.4	97.0	98.8	10	35.0-142			1.84	27
Benzene	50.0	292	371	354	158	124	10	17.0-158			4.69	27
Bromodichloromethane	50.0	U	62.4	64.6	125	129	10	31.0-150			3.46	27
Bromoform	50.0	U	54.8	58.1	110	116	10	29.0-150			5.85	29
Bromomethane	50.0	U	23.4	22.7	46.8	45.4	10	10.0-160			3.04	38
Carbon tetrachloride	50.0	U	61.8	63.3	124	127	10	23.0-159			2.40	28
Chlorobenzene	50.0	U	56.1	54.1	112	108	10	33.0-152			3.63	27
Chloroethane	50.0	U	52.3	51.9	105	104	10	10.0-160			0.768	30
Chloroform	50.0	1.29	64.5	64.1	126	126	10	29.0-154			0.622	28
cis-1,2-Dichloroethene	50.0	U	54.4	55.7	109	111	10	10.0-160			2.36	27
cis-1,3-Dichloropropene	50.0	U	58.2	58.4	116	117	10	34.0-149			0.343	28
Ethylbenzene	50.0	276	342	321	132	90.0	10	30.0-155			6.33	27
Methylene Chloride	50.0	U	53.2	54.5	106	109	10	23.0-144			2.41	28
Tetrachloroethene	50.0	U	51.4	50.4	103	101	10	10.0-160			1.96	27
Toluene	50.0	104	161	153	114	98.0	10	26.0-154			5.10	28
trans-1,2-Dichloroethene	50.0	U	50.0	51.5	100	103	10	17.0-153			2.96	27
trans-1,3-Dichloropropene	50.0	U	56.1	55.7	112	111	10	32.0-149			0.716	28
Trichloroethene	50.0	U	56.7	53.2	113	106	10	10.0-160			6.37	25
Vinyl chloride	50.0	U	49.0	52.5	98.0	105	10	10.0-160			6.90	27
t-Amyl Alcohol	250	U	316	364	126	146	10	70.0-130		J5	14.1	30
Carbon disulfide	50.0	U	30.5	30.8	61.0	61.6	10	10.0-156			0.979	28

L1442825-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1442825-06 12/18/21 01:00 • (MS) R3742334-3 12/18/21 01:21 • (MSD) R3742334-4 12/18/21 01:42

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyclohexane	50.0	22.4	59.8	55.8	74.8	66.8	10	19.0-160			6.92	23
Acetone	250	U	318	328	127	131	10	10.0-160			3.10	35
n-Hexane	50.0	23.1	55.6	56.6	65.0	67.0	10	10.0-153			1.78	28
1-Methylnaphthalene	50.0	U	94.2	125	188	250	10	10.0-153	J5	J5	28.1	40
2-Methylnaphthalene	50.0	U	U	104	0.000	208	10	10.0-160	J6	J3 J5	200	40
1,3-Dichloropropane	50.0	U	53.6	54.5	107	109	10	38.0-147			1.67	27
Di-isopropyl ether	50.0	U	61.7	62.6	123	125	10	21.0-160			1.45	28
Hexachloro-1,3-butadiene	50.0	U	51.6	53.7	103	107	10	20.0-154			3.99	34
Isopropylbenzene	50.0	16.9	72.1	70.7	110	108	10	28.0-157			1.96	27
2-Butanone (MEK)	250	U	324	344	130	138	10	10.0-160			5.99	32
4-Methyl-2-pentanone (MIBK)	250	U	310	316	124	126	10	29.0-160			1.92	29
Methyl tert-butyl ether	50.0	5.71	69.0	70.0	127	129	10	28.0-150			1.44	29
Vinyl acetate	250	U	390	400	156	160	10	12.0-160			2.53	31
Naphthalene	50.0	173	266	287	186	228	10	12.0-156	J5	J5	7.59	35
tert-Amyl Methyl Ether	50.0	U	71.1	69.5	142	139	10	10.0-160			2.28	37
Ethyl tert-butyl ether	50.0	U	67.4	67.1	135	134	10	10.0-160			0.446	37
Styrene	50.0	8.17	53.2	52.3	90.1	88.3	10	33.0-155			1.71	28
1,1,1,2-Tetrachloroethane	50.0	U	55.3	57.9	111	116	10	36.0-151			4.59	29
1,2,3-Trichlorobenzene	50.0	U	49.1	56.3	98.2	113	10	17.0-150			13.7	36
1,2,4-Trichlorobenzene	50.0	U	49.4	54.7	98.8	109	10	24.0-150			10.2	33
1,2,4-Trimethylbenzene	50.0	352	428	425	152	146	10	26.0-154			0.703	27
1,3,5-Trimethylbenzene	50.0	76.1	128	129	104	106	10	28.0-153			0.778	27
Xylenes, Total	150	984	1210	1120	151	90.7	10	29.0-154			7.73	28
ethanol	2500	U	3250	3820	130	153	10	50.0-150		J5	16.1	20
tert-Butyl alcohol	250	U	373	405	149	162	10	50.0-150		J5	8.23	20
(S) 1,2-Dichloroethane-d4					*120*	*122*		*70.0-130*				
(S) 4-Bromofluorobenzene					*109*	*107*		*77.0-126*				
(S) Toluene-d8					*110*	*108*		*80.0-120*				

Method Blank (MB)

(MB) R3743884-4 12/22/21 12:09

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
3,3-Dimethyl-1-butanol	U		4.51	100
tert-Butyl formate	U		4.51	20.0
(S) Toluene-d8	*105*			*80.0-120*
(S) 4-Bromofluorobenzene	*108*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*99.7*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3743884-3 12/22/21 11:28

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
3,3-Dimethyl-1-butanol	100	75.5	75.5	55.0-148	
tert-Butyl Formate	100	74.1	74.1	10.0-160	
(S) Toluene-d8			*107*	*80.0-120*	
(S) 4-Bromofluorobenzene			*104*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*111*	*70.0-130*	

Method Blank (MB)

(MB) R3743285-3 12/17/21 18:23

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
1,4-Dioxane	U		0.597	3.00
(S) Toluene-d8	*98.8*			*77.0-127*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3743285-1 12/17/21 16:40 • (LCSD) R3743285-2 12/17/21 17:00

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,4-Dioxane	50.0	41.0	38.8	82.0	77.6	55.0-138			5.51	24
(S) Toluene-d8				*99.6*	*99.5*	*77.0-127*				

Method Blank (MB)

(MB) R3742161-2 12/17/21 00:58

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acenaphthene	U		0.0886	1.00
Acenaphthylene	U		0.0921	1.00
Anthracene	U		0.0804	1.00
Benzidine	U		3.74	10.0
Benzo(a)anthracene	U		0.199	1.00
Benzo(b)fluoranthene	U		0.130	1.00
Benzo(k)fluoranthene	U		0.120	1.00
Benzo(g,h,i)perylene	U		0.121	1.00
Benzo(a)pyrene	U		0.0381	1.00
Bis(2-chlorethoxy)methane	U		0.116	10.0
Bis(2-chloroethyl)ether	U		0.137	10.0
2,2-Oxybis(1-Chloropropane)	U		0.210	10.0
4-Bromophenyl-phenylether	U		0.0877	10.0
2-Chloronaphthalene	U		0.0648	1.00
4-Chlorophenyl-phenylether	U		0.0926	10.0
Chrysene	U		0.130	1.00
Dibenz(a,h)anthracene	U		0.0644	1.00
1,2-Dichlorobenzene	U		0.0713	10.0
1,3-Dichlorobenzene	U		0.132	10.0
1,4-Dichlorobenzene	U		0.0942	10.0
3,3-Dichlorobenzidine	U		0.212	10.0
2,4-Dinitrotoluene	U		0.0983	10.0
2,6-Dinitrotoluene	U		0.250	10.0
Fluoranthene	U		0.102	1.00
Fluorene	U		0.0844	1.00
Hexachlorobenzene	U		0.0755	1.00
Hexachloro-1,3-butadiene	U		0.0968	10.0
Hexachlorocyclopentadiene	U		0.0598	10.0
Hexachloroethane	U		0.127	10.0
Indeno(1,2,3-cd)pyrene	U		0.279	1.00
Isophorone	U		0.143	10.0
Naphthalene	U		0.159	1.00
Nitrobenzene	U		0.297	10.0
n-Nitrosodimethylamine	U		0.998	10.0
n-Nitrosodiphenylamine	U		2.37	10.0
n-Nitrosodi-n-propylamine	U		0.261	10.0
Phenanthrene	U		0.112	1.00
Benzylbutyl phthalate	U		0.765	3.00
Bis(2-ethylhexyl)phthalate	U		0.895	3.00
Di-n-butyl phthalate	U		0.453	3.00

Method Blank (MB)

(MB) R3742161-2 12/17/21 00:58

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Diethyl phthalate	U		0.287	3.00
Dimethyl phthalate	U		0.260	3.00
Di-n-octyl phthalate	U		0.932	3.00
Pyrene	U		0.107	1.00
1,2,4-Trichlorobenzene	U		0.0698	10.0
4-Chloro-3-methylphenol	U		0.131	10.0
2-Chlorophenol	U		0.133	10.0
2,4-Dichlorophenol	U		0.102	10.0
2,4-Dimethylphenol	U		0.0636	10.0
4,6-Dinitro-2-methylphenol	U		1.12	10.0
2,4-Dinitrophenol	U		5.93	10.0
2-Nitrophenol	U		0.117	10.0
4-Nitrophenol	U		0.143	10.0
Pentachlorophenol	U		0.313	10.0
Phenol	U		4.33	10.0
2,4,6-Trichlorophenol	U		0.100	10.0
(S) Nitrobenzene-d5	*74.5*			*10.0-127*
(S) 2-Fluorobiphenyl	*78.5*			*10.0-130*
(S) p-Terphenyl-d14	*91.3*			*10.0-128*
(S) Phenol-d5	*28.1*			*10.0-120*
(S) 2-Fluorophenol	*45.6*			*10.0-120*
(S) 2,4,6-Tribromophenol	*70.0*			*10.0-155*

Laboratory Control Sample (LCS)

(LCS) R3742161-1 12/17/21 00:37

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	50.0	38.7	77.4	41.0-120	
Acenaphthylene	50.0	41.6	83.2	43.0-120	
Anthracene	50.0	39.8	79.6	45.0-120	
Benzidine	100	51.8	51.8	10.0-120	
Benzo(a)anthracene	50.0	44.4	88.8	47.0-120	
Benzo(b)fluoranthene	50.0	40.7	81.4	46.0-120	
Benzo(k)fluoranthene	50.0	40.0	80.0	46.0-120	
Benzo(g,h,i)perylene	50.0	38.0	76.0	48.0-121	
Benzo(a)pyrene	50.0	39.7	79.4	47.0-120	
Bis(2-chlorethoxy)methane	50.0	36.2	72.4	33.0-120	
Bis(2-chloroethyl)ether	50.0	37.6	75.2	23.0-120	

Laboratory Control Sample (LCS)

(LCS) R3742161-1 12/17/21 00:37

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
2,2-Oxybis(1-Chloropropane)	50.0	36.2	72.4	28.0-120	
4-Bromophenyl-phenylether	50.0	39.4	78.8	45.0-120	
2-Chloronaphthalene	50.0	37.9	75.8	37.0-120	
4-Chlorophenyl-phenylether	50.0	40.1	80.2	44.0-120	
Chrysene	50.0	38.7	77.4	48.0-120	
Dibenz(a,h)anthracene	50.0	39.8	79.6	47.0-120	
1,2-Dichlorobenzene	50.0	34.7	69.4	20.0-120	
1,3-Dichlorobenzene	50.0	34.3	68.6	17.0-120	
1,4-Dichlorobenzene	50.0	33.8	67.6	18.0-120	
3,3-Dichlorobenzidine	100	84.5	84.5	44.0-120	
2,4-Dinitrotoluene	50.0	46.4	92.8	49.0-124	
2,6-Dinitrotoluene	50.0	42.7	85.4	46.0-120	
Fluoranthene	50.0	40.2	80.4	51.0-120	
Fluorene	50.0	40.2	80.4	47.0-120	
Hexachlorobenzene	50.0	38.1	76.2	44.0-120	
Hexachloro-1,3-butadiene	50.0	30.8	61.6	19.0-120	
Hexachlorocyclopentadiene	50.0	28.7	57.4	15.0-120	
Hexachloroethane	50.0	34.6	69.2	15.0-120	
Indeno(1,2,3-cd)pyrene	50.0	38.6	77.2	49.0-122	
Isophorone	50.0	37.9	75.8	36.0-120	
Naphthalene	50.0	32.9	65.8	27.0-120	
Nitrobenzene	50.0	35.4	70.8	27.0-120	
n-Nitrosodimethylamine	50.0	24.4	48.8	10.0-120	
n-Nitrosodiphenylamine	50.0	39.9	79.8	47.0-120	
n-Nitrosodi-n-propylamine	50.0	42.0	84.0	31.0-120	
Phenanthrene	50.0	39.0	78.0	46.0-120	
Benzylbutyl phthalate	50.0	47.6	95.2	43.0-121	
Bis(2-ethylhexyl)phthalate	50.0	43.4	86.8	43.0-122	
Di-n-butyl phthalate	50.0	46.9	93.8	49.0-121	
Diethyl phthalate	50.0	43.2	86.4	48.0-122	
Dimethyl phthalate	50.0	41.7	83.4	48.0-120	
Di-n-octyl phthalate	50.0	41.0	82.0	42.0-125	
Pyrene	50.0	42.5	85.0	47.0-120	
1,2,4-Trichlorobenzene	50.0	31.9	63.8	24.0-120	
4-Chloro-3-methylphenol	50.0	31.5	63.0	40.0-120	
2-Chlorophenol	50.0	30.6	61.2	25.0-120	
2,4-Dichlorophenol	50.0	32.0	64.0	36.0-120	
2,4-Dimethylphenol	50.0	30.8	61.6	33.0-120	
4,6-Dinitro-2-methylphenol	50.0	48.8	97.6	38.0-138	
2,4-Dinitrophenol	50.0	40.4	80.8	10.0-120	

Laboratory Control Sample (LCS)

(LCS) R3742161-1 12/17/21 00:37

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
2-Nitrophenol	50.0	35.5	71.0	31.0-120	
4-Nitrophenol	50.0	17.3	34.6	10.0-120	
Pentachlorophenol	50.0	38.6	77.2	23.0-120	
Phenol	50.0	14.4	28.8	10.0-120	
2,4,6-Trichlorophenol	50.0	39.9	79.8	42.0-120	
(S) Nitrobenzene-d5			*63.9*	*10.0-127*	
(S) 2-Fluorobiphenyl			*81.1*	*10.0-130*	
(S) p-Terphenyl-d14			*84.9*	*10.0-128*	
(S) Phenol-d5			*27.8*	*10.0-120*	
(S) 2-Fluorophenol			*40.2*	*10.0-120*	
(S) 2,4,6-Tribromophenol			*78.5*	*10.0-155*	

L1441292-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1441292-04 12/17/21 01:19 • (MS) R3742161-3 12/17/21 01:40 • (MSD) R3742161-4 12/17/21 02:01

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	50.0	U	39.1	39.0	78.2	78.0	1	28.0-120			0.256	25
Acenaphthylene	50.0	U	41.4	41.7	82.8	83.4	1	31.0-121			0.722	25
Anthracene	50.0	U	40.1	39.2	80.2	78.4	1	36.0-120			2.27	23
Benzo(a)anthracene	50.0	U	42.7	45.6	85.4	91.2	1	39.0-120			6.57	23
Benzo(b)fluoranthene	50.0	U	35.1	41.6	70.2	83.2	1	37.0-120			16.9	23
Benzo(k)fluoranthene	50.0	U	34.8	42.3	69.6	84.6	1	37.0-120			19.5	26
Benzo(g,h,i)perylene	50.0	U	29.7	39.6	59.4	79.2	1	37.0-123		J3	28.6	25
Benzo(a)pyrene	50.0	U	34.9	41.3	69.8	82.6	1	37.0-120			16.8	24
Bis(2-chlorethoxy)methane	50.0	U	36.1	36.8	72.2	73.6	1	17.0-120			1.92	31
Bis(2-chloroethyl)ether	50.0	U	36.8	36.1	73.6	72.2	1	14.0-120			1.92	33
2,2-Oxybis(1-Chloropropane)	50.0	U	36.5	37.3	73.0	74.6	1	18.0-120			2.17	34
4-Bromophenyl-phenylether	50.0	U	39.9	39.8	79.8	79.6	1	37.0-120			0.251	24
2-Chloronaphthalene	50.0	U	38.5	38.6	77.0	77.2	1	29.0-120			0.259	28
4-Chlorophenyl-phenylether	50.0	U	39.8	40.9	79.6	81.8	1	36.0-120			2.73	23
Chrysene	50.0	U	37.5	40.9	75.0	81.8	1	38.0-120			8.67	23
Dibenz(a,h)anthracene	50.0	U	28.3	38.9	56.6	77.8	1	36.0-121		J3	31.5	24
3,3-Dichlorobenzidine	100	U	87.8	76.2	87.8	76.2	1	10.0-134			14.1	30
2,4-Dinitrotoluene	50.0	U	44.3	46.7	88.6	93.4	1	39.0-125			5.27	25
2,6-Dinitrotoluene	50.0	U	43.2	44.3	86.4	88.6	1	36.0-120			2.51	27
Fluoranthene	50.0	U	40.8	41.4	81.6	82.8	1	41.0-121			1.46	22
Fluorene	50.0	U	40.1	41.1	80.2	82.2	1	37.0-120			2.46	24
Hexachlorobenzene	50.0	U	38.9	39.6	77.8	79.2	1	35.0-122			1.78	24

L1441292-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1441292-04 12/17/21 01:19 • (MS) R3742161-3 12/17/21 01:40 • (MSD) R3742161-4 12/17/21 02:01

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexachloro-1,3-butadiene	50.0	U	31.9	31.8	63.8	63.6	1	12.0-120			0.314	34
Hexachlorocyclopentadiene	50.0	U	30.7	31.5	61.4	63.0	1	10.0-120			2.57	33
Hexachloroethane	50.0	U	37.1	35.9	74.2	71.8	1	10.0-120			3.29	40
Indeno(1,2,3-cd)pyrene	50.0	U	29.3	40.6	58.6	81.2	1	38.0-125		J3	32.3	24
Isophorone	50.0	U	38.1	38.9	76.2	77.8	1	21.0-120			2.08	27
Naphthalene	50.0	U	33.7	33.3	67.4	66.6	1	10.0-120			1.19	31
Nitrobenzene	50.0	U	36.3	36.1	72.6	72.2	1	12.0-120			0.552	30
n-Nitrosodiphenylamine	50.0	U	41.3	38.5	82.6	77.0	1	37.0-120			7.02	24
n-Nitrosodi-n-propylamine	50.0	U	41.3	42.6	82.6	85.2	1	16.0-120			3.10	30
Phenanthrene	50.0	U	38.8	39.2	77.6	78.4	1	33.0-120			1.03	22
Benzylbutyl phthalate	50.0	U	47.5	50.0	95.0	100	1	34.0-126			5.13	24
Bis(2-ethylhexyl)phthalate	50.0	U	29.0	45.0	58.0	90.0	1	33.0-126		J3	43.2	25
Di-n-butyl phthalate	50.0	U	46.0	47.4	92.0	94.8	1	35.0-128			3.00	23
Diethyl phthalate	50.0	U	43.7	45.1	87.4	90.2	1	39.0-125			3.15	24
Dimethyl phthalate	50.0	U	41.8	43.0	83.6	86.0	1	37.0-120			2.83	24
Di-n-octyl phthalate	50.0	U	27.8	43.0	55.6	86.0	1	25.0-135		J3	42.9	26
Pyrene	50.0	U	43.5	44.2	87.0	88.4	1	39.0-120			1.60	22
4-Chloro-3-methylphenol	50.0	U	37.5	36.7	75.0	73.4	1	26.0-120			2.16	27
2-Chlorophenol	50.0	U	32.8	34.3	65.6	68.6	1	18.0-120			4.47	34
2,4-Dichlorophenol	50.0	U	34.2	35.3	68.4	70.6	1	19.0-120			3.17	27
2,4-Dimethylphenol	50.0	U	35.4	32.6	70.8	65.2	1	15.0-120			8.24	28
4,6-Dinitro-2-methylphenol	50.0	U	5.13	51.4	10.3	103	1	10.0-144		J3	164	39
2,4-Dinitrophenol	50.0	U	U	45.4	0.000	90.8	1	10.0-120	J6	J3	200	40
2-Nitrophenol	50.0	U	36.2	38.0	72.4	76.0	1	20.0-120			4.85	30
4-Nitrophenol	50.0	U	88.9	19.5	178	39.0	1	10.0-120	J5	J3	128	40
Pentachlorophenol	50.0	U	17.0	39.9	34.0	79.8	1	10.0-128		J3	80.5	37
2,4,6-Trichlorophenol	50.0	U	27.4	41.3	54.8	82.6	1	26.0-120		J3	40.5	31
Benzidine	100	U	79.3	62.7	79.3	62.7	1	10.0-120			23.4	37
1,2-Dichlorobenzene	50.0	U	36.2	35.8	72.4	71.6	1	18.0-120			1.11	40
1,3-Dichlorobenzene	50.0	U	35.9	35.2	71.8	70.4	1	15.0-120			1.97	40
1,4-Dichlorobenzene	50.0	U	35.6	35.0	71.2	70.0	1	17.0-120			1.70	40
n-Nitrosodimethylamine	50.0	U	26.0	26.9	52.0	53.8	1	10.0-120			3.40	40
1,2,4-Trichlorobenzene	50.0	U	33.5	33.6	67.0	67.2	1	15.0-120			0.298	31
Phenol	50.0	U	16.6	16.3	33.2	32.6	1	10.0-120			1.82	40
(S) Nitrobenzene-d5					*60.0*	*61.6*		*10.0-127*				
(S) 2-Fluorobiphenyl					*80.9*	*83.9*		*10.0-130*				
(S) p-Terphenyl-d14					*81.2*	*91.1*		*10.0-128*				
(S) Phenol-d5					*28.4*	*28.2*		*10.0-120*				
(S) 2-Fluorophenol					*40.1*	*43.9*		*10.0-120*				
(S) 2,4,6-Tribromophenol					*73.0*	*79.0*		*10.0-155*				

Method Blank (MB)

(MB) R3742102-3 12/17/21 11:04

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acenaphthene	U		0.0886	1.00
Acenaphthylene	U		0.0921	1.00
Anthracene	U		0.0804	1.00
Benzidine	U		3.74	10.0
Benzo(a)anthracene	U		0.199	1.00
Benzo(b)fluoranthene	U		0.130	1.00
Benzo(k)fluoranthene	U		0.120	1.00
Benzo(g,h,i)perylene	U		0.121	1.00
Benzo(a)pyrene	U		0.0381	1.00
Bis(2-chlorethoxy)methane	U		0.116	10.0
Bis(2-chloroethyl)ether	U		0.137	10.0
2,2-oxybis(1-chloropropane)	U		0.210	10.0
4-Bromophenyl-phenylether	U		0.0877	10.0
2-Chloronaphthalene	U		0.0648	1.00
4-Chlorophenyl-phenylether	U		0.0926	10.0
Chrysene	U		0.130	1.00
Dibenz(a,h)anthracene	U		0.0644	1.00
1,2-Dichlorobenzene	U		0.0713	10.0
1,3-Dichlorobenzene	U		0.132	10.0
1,4-Dichlorobenzene	U		0.0942	10.0
3,3-Dichlorobenzidine	U		0.212	10.0
2,4-Dinitrotoluene	U		0.0983	10.0
2,6-Dinitrotoluene	U		0.250	10.0
Fluoranthene	U		0.102	1.00
Fluorene	U		0.0844	1.00
Hexachlorobenzene	U		0.0755	1.00
Hexachloro-1,3-butadiene	U		0.0968	10.0
Hexachlorocyclopentadiene	U		0.0598	10.0
Hexachloroethane	U		0.127	10.0
Indeno(1,2,3-cd)pyrene	U		0.279	1.00
Isophorone	U		0.143	10.0
Naphthalene	U		0.159	1.00
Nitrobenzene	U		0.297	10.0
n-Nitrosodimethylamine	U		0.998	10.0
n-Nitrosodiphenylamine	U		2.37	10.0
n-Nitrosodi-n-propylamine	U		0.261	10.0
Phenanthrene	U		0.112	1.00
Benzylbutyl phthalate	U		0.765	3.00
Bis(2-ethylhexyl)phthalate	U		0.895	3.00
Di-n-butyl phthalate	U		0.453	3.00

Method Blank (MB)

(MB) R3742102-3 12/17/21 11:04

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Diethyl phthalate	U		0.287	3.00
Dimethyl phthalate	U		0.260	3.00
Di-n-octyl phthalate	U		0.932	3.00
Pyrene	U		0.107	1.00
1,2,4-Trichlorobenzene	U		0.0698	10.0
4-Chloro-3-methylphenol	U		0.131	10.0
2-Chlorophenol	U		0.133	10.0
2-Nitrophenol	U		0.117	10.0
4-Nitrophenol	U		0.143	10.0
Pentachlorophenol	U		0.313	10.0
Phenol	U		4.33	10.0
2,4,6-Trichlorophenol	U		0.100	10.0
2,4-Dichlorophenol	U		0.102	10.0
2,4-Dimethylphenol	U		0.0636	10.0
4,6-Dinitro-2-methylphenol	U		1.12	10.0
2,4-Dinitrophenol	U		5.93	10.0
(S) Nitrobenzene-d5	*58.1*			*10.0-127*
(S) 2-Fluorobiphenyl	*58.5*			*10.0-130*
(S) p-Terphenyl-d14	*72.3*			*10.0-128*
(S) Phenol-d5	*23.4*			*10.0-120*
(S) 2-Fluorophenol	*39.2*			*10.0-120*
(S) 2,4,6-Tribromophenol	*44.9*			*10.0-155*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3742102-1 12/17/21 10:21 • (LCSD) R3742102-2 12/17/21 10:42

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acenaphthene	50.0	39.0	31.3	78.0	62.6	41.0-120			21.9	22
Acenaphthylene	50.0	42.3	33.0	84.6	66.0	43.0-120		J3	24.7	22
Anthracene	50.0	43.3	36.8	86.6	73.6	45.0-120			16.2	20
Benzidine	100	47.6	22.5	47.6	22.5	10.0-120		J3	71.6	36
Benzo(a)anthracene	50.0	43.0	37.7	86.0	75.4	47.0-120			13.1	20
Benzo(b)fluoranthene	50.0	44.8	38.3	89.6	76.6	46.0-120			15.6	20
Benzo(k)fluoranthene	50.0	42.1	37.3	84.2	74.6	46.0-120			12.1	21
Benzo(g,h,i)perylene	50.0	37.5	32.4	75.0	64.8	48.0-121			14.6	20
Benzo(a)pyrene	50.0	37.7	32.6	75.4	65.2	47.0-120			14.5	20
Bis(2-chlorethoxy)methane	50.0	34.4	26.1	68.8	52.2	33.0-120		J3	27.4	24
Bis(2-chloroethyl)ether	50.0	33.6	25.0	67.2	50.0	23.0-120			29.4	33

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3742102-1 12/17/21 10:21 • (LCSD) R3742102-2 12/17/21 10:42

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2,2-oxybis(1-chloropropane)	50.0	36.9	26.6	73.8	53.2	28.0-120		J3	32.4	31
4-Bromophenyl-phenylether	50.0	38.6	32.3	77.2	64.6	45.0-120			17.8	20
2-Chloronaphthalene	50.0	39.0	30.7	78.0	61.4	37.0-120			23.8	25
4-Chlorophenyl-phenylether	50.0	35.3	29.7	70.6	59.4	44.0-120			17.2	20
Chrysene	50.0	41.9	37.2	83.8	74.4	48.0-120			11.9	20
Dibenz(a,h)anthracene	50.0	37.5	31.3	75.0	62.6	47.0-120			18.0	20
3,3-Dichlorobenzidine	100	78.2	70.8	78.2	70.8	44.0-120			9.93	20
2,4-Dinitrotoluene	50.0	40.5	35.5	81.0	71.0	49.0-124			13.2	20
2,6-Dinitrotoluene	50.0	39.8	33.3	79.6	66.6	46.0-120			17.8	21
Fluoranthene	50.0	40.5	35.9	81.0	71.8	51.0-120			12.0	20
Fluorene	50.0	38.7	32.0	77.4	64.0	47.0-120			19.0	20
Hexachlorobenzene	50.0	33.4	28.1	66.8	56.2	44.0-120			17.2	20
Hexachloro-1,3-butadiene	50.0	27.1	20.3	54.2	40.6	19.0-120			28.7	32
Hexachlorocyclopentadiene	50.0	26.2	19.4	52.4	38.8	15.0-120			29.8	31
Hexachloroethane	50.0	31.0	24.0	62.0	48.0	15.0-120			25.5	37
Indeno(1,2,3-cd)pyrene	50.0	38.3	33.5	76.6	67.0	49.0-122			13.4	20
Isophorone	50.0	37.4	28.8	74.8	57.6	36.0-120		J3	26.0	23
Naphthalene	50.0	31.4	24.6	62.8	49.2	27.0-120			24.3	27
Nitrobenzene	50.0	35.8	27.3	71.6	54.6	27.0-120			26.9	29
n-Nitrosodimethylamine	50.0	42.1	31.8	84.2	63.6	10.0-120			27.9	40
n-Nitrosodiphenylamine	50.0	40.9	33.8	81.8	67.6	47.0-120			19.0	20
n-Nitrosodi-n-propylamine	50.0	37.9	29.6	75.8	59.2	31.0-120			24.6	28
Phenanthrene	50.0	42.5	36.0	85.0	72.0	46.0-120			16.6	20
Benzylbutyl phthalate	50.0	47.0	42.0	94.0	84.0	43.0-121			11.2	20
Bis(2-ethylhexyl)phthalate	50.0	42.9	37.8	85.8	75.6	43.0-122			12.6	20
Di-n-butyl phthalate	50.0	46.6	41.3	93.2	82.6	49.0-121			12.1	20
Diethyl phthalate	50.0	41.6	36.6	83.2	73.2	48.0-122			12.8	20
Dimethyl phthalate	50.0	39.5	33.8	79.0	67.6	48.0-120			15.6	20
Di-n-octyl phthalate	50.0	44.9	40.1	89.8	80.2	42.0-125			11.3	20
Pyrene	50.0	47.1	41.6	94.2	83.2	47.0-120			12.4	20
1,2,4-Trichlorobenzene	50.0	29.3	23.1	58.6	46.2	24.0-120			23.7	29
4-Chloro-3-methylphenol	50.0	37.7	30.5	75.4	61.0	40.0-120		J3	21.1	21
2-Chlorophenol	50.0	33.8	24.6	67.6	49.2	25.0-120			31.5	35
2,4-Dichlorophenol	50.0	35.4	26.6	70.8	53.2	36.0-120		J3	28.4	26
2,4-Dimethylphenol	50.0	36.1	28.2	72.2	56.4	33.0-120			24.6	26
4,6-Dinitro-2-methylphenol	50.0	44.6	39.4	89.2	78.8	38.0-138			12.4	25
2,4-Dinitrophenol	50.0	40.4	34.9	80.8	69.8	10.0-120			14.6	39
2-Nitrophenol	50.0	36.7	27.9	73.4	55.8	31.0-120			27.2	29
4-Nitrophenol	50.0	16.7	14.5	33.4	29.0	10.0-120			14.1	33
Pentachlorophenol	50.0	35.4	29.9	70.8	59.8	23.0-120			16.8	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3742102-1 12/17/21 10:21 • (LCSD) R3742102-2 12/17/21 10:42

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Phenol	50.0	16.2	12.2	32.4	24.4	10.0-120			28.2	36
2,4,6-Trichlorophenol	50.0	39.2	31.2	78.4	62.4	42.0-120			22.7	23
1,2-Dichlorobenzene	50.0	33.2	25.0	66.4	50.0	20.0-120			28.2	34
1,3-Dichlorobenzene	50.0	33.4	25.0	66.8	50.0	17.0-120			28.8	35
1,4-Dichlorobenzene	50.0	32.7	24.7	65.4	49.4	18.0-120			27.9	34
(S) Nitrobenzene-d5				*66.8*	*50.3*	*10.0-127*				
(S) 2-Fluorobiphenyl				*77.3*	*60.0*	*10.0-130*				
(S) p-Terphenyl-d14				*87.1*	*77.7*	*10.0-128*				
(S) Phenol-d5				*32.5*	*25.4*	*10.0-120*				
(S) 2-Fluorophenol				*52.0*	*38.9*	*10.0-120*				
(S) 2,4,6-Tribromophenol				*67.5*	*54.5*	*10.0-155*				

Method Blank (MB)

(MB) R3741692-3 12/16/21 12:35

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Anthracene	U		0.0190	0.0500
Acenaphthene	U		0.0190	0.0500
Acenaphthylene	U		0.0171	0.0500
Benzo(a)anthracene	U		0.0203	0.0500
Benzo(a)pyrene	U		0.0184	0.0500
Benzo(b)fluoranthene	U		0.0168	0.0500
Benzo(g,h,i)perylene	U		0.0184	0.0500
Benzo(k)fluoranthene	U		0.0202	0.0500
Chrysene	U		0.0179	0.0500
Dibenz(a,h)anthracene	U		0.0160	0.0500
Fluoranthene	U		0.0270	0.100
Fluorene	U		0.0169	0.0500
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500
Naphthalene	U		0.0917	0.250
Phenanthrene	U		0.0180	0.0500
Pyrene	U		0.0169	0.0500
Tetraethyllead	U		0.0338	0.0500
1-Methylnaphthalene	U		0.0687	0.250
2-Methylnaphthalene	U		0.0674	0.250
2-Chloronaphthalene	U		0.0682	0.250
(S) Nitrobenzene-d5	*101*			*31.0-160*
(S) 2-Fluorobiphenyl	*97.0*			*48.0-148*
(S) p-Terphenyl-d14	*95.0*			*37.0-146*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3741692-1 12/16/21 12:01 • (LCSD) R3741692-2 12/16/21 12:18

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Anthracene	2.00	1.85	2.01	92.5	100	67.0-150			8.29	20
Acenaphthene	2.00	1.92	2.06	96.0	103	65.0-138			7.04	20
Acenaphthylene	2.00	1.97	2.09	98.5	104	66.0-140			5.91	20
Benzo(a)anthracene	2.00	1.79	1.94	89.5	97.0	61.0-140			8.04	20
Benzo(a)pyrene	2.00	1.93	2.11	96.5	105	60.0-143			8.91	20
Benzo(b)fluoranthene	2.00	1.75	1.95	87.5	97.5	58.0-141			10.8	20
Benzo(g,h,i)perylene	2.00	1.63	1.86	81.5	93.0	52.0-153			13.2	20
Benzo(k)fluoranthene	2.00	1.78	1.94	89.0	97.0	58.0-148			8.60	20
Chrysene	2.00	1.85	2.02	92.5	101	64.0-144			8.79	20
Dibenz(a,h)anthracene	2.00	1.55	1.78	77.5	89.0	52.0-155			13.8	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3741692-1 12/16/21 12:01 • (LCSD) R3741692-2 12/16/21 12:18

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Fluoranthene	2.00	1.85	1.98	92.5	99.0	69.0-153			6.79	20
Fluorene	2.00	1.93	2.06	96.5	103	64.0-136			6.52	20
Indeno(1,2,3-cd)pyrene	2.00	1.71	1.93	85.5	96.5	54.0-153			12.1	20
Naphthalene	2.00	1.91	2.07	95.5	104	61.0-137			8.04	20
Phenanthrene	2.00	1.82	1.96	91.0	98.0	62.0-137			7.41	20
Pyrene	2.00	1.87	2.02	93.5	101	60.0-142			7.71	20
Tetraethyllead	2.00	1.91	2.17	95.5	108	50.0-150			12.7	20
1-Methylnaphthalene	2.00	1.90	2.06	95.0	103	66.0-142			8.08	20
2-Methylnaphthalene	2.00	1.96	2.12	98.0	106	62.0-136			7.84	20
2-Chloronaphthalene	2.00	1.92	2.06	96.0	103	64.0-140			7.04	20
(S) Nitrobenzene-d5				*102*	*107*	*31.0-160*				
(S) 2-Fluorobiphenyl				*96.5*	*103*	*48.0-148*				
(S) p-Terphenyl-d14				*91.0*	*98.0*	*37.0-146*				

Method Blank (MB)

(MB) R3742052-3 12/16/21 20:45

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Anthracene	U		0.0190	0.0500
Acenaphthene	U		0.0190	0.0500
Acenaphthylene	U		0.0171	0.0500
Benzo(a)anthracene	U		0.0203	0.0500
Benzo(a)pyrene	U		0.0184	0.0500
Benzo(b)fluoranthene	U		0.0168	0.0500
Benzo(g,h,i)perylene	U		0.0184	0.0500
Benzo(k)fluoranthene	U		0.0202	0.0500
Chrysene	U		0.0179	0.0500
Dibenz(a,h)anthracene	U		0.0160	0.0500
Fluoranthene	U		0.0270	0.100
Fluorene	U		0.0169	0.0500
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500
Naphthalene	U		0.0917	0.250
Phenanthrene	U		0.0180	0.0500
Pyrene	U		0.0169	0.0500
Tetraethyllead	U		0.0338	0.0500
1-Methylnaphthalene	U		0.0687	0.250
2-Methylnaphthalene	U		0.0674	0.250
2-Chloronaphthalene	U		0.0682	0.250
(S) Nitrobenzene-d5	*98.0*			*31.0-160*
(S) 2-Fluorobiphenyl	*94.5*			*48.0-148*
(S) p-Terphenyl-d14	*98.5*			*37.0-146*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3742052-1 12/16/21 20:06 • (LCSD) R3742052-2 12/16/21 20:25

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Anthracene	2.00	2.06	2.06	103	103	67.0-150			0.000	20
Acenaphthene	2.00	2.09	2.09	105	105	65.0-138			0.000	20
Acenaphthylene	2.00	2.15	2.17	108	108	66.0-140			0.926	20
Benzo(a)anthracene	2.00	2.12	2.11	106	105	61.0-140			0.473	20
Benzo(a)pyrene	2.00	2.24	2.20	112	110	60.0-143			1.80	20
Benzo(b)fluoranthene	2.00	2.23	2.22	111	111	58.0-141			0.449	20
Benzo(g,h,i)perylene	2.00	1.66	1.74	83.0	87.0	52.0-153			4.71	20
Benzo(k)fluoranthene	2.00	2.20	2.15	110	108	58.0-148			2.30	20
Chrysene	2.00	2.04	2.08	102	104	64.0-144			1.94	20
Dibenz(a,h)anthracene	2.00	1.68	1.71	84.0	85.5	52.0-155			1.77	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3742052-1 12/16/21 20:06 • (LCSD) R3742052-2 12/16/21 20:25

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Fluoranthene	2.00	1.94	2.00	97.0	100	69.0-153			3.05	20
Fluorene	2.00	2.12	2.11	106	105	64.0-136			0.473	20
Indeno(1,2,3-cd)pyrene	2.00	1.93	2.00	96.5	100	54.0-153			3.56	20
Naphthalene	2.00	1.96	2.00	98.0	100	61.0-137			2.02	20
Phenanthrene	2.00	1.92	1.99	96.0	99.5	62.0-137			3.58	20
Pyrene	2.00	2.17	2.18	108	109	60.0-142			0.460	20
Tetraethyllead	2.00	1.63	1.66	81.5	83.0	50.0-150			1.82	20
1-Methylnaphthalene	2.00	2.01	2.04	100	102	66.0-142			1.48	20
2-Methylnaphthalene	2.00	2.04	2.07	102	103	62.0-136			1.46	20
2-Chloronaphthalene	2.00	1.99	2.03	99.5	102	64.0-140			1.99	20
(S) Nitrobenzene-d5				*106*	*106*	*31.0-160*				
(S) 2-Fluorobiphenyl				*98.5*	*99.5*	*48.0-148*				
(S) p-Terphenyl-d14				*100*	*103*	*37.0-146*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
V	The sample concentration is too high to evaluate accurate spike recoveries.
V3	The internal standard exhibited poor recovery due to sample matrix interference. The analytical results will be biased high. BDL results will be unaffected.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
ATC Group Services - Novi, MI

46555 Humboldt Drive Suite 100
Novi, MI 48377

Billing Information:
Accounts Payable
46555 Humboldt Dr., Ste.100
Novi, MI 48377

Pres Chk

Report to:
Ryann Scott

Email To: **Ryann.Scott@oneatlas.com**

Project Description:
Detroit Axle 1600 W. 8 Mile Road

City/State Collected: Ferndale, MI

Please Circle: PT MT CT ET

Phone: **248-669-5140**

Client Project #

Lab Project #
ATCNMI-DETROIT AXLE

Collected by (print):
Nick Pricks/Maddi Haas

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately
Packed on Ice N ___ Y ___

Rush? (Lab MUST be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Chain of Custody Page 1 of 4

Pace Analytical®

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SDG # 1492051

B021

Acctnum: **ATCNMI**
Template: **T199196**
Prelogin: **P886691**
PM: **341 - John Hawkins**
PB: 11/11/21 mrb
Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	8270 100ml Amb NoPres	CN 250mlHDPEAmb-NaOH	MEETAC 40mlClr-HCl	MEOH ETOH - Pace Ind 40mlAmb-HCl	Metals MI Part 201 250mlHDPE-HNO3	PAHSIMLVITEL 40mlAmb-NoPres-WT	V8260LL14D 40mlAmb-HCl	V8260LL14D 40mlAmb-HCl-Blk	V8260OXY 40mlAmb-HCl	V8260OXY 40mlAmb-HCl-Blk	Remarks	Sample # (lab only)
MW-106	G	GW		12/10/21	1429	16	X	X	X	X	X	X	X		X			-01
MW-107		GW			1254	16	X	X	X	X	X	X	X		X			-02
MW-108		GW			1129	16	X	X	X	X	X	X	X		X			-03
MW-109		GW			1032	16	X	X	X	X	X	X	X		X			-04
MW-110		GW			1045	16	X	X	X	X	X	X	X		X			-05
MW-111		GW			1200	16	X	X	X	X	X	X	X		X			-06
MW-112		GW			1316	16	X	X	X	X	X	X	X		X			-07
MW-113		GW			1520 ~~16~~ 13		X	X	X	X	X	X	X		X			-08
MW-119		GW			1430 ~~16~~ 14		X	X	X	X	X	X	X		X			-09
MW-121		GW			1619	16	X	X	X	X	X	X	X		X			-10

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: 12/14

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 5318/9959 6310/6331/6304

Sample Receipt Checklist

COC Seal Present/Intact:	__NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:		Y N

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR	If preservation required by Login: Date/Time
	12/13/21	1615		3	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 0KA7C 4,8+0=4.8 Bottles Received: 21	
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 12/14/21 Time: 900	Hold: Condition: NCF / OK

Company Name/Address:
ATC Group Services - Novi, MI

46555 Humboldt Drive Suite 100
Novi, MI 48377

Billing Information:
Accounts Payable
46555 Humboldt Dr., Ste.100
Novi, MI 48377

Pres Chk

Report to: **Ryann Scott**

Email To: **Ryann.Scott@oneatlas.com**

Project Description: **Detroit Axle 1600 W. 8 Mile Road**

City/State Collected: **Ferndale, MI**

Please Circle: PT MT CT (ET)

Phone: **248-669-5140**

Client Project #

Lab Project # **ATCNMI-DETROIT AXLE**

Collected by (print): **Nick Priddy / Maddi Haas**

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Chain of Custody Page 2 of 4

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SDG # 1942051

Table #

Acctnum: **ATCNMI**

Template: **T199196**

Prelogin: **P886691**

PM: **341 - John Hawkins**

PB: 11/11/21 mw

Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	n-Butanol- Pace Indy 40mlAmb-HCl	Remarks	Sample # (lab only)
MW-106	G	GW		12/10/21	1429	16	X		-01
MW-107		GW			1254	16	X		-02
MW-108		GW			1129	16	X		-03
MW-109		GW			1032	16	X		-04
MW-110		GW			1045	16	X		-05
MW-111		GW			1200	16	X		-06
MW-112		GW			1310	16	X		-07
MW-113		GW			1520	~~16~~ 13	X		-08
MW-119		GW			1430	~~16~~ 14	X		-09
MW-121		GW			1619	16	X		-10

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

12/14

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR
	12/13/21	1615		3
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: DRATC 4.8+0=4.8 Bottles Received: 219
				If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 12/14/21 Time: 900
				Hold: Condition: NCF / OK

Company Name/Address:
ATC Group Services - Novi, MI

46555 Humboldt Drive Suite 100
Novi, MI 48377

Billing Information:
Accounts Payable
46555 Humboldt Dr., Ste.100
Novi, MI 48377

Pres Chk

Report to:
Ryann Scott

Email To: **Ryann.Scott@oneatlas.com**

Project Description:
Detroit Axle 1600 W. 8 Mile Road

City/State Collected: Ferndale, MI

Please Circle: PT MT CT ET

Phone: **248-669-5140**

Client Project #

Lab Project #
ATCNMI-DETROIT AXLE

Collected by (print):
Nick Procky/Maddi Haas

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately
Packed on Ice N ____ Y ____

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	8270 100ml Amb NoPres	CN 250mlHDPEAmb-NaOH	MEETAC 40mlClr-HCl	MEOH ETOH - Pace Ind 40mlAmb-HCl	Metals MI Part 201 250mlHDPE-HNO3	PAHSIMLVITEL 40mlAmb-NoPres-WT	V8260LL14D 40mlAmb-HCl	V8260LL14D 40mlAmb-HCl-Blk	V8260OXY 40mlAmb-HCl	V8260OXY 40mlAmb-HCl-Blk	Remarks	Sample # (lab only)
DUP-1	Grab	GW		12/10/21	0000	16	X	X	X	X	X	X	X		X			-11
DUP-2		GW			0000	16	X	X	X	X	X	X	X		X			-12
Trip Blank		GW			1800	16	X	X	X	X	X	X	X		X			-13
Field Blank		GW			0915	16	X	X	X	X	X	X	X		X			-14
		GW				16	X	X	X	X	X	X	X		X			
		GW				16	X	X	X	X	X	X	X		X			
MS		GW				16	X	X	X	X	X	X	X		X			
MSD		GW				16	X	X	X	X	X	X	X		X			
TRIP BLANK		GW				3Z								X		X		-15
						12/14												

Chain of Custody Page 3 of 4

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SDG # 144205

Table #

Acctnum: **ATCNMI**

Template: **T199196**

Prelogin: **P886691**

PM: **341 - John Hawkins**

PB: 11/11/21 MB

Shipped Via: **FedEX Ground**

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes No HCL MeoH TBR	If preservation required by Login: Date/Time
	12/13/21	1615		3	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 4.1 °C Bottles Received: 4.8 to 4.8 219	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 12/14/21 Time: 900	Hold: Condition: NCF / OK

Company Name/Address:
ATC Group Services - Novi, MI
46555 Humboldt Drive Suite 100
Novi, MI 48377

Billing Information:
Accounts Payable
46555 Humboldt Dr., Ste.100
Novi, MI 48377

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 4 of 4

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Report to: Ryann Scott

Email To: Ryann.Scott@oneatlas.com

Project Description: Detroit Axle 1600 W. 8 Mile Road

City/State Collected: Ferndale, MI

Please Circle: PT MT CT (ET)

Phone: 248-669-5140

Client Project #

Lab Project # ATCNMI-DETROIT AXLE

Collected by (print): Nick Pirely/Maddi Han

Site/Facility ID #

P.O. #

Collected by (signature): [signature]

Immediately Packed on Ice N ___ Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

SDG # 1442051

Table #

Acctnum: ATCNMI
Template: T199196
Prelogin: P886691
PM: 341 - John Hawkins
PB: 11/11/21 MW
Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	n-Butanol- Pace Indy 40mlAmb-HCl									Remarks	Sample # (lab only)
DUP-1	G	GW		12/10/21	0000	16	X										-11
DUP-2	↓	GW		↓	0000	16	X										-12
Trip Blank	↓	GW		↓	1800	16	X										-13
Field Blank	↓	GW		↓	0915	16	X										-14
		GW				16	X										
		GW				16	X										
MS		GW				16	X										
MSD		GW				16	X										
TRIP BLANK		GW				23											-15
						12/14											

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other________

Remarks:

pH ______ Temp ______

Flow ______ Other ______

Samples returned via:
__ UPS __ FedEx __ Courier ________

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: __Y ✓N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: ✓Y __N
Preservation Correct/Checked: ✓Y __N
RAD Screen <0.5 mR/hr: ✓Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: (Yes) / No 3 (HCL) / MeoH TBR	
[signature]	12/13/21	1615			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: pre A1 °C 4.8+0=4.8	Bottles Received: 219
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) [signature]	Date: 12/14/21	Time: 900

If preservation required by Login: Date/Time

Hold:

Condition: (NCF) / OK

12/14-NCF-L1442051-ATCNMI PM

R5

Time estimate: oh **Time spent:** oh

Members


Paul Minnich (responsible)

- [ ] Parameter(s) past holding time
- [ ] Temperature not in range
- [ ] Improper container type
- [ ] pH not in range
- [ ] Insufficient sample volume
- [ ] Sample is biphasic
- [ ] Vials received with headspace
- [x] Broken container
- [ ] Sufficient sample remains
- [ ] If broken container: Insufficient packing material around container
- [ ] If broken container: Insufficient packing material inside cooler
- [ ] If broken container: Improper handling by carrier:_____
- [ ] If broken container: Sample was frozen
- [ ] If broken container: Container lid not intact
- [ ] Client informed by Call
- [ ] Client informed by Email
- [ ] Client informed by Voicemail
- [ ] Date/Time:_____
- [ ] PM initials:_____
- [ ] Client Contact:_____

Comments

Paul Minnich *14 December 2021 8:02 PM*

Lost three vials from 113 and two vials from 119 due to freezing.

ANALYTICAL REPORT

March 07, 2022

Revised Report

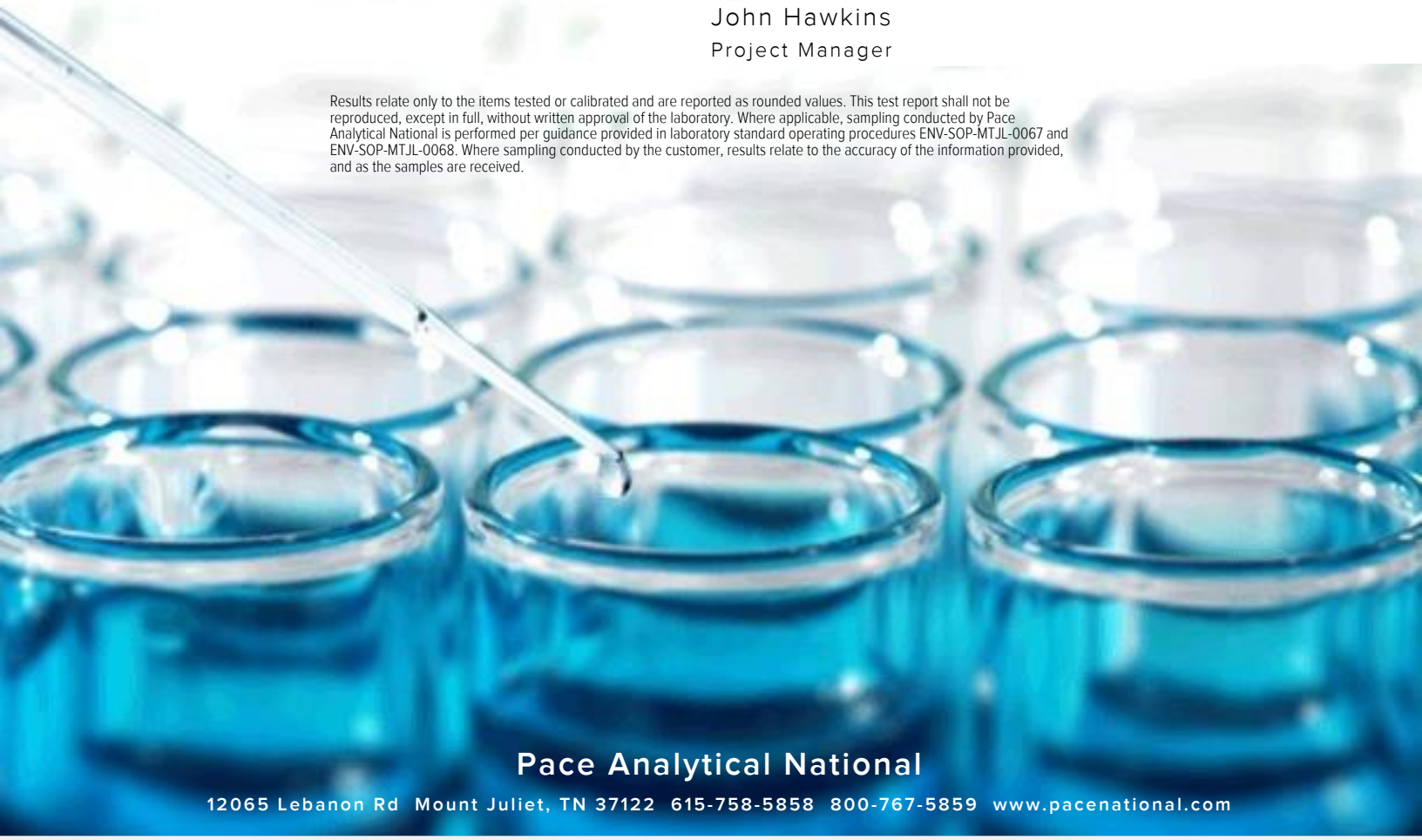
ATC Group Services - Novi, MI

Sample Delivery Group:	L1454394
Samples Received:	01/25/2022
Project Number:	
Description:	Detroit Axle 1600 W. 8 Mile Road

Report To: Ryann Scott
46555 Humboldt Drive Suite 100
Novi, MI 48377

Entire Report Reviewed By:

John Hawkins
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

MW-104 L1454394-01 GW

Collected by	Collected date/time	Received date/time
	01/20/22 11:18	01/25/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2016	WG1809738	1	01/30/22 23:43	02/02/22 12:57	KEG	Mt. Juliet, TN
Mercury by Method 7470A	WG1808899	1	01/27/22 09:42	01/28/22 10:44	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1810663	1	02/01/22 02:50	02/01/22 22:26	JDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1810062	1	01/30/22 18:09	02/03/22 22:59	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1810062	1	01/30/22 18:09	02/04/22 13:53	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015M	WG1808278	1	01/26/22 12:47	01/26/22 12:47	DBB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1807985	1	01/26/22 00:50	01/26/22 00:50	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1810399	1	01/31/22 23:33	01/31/22 23:33	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1808148	1	01/27/22 04:03	01/27/22 12:34	JNJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1807883	1	01/26/22 13:03	01/27/22 02:53	AGW	Mt. Juliet, TN

MW-120 L1454394-02 GW

Collected by	Collected date/time	Received date/time
	01/20/22 13:36	01/25/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2016	WG1808560	1	01/27/22 11:37	02/01/22 20:59	CAT	Mt. Juliet, TN
Mercury by Method 7470A	WG1808899	1	01/27/22 09:42	01/28/22 10:46	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1810663	1	02/01/22 02:50	02/01/22 22:29	JDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1810062	1	01/30/22 18:09	02/03/22 23:02	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1810062	1	01/30/22 18:09	02/04/22 13:56	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015M	WG1808278	1	01/26/22 12:53	01/26/22 12:53	DBB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1807985	1	01/26/22 01:12	01/26/22 01:12	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1809937	1	01/29/22 17:57	01/29/22 17:57	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1808148	1	01/27/22 04:03	01/27/22 12:55	JNJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1807883	1	01/26/22 13:03	01/27/22 03:13	AGW	Mt. Juliet, TN

DUP-1 L1454394-03 GW

Collected by	Collected date/time	Received date/time
	01/20/22 00:00	01/25/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2016	WG1808560	1	01/27/22 11:37	02/01/22 21:02	CAT	Mt. Juliet, TN
Mercury by Method 7470A	WG1808899	1	01/27/22 09:42	01/28/22 10:48	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1810663	1	02/01/22 02:50	02/01/22 22:31	JDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1810062	1	01/30/22 18:09	02/03/22 23:05	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1810062	1	01/30/22 18:09	02/04/22 14:11	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015M	WG1808278	1	01/26/22 12:58	01/26/22 12:58	DBB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1807985	1	01/26/22 01:33	01/26/22 01:33	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1809937	1	01/29/22 18:17	01/29/22 18:17	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1808148	1	01/27/22 04:03	01/27/22 13:16	JNJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1807883	1	01/26/22 13:03	01/27/22 03:33	AGW	Mt. Juliet, TN

FIELD BLANK L1454394-04 GW

Collected by	Collected date/time	Received date/time
	01/20/22 10:00	01/25/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2016	WG1808560	1	01/27/22 11:37	02/01/22 21:03	CAT	Mt. Juliet, TN
Mercury by Method 7470A	WG1808899	1	01/27/22 09:42	01/28/22 10:50	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1810663	1	02/01/22 02:50	02/01/22 22:34	JDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1810062	1	01/30/22 18:09	02/03/22 23:08	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1810062	1	01/30/22 18:09	02/04/22 14:14	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015M	WG1808278	1	01/26/22 13:04	01/26/22 13:04	DBB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1807985	1	01/25/22 23:25	01/25/22 23:25	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1808136	1	01/26/22 14:37	01/26/22 14:37	ADM	Mt. Juliet, TN

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

FIELD BLANK L1454394-04 GW

Collected by	Collected date/time	Received date/time
	01/20/22 10:00	01/25/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1808148	1	01/27/22 04:03	01/27/22 13:37	JNJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG1807883	1	01/26/22 13:03	01/27/22 03:52	AGW	Mt. Juliet, TN

TRIP BLANK L1454394-05 GW

Collected by	Collected date/time	Received date/time
	01/20/22 00:00	01/25/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1808136	1	01/26/22 14:56	01/26/22 14:56	ADM	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

John Hawkins
Project Manager

Report Revision History

Level II Report - Version 1: 02/08/22 15:15

Project Narrative

Recapture Boron

Sample Delivery Group (SDG) Narrative

An aliquot for analysis was taken from the original container received due to volume requirements of the laboratory's procedure. Rinsing of the original sample container for inclusion in the sample extraction was not performed.

Lab Sample ID	Project Sample ID	Method
L1454394-01	MW-104	8270C

Wet Chemistry by Method 4500CN E-2016

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Cyanide	U		1.80	5.00	1	02/02/2022 12:57	WG1809738

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury	U		0.100	0.200	1	01/28/2022 10:44	WG1808899

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Arsenic	U		4.40	10.0	1	02/01/2022 22:26	WG1810663
Barium	84.5		0.736	5.00	1	02/01/2022 22:26	WG1810663
Boron	106	J	20.0	200	1	02/01/2022 22:26	WG1810663
Calcium	73000		79.3	1000	1	02/01/2022 22:26	WG1810663
Chromium	U		1.40	10.0	1	02/01/2022 22:26	WG1810663
Cobalt	1.13	J	0.840	10.0	1	02/01/2022 22:26	WG1810663
Iron	22.2	J	18.0	100	1	02/01/2022 22:26	WG1810663
Magnesium	11500		85.3	1000	1	02/01/2022 22:26	WG1810663
Manganese	47.4		0.934	10.0	1	02/01/2022 22:26	WG1810663
Molybdenum	14.0		1.16	5.00	1	02/01/2022 22:26	WG1810663
Nickel	U		1.61	10.0	1	02/01/2022 22:26	WG1810663
Potassium	7240		261	2000	1	02/01/2022 22:26	WG1810663
Sodium	216000		504	3000	1	02/01/2022 22:26	WG1810663
Strontium	248		0.640	10.0	1	02/01/2022 22:26	WG1810663
Zinc	U		6.52	50.0	1	02/01/2022 22:26	WG1810663

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Aluminum	U		18.5	100	1	02/03/2022 22:59	WG1810062
Antimony	U		1.03	4.00	1	02/03/2022 22:59	WG1810062
Beryllium	U		0.190	2.00	1	02/03/2022 22:59	WG1810062
Cadmium	U		0.150	1.00	1	02/03/2022 22:59	WG1810062
Lead	U		0.849	2.00	1	02/03/2022 22:59	WG1810062
Selenium	0.686	J	0.300	2.00	1	02/04/2022 13:53	WG1810062
Silver	U		0.0700	2.00	1	02/03/2022 22:59	WG1810062
Thallium	U		0.121	2.00	1	02/03/2022 22:59	WG1810062
Titanium	U		2.18	20.0	1	02/04/2022 13:53	WG1810062
Vanadium	1.09	J	0.664	5.00	1	02/03/2022 22:59	WG1810062

Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methanol	104000		4950	10000	1	01/26/2022 12:47	WG1808278
Ethanol	U		4760	10000	1	01/26/2022 12:47	WG1808278

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	01/26/2022 00:50	WG1807985
Benzene	U		0.0941	1.00	1	01/26/2022 00:50	WG1807985
Bromodichloromethane	U		0.136	1.00	1	01/26/2022 00:50	WG1807985
Bromoform	U		0.129	1.00	1	01/26/2022 00:50	WG1807985

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Bromomethane	U	J3	0.605	5.00	1	01/26/2022 00:50	WG1807985
Carbon disulfide	U		0.0962	1.00	1	01/26/2022 00:50	WG1807985
Carbon tetrachloride	U		0.128	1.00	1	01/26/2022 00:50	WG1807985
Chlorobenzene	U		0.116	1.00	1	01/26/2022 00:50	WG1807985
Chloroethane	U		0.192	5.00	1	01/26/2022 00:50	WG1807985
Chloroform	U		0.111	5.00	1	01/26/2022 00:50	WG1807985
Cyclohexane	U		0.188	1.00	1	01/26/2022 00:50	WG1807985
1,2-Dichlorobenzene	U	J3	0.107	1.00	1	01/26/2022 00:50	WG1807985
1,3-Dichlorobenzene	U		0.110	1.00	1	01/26/2022 00:50	WG1807985
1,4-Dichlorobenzene	U		0.120	1.00	1	01/26/2022 00:50	WG1807985
1,1-Dichloroethane	U		0.100	1.00	1	01/26/2022 00:50	WG1807985
1,2-Dichloroethane	U		0.0819	1.00	1	01/26/2022 00:50	WG1807985
1,1-Dichloroethene	U		0.188	1.00	1	01/26/2022 00:50	WG1807985
cis-1,2-Dichloroethene	U		0.126	1.00	1	01/26/2022 00:50	WG1807985
trans-1,2-Dichloroethene	U		0.149	1.00	1	01/26/2022 00:50	WG1807985
1,2-Dichloropropane	U		0.149	1.00	1	01/26/2022 00:50	WG1807985
1,3-Dichloropropane	U		0.110	1.00	1	01/26/2022 00:50	WG1807985
cis-1,3-Dichloropropene	U		0.111	1.00	1	01/26/2022 00:50	WG1807985
trans-1,3-Dichloropropene	U	J3 J4	0.118	1.00	1	01/26/2022 00:50	WG1807985
Ethylbenzene	U		0.137	1.00	1	01/26/2022 00:50	WG1807985
Hexachloro-1,3-butadiene	U		0.337	1.00	1	01/26/2022 00:50	WG1807985
n-Hexane	U		0.749	10.0	1	01/26/2022 00:50	WG1807985
Isopropylbenzene	U		0.105	1.00	1	01/26/2022 00:50	WG1807985
2-Butanone (MEK)	U		1.19	10.0	1	01/26/2022 00:50	WG1807985
Methylene Chloride	U		0.430	5.00	1	01/26/2022 00:50	WG1807985
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	01/26/2022 00:50	WG1807985
Methyl tert-butyl ether	U		0.101	1.00	1	01/26/2022 00:50	WG1807985
Naphthalene	U		1.00	5.00	1	01/26/2022 00:50	WG1807985
1-Methylnaphthalene	U		7.30	10.0	1	01/26/2022 00:50	WG1807985
2-Methylnaphthalene	U		7.18	10.0	1	01/26/2022 00:50	WG1807985
Styrene	U		0.118	1.00	1	01/26/2022 00:50	WG1807985
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	01/26/2022 00:50	WG1807985
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	01/26/2022 00:50	WG1807985
Tetrachloroethene	U		0.300	1.00	1	01/26/2022 00:50	WG1807985
Toluene	U		0.278	1.00	1	01/26/2022 00:50	WG1807985
1,2,3-Trichlorobenzene	U		0.230	1.00	1	01/26/2022 00:50	WG1807985
1,2,4-Trichlorobenzene	U		0.481	1.00	1	01/26/2022 00:50	WG1807985
1,1,1-Trichloroethane	U		0.149	1.00	1	01/26/2022 00:50	WG1807985
1,1,2-Trichloroethane	U		0.158	1.00	1	01/26/2022 00:50	WG1807985
Trichloroethene	U		0.190	1.00	1	01/26/2022 00:50	WG1807985
1,2,4-Trimethylbenzene	U	J4	0.322	1.00	1	01/26/2022 00:50	WG1807985
1,3,5-Trimethylbenzene	U		0.104	1.00	1	01/26/2022 00:50	WG1807985
Vinyl acetate	U		0.692	10.0	1	01/26/2022 00:50	WG1807985
Vinyl chloride	U		0.234	1.00	1	01/26/2022 00:50	WG1807985
Xylenes, Total	U		0.174	3.00	1	01/26/2022 00:50	WG1807985
Di-isopropyl ether	U		0.105	1.00	1	01/26/2022 00:50	WG1807985
Ethanol	U	J3	42.0	100	1	01/26/2022 00:50	WG1807985
3,3-Dimethyl-1-butanol	U		4.51	100	1	01/26/2022 00:50	WG1807985
Ethyl tert-butyl ether	U		0.101	1.00	1	01/26/2022 00:50	WG1807985
t-Amyl Alcohol	U		4.90	50.0	1	01/26/2022 00:50	WG1807985
tert-Butyl alcohol	U		4.06	5.00	1	01/26/2022 00:50	WG1807985
tert-Butyl Formate	U		4.51	20.0	1	01/26/2022 00:50	WG1807985
tert-Amyl Methyl Ether	U		0.195	1.00	1	01/26/2022 00:50	WG1807985
(S) 1,2-Dichloroethane-d4	*93.4*			*70.0-130*		*01/26/2022 00:50*	WG1807985
(S) Toluene-d8	*101*			*80.0-120*		*01/26/2022 00:50*	WG1807985
(S) 4-Bromofluorobenzene	*94.5*			*77.0-126*		*01/26/2022 00:50*	WG1807985

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260B-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	U		0.597	3.00	1	01/31/2022 23:33	WG1810399
(S) Toluene-d8	*100*			*77.0-127*		*01/31/2022 23:33*	WG1810399

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acenaphthene	U		0.0886	1.00	1	01/27/2022 12:34	WG1808148
Acenaphthylene	U		0.0921	1.00	1	01/27/2022 12:34	WG1808148
Anthracene	U		0.0804	1.00	1	01/27/2022 12:34	WG1808148
Benzidine	U	J4	3.74	10.0	1	01/27/2022 12:34	WG1808148
Benzo(a)anthracene	U		0.199	1.00	1	01/27/2022 12:34	WG1808148
Benzo(b)fluoranthene	U		0.130	1.00	1	01/27/2022 12:34	WG1808148
Benzo(k)fluoranthene	U		0.120	1.00	1	01/27/2022 12:34	WG1808148
Benzo(g,h,i)perylene	U		0.121	1.00	1	01/27/2022 12:34	WG1808148
Benzo(a)pyrene	U		0.0381	1.00	1	01/27/2022 12:34	WG1808148
Bis(2-chlorethoxy)methane	U		0.116	10.0	1	01/27/2022 12:34	WG1808148
Bis(2-chloroethyl)ether	U		0.137	10.0	1	01/27/2022 12:34	WG1808148
2,2-Oxybis(1-Chloropropane)	U		0.210	10.0	1	01/27/2022 12:34	WG1808148
4-Bromophenyl-phenylether	U		0.0877	10.0	1	01/27/2022 12:34	WG1808148
2-Chloronaphthalene	U		0.0648	1.00	1	01/27/2022 12:34	WG1808148
4-Chlorophenyl-phenylether	U		0.0926	10.0	1	01/27/2022 12:34	WG1808148
Chrysene	U		0.130	1.00	1	01/27/2022 12:34	WG1808148
Dibenz(a,h)anthracene	U		0.0644	1.00	1	01/27/2022 12:34	WG1808148
1,2-Dichlorobenzene	U		0.0713	10.0	1	01/27/2022 12:34	WG1808148
1,3-Dichlorobenzene	U		0.132	10.0	1	01/27/2022 12:34	WG1808148
1,4-Dichlorobenzene	U		0.0942	10.0	1	01/27/2022 12:34	WG1808148
3,3-Dichlorobenzidine	U		0.212	10.0	1	01/27/2022 12:34	WG1808148
2,4-Dinitrotoluene	U		0.0983	10.0	1	01/27/2022 12:34	WG1808148
2,6-Dinitrotoluene	U		0.250	10.0	1	01/27/2022 12:34	WG1808148
Fluoranthene	U		0.102	1.00	1	01/27/2022 12:34	WG1808148
Fluorene	U		0.0844	1.00	1	01/27/2022 12:34	WG1808148
Hexachlorobenzene	U		0.0755	1.00	1	01/27/2022 12:34	WG1808148
Hexachloro-1,3-butadiene	U		0.0968	10.0	1	01/27/2022 12:34	WG1808148
Hexachlorocyclopentadiene	U		0.0598	10.0	1	01/27/2022 12:34	WG1808148
Hexachloroethane	U		0.127	10.0	1	01/27/2022 12:34	WG1808148
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	01/27/2022 12:34	WG1808148
Isophorone	U		0.143	10.0	1	01/27/2022 12:34	WG1808148
Naphthalene	U		0.159	1.00	1	01/27/2022 12:34	WG1808148
Nitrobenzene	U		0.297	10.0	1	01/27/2022 12:34	WG1808148
n-Nitrosodimethylamine	U		0.998	10.0	1	01/27/2022 12:34	WG1808148
n-Nitrosodiphenylamine	U		2.37	10.0	1	01/27/2022 12:34	WG1808148
n-Nitrosodi-n-propylamine	U		0.261	10.0	1	01/27/2022 12:34	WG1808148
Phenanthrene	U		0.112	1.00	1	01/27/2022 12:34	WG1808148
Benzylbutyl phthalate	U		0.765	3.00	1	01/27/2022 12:34	WG1808148
Bis(2-ethylhexyl)phthalate	U		0.895	3.00	1	01/27/2022 12:34	WG1808148
Di-n-butyl phthalate	U		0.453	3.00	1	01/27/2022 12:34	WG1808148
Diethyl phthalate	U		0.287	3.00	1	01/27/2022 12:34	WG1808148
Dimethyl phthalate	U		0.260	3.00	1	01/27/2022 12:34	WG1808148
Di-n-octyl phthalate	U		0.932	3.00	1	01/27/2022 12:34	WG1808148
Pyrene	U		0.107	1.00	1	01/27/2022 12:34	WG1808148
1,2,4-Trichlorobenzene	U		0.0698	10.0	1	01/27/2022 12:34	WG1808148
4-Chloro-3-methylphenol	U		0.131	10.0	1	01/27/2022 12:34	WG1808148
2-Chlorophenol	U		0.133	10.0	1	01/27/2022 12:34	WG1808148
2,4-Dichlorophenol	U		0.102	10.0	1	01/27/2022 12:34	WG1808148
2,4-Dimethylphenol	U		0.0636	10.0	1	01/27/2022 12:34	WG1808148
4,6-Dinitro-2-methylphenol	U		1.12	10.0	1	01/27/2022 12:34	WG1808148

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
2,4-Dinitrophenol	U		5.93	10.0	1	01/27/2022 12:34	WG1808148
2-Nitrophenol	U		0.117	10.0	1	01/27/2022 12:34	WG1808148
4-Nitrophenol	U		0.143	10.0	1	01/27/2022 12:34	WG1808148
Pentachlorophenol	U		0.313	10.0	1	01/27/2022 12:34	WG1808148
Phenol	U		4.33	10.0	1	01/27/2022 12:34	WG1808148
2,4,6-Trichlorophenol	U		0.100	10.0	1	01/27/2022 12:34	WG1808148
(S) 2-Fluorophenol	*24.9*			*10.0-120*		*01/27/2022 12:34*	WG1808148
(S) Phenol-d5	*16.1*			*10.0-120*		*01/27/2022 12:34*	WG1808148
(S) Nitrobenzene-d5	*57.9*			*10.0-127*		*01/27/2022 12:34*	WG1808148
(S) 2-Fluorobiphenyl	*59.1*			*10.0-130*		*01/27/2022 12:34*	WG1808148
(S) 2,4,6-Tribromophenol	*35.5*			*10.0-155*		*01/27/2022 12:34*	WG1808148
(S) p-Terphenyl-d14	*48.3*			*10.0-128*		*01/27/2022 12:34*	WG1808148

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Anthracene	U		0.0190	0.0500	1	01/27/2022 02:53	WG1807883
Acenaphthene	U		0.0190	0.0500	1	01/27/2022 02:53	WG1807883
Acenaphthylene	U		0.0171	0.0500	1	01/27/2022 02:53	WG1807883
Benzo(a)anthracene	U		0.0203	0.0500	1	01/27/2022 02:53	WG1807883
Benzo(a)pyrene	U		0.0184	0.0500	1	01/27/2022 02:53	WG1807883
Benzo(b)fluoranthene	U		0.0168	0.0500	1	01/27/2022 02:53	WG1807883
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	01/27/2022 02:53	WG1807883
Benzo(k)fluoranthene	U		0.0202	0.0500	1	01/27/2022 02:53	WG1807883
Chrysene	U		0.0179	0.0500	1	01/27/2022 02:53	WG1807883
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	01/27/2022 02:53	WG1807883
Fluoranthene	U		0.0270	0.100	1	01/27/2022 02:53	WG1807883
Fluorene	U		0.0169	0.0500	1	01/27/2022 02:53	WG1807883
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	01/27/2022 02:53	WG1807883
Naphthalene	U		0.0917	0.250	1	01/27/2022 02:53	WG1807883
Phenanthrene	U		0.0180	0.0500	1	01/27/2022 02:53	WG1807883
Pyrene	U		0.0169	0.0500	1	01/27/2022 02:53	WG1807883
1-Methylnaphthalene	U		0.0687	0.250	1	01/27/2022 02:53	WG1807883
2-Methylnaphthalene	U		0.0674	0.250	1	01/27/2022 02:53	WG1807883
2-Chloronaphthalene	U		0.0682	0.250	1	01/27/2022 02:53	WG1807883
Tetraethyllead	U		0.0338	0.0500	1	01/27/2022 02:53	WG1807883
(S) Nitrobenzene-d5	*97.4*			*31.0-160*		*01/27/2022 02:53*	WG1807883
(S) 2-Fluorobiphenyl	*100*			*48.0-148*		*01/27/2022 02:53*	WG1807883
(S) p-Terphenyl-d14	*103*			*37.0-146*		*01/27/2022 02:53*	WG1807883

Wet Chemistry by Method 4500CN E-2016

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cyanide	U	J3 J6	1.80	5.00	1	02/01/2022 20:59	WG1808560

Mercury by Method 7470A

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Mercury	U		0.100	0.200	1	01/28/2022 10:46	WG1808899

Metals (ICP) by Method 6010B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Arsenic	U		4.40	10.0	1	02/01/2022 22:29	WG1810663
Barium	34.5		0.736	5.00	1	02/01/2022 22:29	WG1810663
Boron	277		20.0	200	1	02/01/2022 22:29	WG1810663
Calcium	186000		79.3	1000	1	02/01/2022 22:29	WG1810663
Chromium	U		1.40	10.0	1	02/01/2022 22:29	WG1810663
Cobalt	0.869	J	0.840	10.0	1	02/01/2022 22:29	WG1810663
Iron	58.0	J	18.0	100	1	02/01/2022 22:29	WG1810663
Magnesium	39100		85.3	1000	1	02/01/2022 22:29	WG1810663
Manganese	6.16	J	0.934	10.0	1	02/01/2022 22:29	WG1810663
Molybdenum	10.9		1.16	5.00	1	02/01/2022 22:29	WG1810663
Nickel	1.61	J	1.61	10.0	1	02/01/2022 22:29	WG1810663
Potassium	1010	J	261	2000	1	02/01/2022 22:29	WG1810663
Sodium	10400		504	3000	1	02/01/2022 22:29	WG1810663
Strontium	1460		0.640	10.0	1	02/01/2022 22:29	WG1810663
Zinc	U		6.52	50.0	1	02/01/2022 22:29	WG1810663

Metals (ICPMS) by Method 6020

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Aluminum	33.6	J	18.5	100	1	02/03/2022 23:02	WG1810062
Antimony	U		1.03	4.00	1	02/03/2022 23:02	WG1810062
Beryllium	0.777	J	0.190	2.00	1	02/03/2022 23:02	WG1810062
Cadmium	U		0.150	1.00	1	02/03/2022 23:02	WG1810062
Lead	U		0.849	2.00	1	02/03/2022 23:02	WG1810062
Selenium	5.42		0.300	2.00	1	02/04/2022 13:56	WG1810062
Silver	U		0.0700	2.00	1	02/03/2022 23:02	WG1810062
Thallium	0.213	J	0.121	2.00	1	02/03/2022 23:02	WG1810062
Titanium	U		2.18	20.0	1	02/04/2022 13:56	WG1810062
Vanadium	2.88	J	0.664	5.00	1	02/03/2022 23:02	WG1810062

Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methanol	U		4950	10000	1	01/26/2022 12:53	WG1808278
Ethanol	U		4760	10000	1	01/26/2022 12:53	WG1808278

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	01/26/2022 01:12	WG1807985
Benzene	U		0.0941	1.00	1	01/26/2022 01:12	WG1807985
Bromodichloromethane	U		0.136	1.00	1	01/26/2022 01:12	WG1807985
Bromoform	U		0.129	1.00	1	01/26/2022 01:12	WG1807985

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Bromomethane	U	J3	0.605	5.00	1	01/26/2022 01:12	WG1807985
Carbon disulfide	U		0.0962	1.00	1	01/26/2022 01:12	WG1807985
Carbon tetrachloride	U		0.128	1.00	1	01/26/2022 01:12	WG1807985
Chlorobenzene	U		0.116	1.00	1	01/26/2022 01:12	WG1807985
Chloroethane	U		0.192	5.00	1	01/26/2022 01:12	WG1807985
Chloroform	U		0.111	5.00	1	01/26/2022 01:12	WG1807985
Cyclohexane	U		0.188	1.00	1	01/26/2022 01:12	WG1807985
1,2-Dichlorobenzene	U	J3	0.107	1.00	1	01/26/2022 01:12	WG1807985
1,3-Dichlorobenzene	U		0.110	1.00	1	01/26/2022 01:12	WG1807985
1,4-Dichlorobenzene	U		0.120	1.00	1	01/26/2022 01:12	WG1807985
1,1-Dichloroethane	U		0.100	1.00	1	01/26/2022 01:12	WG1807985
1,2-Dichloroethane	U		0.0819	1.00	1	01/26/2022 01:12	WG1807985
1,1-Dichloroethene	U		0.188	1.00	1	01/26/2022 01:12	WG1807985
cis-1,2-Dichloroethene	U		0.126	1.00	1	01/26/2022 01:12	WG1807985
trans-1,2-Dichloroethene	U		0.149	1.00	1	01/26/2022 01:12	WG1807985
1,2-Dichloropropane	U		0.149	1.00	1	01/26/2022 01:12	WG1807985
1,3-Dichloropropane	U		0.110	1.00	1	01/26/2022 01:12	WG1807985
cis-1,3-Dichloropropene	U		0.111	1.00	1	01/26/2022 01:12	WG1807985
trans-1,3-Dichloropropene	U	J3 J4	0.118	1.00	1	01/26/2022 01:12	WG1807985
Ethylbenzene	U		0.137	1.00	1	01/26/2022 01:12	WG1807985
Hexachloro-1,3-butadiene	U		0.337	1.00	1	01/26/2022 01:12	WG1807985
n-Hexane	U		0.749	10.0	1	01/26/2022 01:12	WG1807985
Isopropylbenzene	U		0.105	1.00	1	01/26/2022 01:12	WG1807985
2-Butanone (MEK)	U		1.19	10.0	1	01/26/2022 01:12	WG1807985
Methylene Chloride	U		0.430	5.00	1	01/26/2022 01:12	WG1807985
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	01/26/2022 01:12	WG1807985
Methyl tert-butyl ether	U		0.101	1.00	1	01/26/2022 01:12	WG1807985
Naphthalene	U		1.00	5.00	1	01/26/2022 01:12	WG1807985
1-Methylnaphthalene	U		7.30	10.0	1	01/26/2022 01:12	WG1807985
2-Methylnaphthalene	U		7.18	10.0	1	01/26/2022 01:12	WG1807985
Styrene	U		0.118	1.00	1	01/26/2022 01:12	WG1807985
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	01/26/2022 01:12	WG1807985
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	01/26/2022 01:12	WG1807985
Tetrachloroethene	U		0.300	1.00	1	01/26/2022 01:12	WG1807985
Toluene	U		0.278	1.00	1	01/26/2022 01:12	WG1807985
1,2,3-Trichlorobenzene	U		0.230	1.00	1	01/26/2022 01:12	WG1807985
1,2,4-Trichlorobenzene	U		0.481	1.00	1	01/26/2022 01:12	WG1807985
1,1,1-Trichloroethane	U		0.149	1.00	1	01/26/2022 01:12	WG1807985
1,1,2-Trichloroethane	U		0.158	1.00	1	01/26/2022 01:12	WG1807985
Trichloroethene	U		0.190	1.00	1	01/26/2022 01:12	WG1807985
1,2,4-Trimethylbenzene	U	J4	0.322	1.00	1	01/26/2022 01:12	WG1807985
1,3,5-Trimethylbenzene	U		0.104	1.00	1	01/26/2022 01:12	WG1807985
Vinyl acetate	U		0.692	10.0	1	01/26/2022 01:12	WG1807985
Vinyl chloride	U		0.234	1.00	1	01/26/2022 01:12	WG1807985
Xylenes, Total	U		0.174	3.00	1	01/26/2022 01:12	WG1807985
Di-isopropyl ether	U		0.105	1.00	1	01/26/2022 01:12	WG1807985
Ethanol	U	J3	42.0	100	1	01/26/2022 01:12	WG1807985
3,3-Dimethyl-1-butanol	U		4.51	100	1	01/26/2022 01:12	WG1807985
Ethyl tert-butyl ether	U		0.101	1.00	1	01/26/2022 01:12	WG1807985
t-Amyl Alcohol	U		4.90	50.0	1	01/26/2022 01:12	WG1807985
tert-Butyl alcohol	U		4.06	5.00	1	01/26/2022 01:12	WG1807985
tert-Butyl Formate	U		4.51	20.0	1	01/26/2022 01:12	WG1807985
tert-Amyl Methyl Ether	U		0.195	1.00	1	01/26/2022 01:12	WG1807985
(S) 1,2-Dichloroethane-d4	*92.4*			*70.0-130*		*01/26/2022 01:12*	WG1807985
(S) Toluene-d8	*109*			*80.0-120*		*01/26/2022 01:12*	WG1807985
(S) 4-Bromofluorobenzene	*96.0*			*77.0-126*		*01/26/2022 01:12*	WG1807985

Volatile Organic Compounds (GC/MS) by Method 8260B-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	U		0.597	3.00	1	01/29/2022 17:57	WG1809937
(S) Toluene-d8	*83.1*			*77.0-127*		*01/29/2022 17:57*	WG1809937

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acenaphthene	U		0.0886	1.00	1	01/27/2022 12:55	WG1808148
Acenaphthylene	U		0.0921	1.00	1	01/27/2022 12:55	WG1808148
Anthracene	U		0.0804	1.00	1	01/27/2022 12:55	WG1808148
Benzidine	U	J4	3.74	10.0	1	01/27/2022 12:55	WG1808148
Benzo(a)anthracene	U		0.199	1.00	1	01/27/2022 12:55	WG1808148
Benzo(b)fluoranthene	U		0.130	1.00	1	01/27/2022 12:55	WG1808148
Benzo(k)fluoranthene	U		0.120	1.00	1	01/27/2022 12:55	WG1808148
Benzo(g,h,i)perylene	U		0.121	1.00	1	01/27/2022 12:55	WG1808148
Benzo(a)pyrene	U		0.0381	1.00	1	01/27/2022 12:55	WG1808148
Bis(2-chlorethoxy)methane	U		0.116	10.0	1	01/27/2022 12:55	WG1808148
Bis(2-chloroethyl)ether	U		0.137	10.0	1	01/27/2022 12:55	WG1808148
2,2-Oxybis(1-Chloropropane)	U		0.210	10.0	1	01/27/2022 12:55	WG1808148
4-Bromophenyl-phenylether	U		0.0877	10.0	1	01/27/2022 12:55	WG1808148
2-Chloronaphthalene	U		0.0648	1.00	1	01/27/2022 12:55	WG1808148
4-Chlorophenyl-phenylether	U		0.0926	10.0	1	01/27/2022 12:55	WG1808148
Chrysene	U		0.130	1.00	1	01/27/2022 12:55	WG1808148
Dibenz(a,h)anthracene	U		0.0644	1.00	1	01/27/2022 12:55	WG1808148
1,2-Dichlorobenzene	U		0.0713	10.0	1	01/27/2022 12:55	WG1808148
1,3-Dichlorobenzene	U		0.132	10.0	1	01/27/2022 12:55	WG1808148
1,4-Dichlorobenzene	U		0.0942	10.0	1	01/27/2022 12:55	WG1808148
3,3-Dichlorobenzidine	U		0.212	10.0	1	01/27/2022 12:55	WG1808148
2,4-Dinitrotoluene	U		0.0983	10.0	1	01/27/2022 12:55	WG1808148
2,6-Dinitrotoluene	U		0.250	10.0	1	01/27/2022 12:55	WG1808148
Fluoranthene	U		0.102	1.00	1	01/27/2022 12:55	WG1808148
Fluorene	U		0.0844	1.00	1	01/27/2022 12:55	WG1808148
Hexachlorobenzene	U		0.0755	1.00	1	01/27/2022 12:55	WG1808148
Hexachloro-1,3-butadiene	U		0.0968	10.0	1	01/27/2022 12:55	WG1808148
Hexachlorocyclopentadiene	U		0.0598	10.0	1	01/27/2022 12:55	WG1808148
Hexachloroethane	U		0.127	10.0	1	01/27/2022 12:55	WG1808148
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	01/27/2022 12:55	WG1808148
Isophorone	U		0.143	10.0	1	01/27/2022 12:55	WG1808148
Naphthalene	U		0.159	1.00	1	01/27/2022 12:55	WG1808148
Nitrobenzene	U		0.297	10.0	1	01/27/2022 12:55	WG1808148
n-Nitrosodimethylamine	U		0.998	10.0	1	01/27/2022 12:55	WG1808148
n-Nitrosodiphenylamine	U		2.37	10.0	1	01/27/2022 12:55	WG1808148
n-Nitrosodi-n-propylamine	U		0.261	10.0	1	01/27/2022 12:55	WG1808148
Phenanthrene	U		0.112	1.00	1	01/27/2022 12:55	WG1808148
Benzylbutyl phthalate	U		0.765	3.00	1	01/27/2022 12:55	WG1808148
Bis(2-ethylhexyl)phthalate	U		0.895	3.00	1	01/27/2022 12:55	WG1808148
Di-n-butyl phthalate	U		0.453	3.00	1	01/27/2022 12:55	WG1808148
Diethyl phthalate	U		0.287	3.00	1	01/27/2022 12:55	WG1808148
Dimethyl phthalate	U		0.260	3.00	1	01/27/2022 12:55	WG1808148
Di-n-octyl phthalate	U		0.932	3.00	1	01/27/2022 12:55	WG1808148
Pyrene	U		0.107	1.00	1	01/27/2022 12:55	WG1808148
1,2,4-Trichlorobenzene	U		0.0698	10.0	1	01/27/2022 12:55	WG1808148
4-Chloro-3-methylphenol	U		0.131	10.0	1	01/27/2022 12:55	WG1808148
2-Chlorophenol	U		0.133	10.0	1	01/27/2022 12:55	WG1808148
2,4-Dichlorophenol	U		0.102	10.0	1	01/27/2022 12:55	WG1808148
2,4-Dimethylphenol	U		0.0636	10.0	1	01/27/2022 12:55	WG1808148
4,6-Dinitro-2-methylphenol	U		1.12	10.0	1	01/27/2022 12:55	WG1808148

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
2,4-Dinitrophenol	U		5.93	10.0	1	01/27/2022 12:55	WG1808148
2-Nitrophenol	U		0.117	10.0	1	01/27/2022 12:55	WG1808148
4-Nitrophenol	U		0.143	10.0	1	01/27/2022 12:55	WG1808148
Pentachlorophenol	U		0.313	10.0	1	01/27/2022 12:55	WG1808148
Phenol	U		4.33	10.0	1	01/27/2022 12:55	WG1808148
2,4,6-Trichlorophenol	U		0.100	10.0	1	01/27/2022 12:55	WG1808148
(S) 2-Fluorophenol	*27.3*			*10.0-120*		*01/27/2022 12:55*	WG1808148
(S) Phenol-d5	*16.8*			*10.0-120*		*01/27/2022 12:55*	WG1808148
(S) Nitrobenzene-d5	*56.2*			*10.0-127*		*01/27/2022 12:55*	WG1808148
(S) 2-Fluorobiphenyl	*59.5*			*10.0-130*		*01/27/2022 12:55*	WG1808148
(S) 2,4,6-Tribromophenol	*41.0*			*10.0-155*		*01/27/2022 12:55*	WG1808148
(S) p-Terphenyl-d14	*48.4*			*10.0-128*		*01/27/2022 12:55*	WG1808148

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Anthracene	U		0.0190	0.0500	1	01/27/2022 03:13	WG1807883
Acenaphthene	U		0.0190	0.0500	1	01/27/2022 03:13	WG1807883
Acenaphthylene	U		0.0171	0.0500	1	01/27/2022 03:13	WG1807883
Benzo(a)anthracene	U		0.0203	0.0500	1	01/27/2022 03:13	WG1807883
Benzo(a)pyrene	U		0.0184	0.0500	1	01/27/2022 03:13	WG1807883
Benzo(b)fluoranthene	U		0.0168	0.0500	1	01/27/2022 03:13	WG1807883
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	01/27/2022 03:13	WG1807883
Benzo(k)fluoranthene	U		0.0202	0.0500	1	01/27/2022 03:13	WG1807883
Chrysene	U		0.0179	0.0500	1	01/27/2022 03:13	WG1807883
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	01/27/2022 03:13	WG1807883
Fluoranthene	U		0.0270	0.100	1	01/27/2022 03:13	WG1807883
Fluorene	U		0.0169	0.0500	1	01/27/2022 03:13	WG1807883
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	01/27/2022 03:13	WG1807883
Naphthalene	U		0.0917	0.250	1	01/27/2022 03:13	WG1807883
Phenanthrene	U		0.0180	0.0500	1	01/27/2022 03:13	WG1807883
Pyrene	U		0.0169	0.0500	1	01/27/2022 03:13	WG1807883
1-Methylnaphthalene	U		0.0687	0.250	1	01/27/2022 03:13	WG1807883
2-Methylnaphthalene	0.0679	J	0.0674	0.250	1	01/27/2022 03:13	WG1807883
2-Chloronaphthalene	U		0.0682	0.250	1	01/27/2022 03:13	WG1807883
Tetraethyllead	U		0.0338	0.0500	1	01/27/2022 03:13	WG1807883
(S) Nitrobenzene-d5	*95.8*			*31.0-160*		*01/27/2022 03:13*	WG1807883
(S) 2-Fluorobiphenyl	*101*			*48.0-148*		*01/27/2022 03:13*	WG1807883
(S) p-Terphenyl-d14	*104*			*37.0-146*		*01/27/2022 03:13*	WG1807883

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Wet Chemistry by Method 4500CN E-2016

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Cyanide	U		1.80	5.00	1	02/01/2022 21:02	WG1808560

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury	U		0.100	0.200	1	01/28/2022 10:48	WG1808899

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Arsenic	U		4.40	10.0	1	02/01/2022 22:31	WG1810663
Barium	84.3		0.736	5.00	1	02/01/2022 22:31	WG1810663
Boron	101	J	20.0	200	1	02/01/2022 22:31	WG1810663
Calcium	72000		79.3	1000	1	02/01/2022 22:31	WG1810663
Chromium	U		1.40	10.0	1	02/01/2022 22:31	WG1810663
Cobalt	0.888	J	0.840	10.0	1	02/01/2022 22:31	WG1810663
Iron	38.0	J	18.0	100	1	02/01/2022 22:31	WG1810663
Magnesium	11500		85.3	1000	1	02/01/2022 22:31	WG1810663
Manganese	28.3		0.934	10.0	1	02/01/2022 22:31	WG1810663
Molybdenum	13.4		1.16	5.00	1	02/01/2022 22:31	WG1810663
Nickel	1.66	J	1.61	10.0	1	02/01/2022 22:31	WG1810663
Potassium	7120		261	2000	1	02/01/2022 22:31	WG1810663
Sodium	210000		504	3000	1	02/01/2022 22:31	WG1810663
Strontium	249		0.640	10.0	1	02/01/2022 22:31	WG1810663
Zinc	U		6.52	50.0	1	02/01/2022 22:31	WG1810663

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Aluminum	U		18.5	100	1	02/03/2022 23:05	WG1810062
Antimony	U		1.03	4.00	1	02/03/2022 23:05	WG1810062
Beryllium	U		0.190	2.00	1	02/03/2022 23:05	WG1810062
Cadmium	U		0.150	1.00	1	02/03/2022 23:05	WG1810062
Lead	U		0.849	2.00	1	02/03/2022 23:05	WG1810062
Selenium	0.595	J	0.300	2.00	1	02/04/2022 14:11	WG1810062
Silver	U		0.0700	2.00	1	02/03/2022 23:05	WG1810062
Thallium	U		0.121	2.00	1	02/03/2022 23:05	WG1810062
Titanium	U		2.18	20.0	1	02/04/2022 14:11	WG1810062
Vanadium	1.08	J	0.664	5.00	1	02/03/2022 23:05	WG1810062

Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methanol	U		4950	10000	1	01/26/2022 12:58	WG1808278
Ethanol	U		4760	10000	1	01/26/2022 12:58	WG1808278

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	01/26/2022 01:33	WG1807985
Benzene	U		0.0941	1.00	1	01/26/2022 01:33	WG1807985
Bromodichloromethane	U		0.136	1.00	1	01/26/2022 01:33	WG1807985
Bromoform	U		0.129	1.00	1	01/26/2022 01:33	WG1807985

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Bromomethane	U	J3	0.605	5.00	1	01/26/2022 01:33	WG1807985
Carbon disulfide	U		0.0962	1.00	1	01/26/2022 01:33	WG1807985
Carbon tetrachloride	U		0.128	1.00	1	01/26/2022 01:33	WG1807985
Chlorobenzene	U		0.116	1.00	1	01/26/2022 01:33	WG1807985
Chloroethane	U		0.192	5.00	1	01/26/2022 01:33	WG1807985
Chloroform	U		0.111	5.00	1	01/26/2022 01:33	WG1807985
Cyclohexane	U		0.188	1.00	1	01/26/2022 01:33	WG1807985
1,2-Dichlorobenzene	U	J3	0.107	1.00	1	01/26/2022 01:33	WG1807985
1,3-Dichlorobenzene	U		0.110	1.00	1	01/26/2022 01:33	WG1807985
1,4-Dichlorobenzene	U		0.120	1.00	1	01/26/2022 01:33	WG1807985
1,1-Dichloroethane	U		0.100	1.00	1	01/26/2022 01:33	WG1807985
1,2-Dichloroethane	U		0.0819	1.00	1	01/26/2022 01:33	WG1807985
1,1-Dichloroethene	U		0.188	1.00	1	01/26/2022 01:33	WG1807985
cis-1,2-Dichloroethene	U		0.126	1.00	1	01/26/2022 01:33	WG1807985
trans-1,2-Dichloroethene	U		0.149	1.00	1	01/26/2022 01:33	WG1807985
1,2-Dichloropropane	U		0.149	1.00	1	01/26/2022 01:33	WG1807985
1,3-Dichloropropane	U		0.110	1.00	1	01/26/2022 01:33	WG1807985
cis-1,3-Dichloropropene	U		0.111	1.00	1	01/26/2022 01:33	WG1807985
trans-1,3-Dichloropropene	U	J3 J4	0.118	1.00	1	01/26/2022 01:33	WG1807985
Ethylbenzene	U		0.137	1.00	1	01/26/2022 01:33	WG1807985
Hexachloro-1,3-butadiene	U		0.337	1.00	1	01/26/2022 01:33	WG1807985
n-Hexane	U		0.749	10.0	1	01/26/2022 01:33	WG1807985
Isopropylbenzene	U		0.105	1.00	1	01/26/2022 01:33	WG1807985
2-Butanone (MEK)	U		1.19	10.0	1	01/26/2022 01:33	WG1807985
Methylene Chloride	U		0.430	5.00	1	01/26/2022 01:33	WG1807985
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	01/26/2022 01:33	WG1807985
Methyl tert-butyl ether	U		0.101	1.00	1	01/26/2022 01:33	WG1807985
Naphthalene	U		1.00	5.00	1	01/26/2022 01:33	WG1807985
1-Methylnaphthalene	U		7.30	10.0	1	01/26/2022 01:33	WG1807985
2-Methylnaphthalene	U		7.18	10.0	1	01/26/2022 01:33	WG1807985
Styrene	U		0.118	1.00	1	01/26/2022 01:33	WG1807985
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	01/26/2022 01:33	WG1807985
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	01/26/2022 01:33	WG1807985
Tetrachloroethene	U		0.300	1.00	1	01/26/2022 01:33	WG1807985
Toluene	U		0.278	1.00	1	01/26/2022 01:33	WG1807985
1,2,3-Trichlorobenzene	U		0.230	1.00	1	01/26/2022 01:33	WG1807985
1,2,4-Trichlorobenzene	U		0.481	1.00	1	01/26/2022 01:33	WG1807985
1,1,1-Trichloroethane	U		0.149	1.00	1	01/26/2022 01:33	WG1807985
1,1,2-Trichloroethane	U		0.158	1.00	1	01/26/2022 01:33	WG1807985
Trichloroethene	U		0.190	1.00	1	01/26/2022 01:33	WG1807985
1,2,4-Trimethylbenzene	U	J4	0.322	1.00	1	01/26/2022 01:33	WG1807985
1,3,5-Trimethylbenzene	U		0.104	1.00	1	01/26/2022 01:33	WG1807985
Vinyl acetate	U		0.692	10.0	1	01/26/2022 01:33	WG1807985
Vinyl chloride	U		0.234	1.00	1	01/26/2022 01:33	WG1807985
Xylenes, Total	U		0.174	3.00	1	01/26/2022 01:33	WG1807985
Di-isopropyl ether	U		0.105	1.00	1	01/26/2022 01:33	WG1807985
Ethanol	U	J3	42.0	100	1	01/26/2022 01:33	WG1807985
3,3-Dimethyl-1-butanol	U		4.51	100	1	01/26/2022 01:33	WG1807985
Ethyl tert-butyl ether	U		0.101	1.00	1	01/26/2022 01:33	WG1807985
t-Amyl Alcohol	U		4.90	50.0	1	01/26/2022 01:33	WG1807985
tert-Butyl alcohol	U		4.06	5.00	1	01/26/2022 01:33	WG1807985
tert-Butyl Formate	U		4.51	20.0	1	01/26/2022 01:33	WG1807985
tert-Amyl Methyl Ether	U		0.195	1.00	1	01/26/2022 01:33	WG1807985
(S) 1,2-Dichloroethane-d4	*97.1*			*70.0-130*		*01/26/2022 01:33*	WG1807985
(S) Toluene-d8	*108*			*80.0-120*		*01/26/2022 01:33*	WG1807985
(S) 4-Bromofluorobenzene	*93.6*			*77.0-126*		*01/26/2022 01:33*	WG1807985

Volatile Organic Compounds (GC/MS) by Method 8260B-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	U		0.597	3.00	1	01/29/2022 18:17	WG1809937
(S) Toluene-d8	*86.3*			*77.0-127*		*01/29/2022 18:17*	WG1809937

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acenaphthene	U		0.0886	1.00	1	01/27/2022 13:16	WG1808148
Acenaphthylene	U		0.0921	1.00	1	01/27/2022 13:16	WG1808148
Anthracene	U		0.0804	1.00	1	01/27/2022 13:16	WG1808148
Benzidine	U	J4	3.74	10.0	1	01/27/2022 13:16	WG1808148
Benzo(a)anthracene	U		0.199	1.00	1	01/27/2022 13:16	WG1808148
Benzo(b)fluoranthene	U		0.130	1.00	1	01/27/2022 13:16	WG1808148
Benzo(k)fluoranthene	U		0.120	1.00	1	01/27/2022 13:16	WG1808148
Benzo(g,h,i)perylene	U		0.121	1.00	1	01/27/2022 13:16	WG1808148
Benzo(a)pyrene	U		0.0381	1.00	1	01/27/2022 13:16	WG1808148
Bis(2-chlorethoxy)methane	U		0.116	10.0	1	01/27/2022 13:16	WG1808148
Bis(2-chloroethyl)ether	U		0.137	10.0	1	01/27/2022 13:16	WG1808148
2,2-Oxybis(1-Chloropropane)	U		0.210	10.0	1	01/27/2022 13:16	WG1808148
4-Bromophenyl-phenylether	U		0.0877	10.0	1	01/27/2022 13:16	WG1808148
2-Chloronaphthalene	U		0.0648	1.00	1	01/27/2022 13:16	WG1808148
4-Chlorophenyl-phenylether	U		0.0926	10.0	1	01/27/2022 13:16	WG1808148
Chrysene	U		0.130	1.00	1	01/27/2022 13:16	WG1808148
Dibenz(a,h)anthracene	U		0.0644	1.00	1	01/27/2022 13:16	WG1808148
1,2-Dichlorobenzene	U		0.0713	10.0	1	01/27/2022 13:16	WG1808148
1,3-Dichlorobenzene	U		0.132	10.0	1	01/27/2022 13:16	WG1808148
1,4-Dichlorobenzene	U		0.0942	10.0	1	01/27/2022 13:16	WG1808148
3,3-Dichlorobenzidine	U		0.212	10.0	1	01/27/2022 13:16	WG1808148
2,4-Dinitrotoluene	U		0.0983	10.0	1	01/27/2022 13:16	WG1808148
2,6-Dinitrotoluene	U		0.250	10.0	1	01/27/2022 13:16	WG1808148
Fluoranthene	U		0.102	1.00	1	01/27/2022 13:16	WG1808148
Fluorene	U		0.0844	1.00	1	01/27/2022 13:16	WG1808148
Hexachlorobenzene	U		0.0755	1.00	1	01/27/2022 13:16	WG1808148
Hexachloro-1,3-butadiene	U		0.0968	10.0	1	01/27/2022 13:16	WG1808148
Hexachlorocyclopentadiene	U		0.0598	10.0	1	01/27/2022 13:16	WG1808148
Hexachloroethane	U		0.127	10.0	1	01/27/2022 13:16	WG1808148
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	01/27/2022 13:16	WG1808148
Isophorone	U		0.143	10.0	1	01/27/2022 13:16	WG1808148
Naphthalene	U		0.159	1.00	1	01/27/2022 13:16	WG1808148
Nitrobenzene	U		0.297	10.0	1	01/27/2022 13:16	WG1808148
n-Nitrosodimethylamine	U		0.998	10.0	1	01/27/2022 13:16	WG1808148
n-Nitrosodiphenylamine	U		2.37	10.0	1	01/27/2022 13:16	WG1808148
n-Nitrosodi-n-propylamine	U		0.261	10.0	1	01/27/2022 13:16	WG1808148
Phenanthrene	U		0.112	1.00	1	01/27/2022 13:16	WG1808148
Benzylbutyl phthalate	U		0.765	3.00	1	01/27/2022 13:16	WG1808148
Bis(2-ethylhexyl)phthalate	U		0.895	3.00	1	01/27/2022 13:16	WG1808148
Di-n-butyl phthalate	U		0.453	3.00	1	01/27/2022 13:16	WG1808148
Diethyl phthalate	U		0.287	3.00	1	01/27/2022 13:16	WG1808148
Dimethyl phthalate	U		0.260	3.00	1	01/27/2022 13:16	WG1808148
Di-n-octyl phthalate	U		0.932	3.00	1	01/27/2022 13:16	WG1808148
Pyrene	U		0.107	1.00	1	01/27/2022 13:16	WG1808148
1,2,4-Trichlorobenzene	U		0.0698	10.0	1	01/27/2022 13:16	WG1808148
4-Chloro-3-methylphenol	U		0.131	10.0	1	01/27/2022 13:16	WG1808148
2-Chlorophenol	U		0.133	10.0	1	01/27/2022 13:16	WG1808148
2,4-Dichlorophenol	U		0.102	10.0	1	01/27/2022 13:16	WG1808148
2,4-Dimethylphenol	U		0.0636	10.0	1	01/27/2022 13:16	WG1808148
4,6-Dinitro-2-methylphenol	U		1.12	10.0	1	01/27/2022 13:16	WG1808148

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
2,4-Dinitrophenol	U		5.93	10.0	1	01/27/2022 13:16	WG1808148
2-Nitrophenol	U		0.117	10.0	1	01/27/2022 13:16	WG1808148
4-Nitrophenol	U		0.143	10.0	1	01/27/2022 13:16	WG1808148
Pentachlorophenol	U		0.313	10.0	1	01/27/2022 13:16	WG1808148
Phenol	U		4.33	10.0	1	01/27/2022 13:16	WG1808148
2,4,6-Trichlorophenol	U		0.100	10.0	1	01/27/2022 13:16	WG1808148
(S) 2-Fluorophenol	*23.8*			*10.0-120*		*01/27/2022 13:16*	WG1808148
(S) Phenol-d5	*14.7*			*10.0-120*		*01/27/2022 13:16*	WG1808148
(S) Nitrobenzene-d5	*54.4*			*10.0-127*		*01/27/2022 13:16*	WG1808148
(S) 2-Fluorobiphenyl	*55.6*			*10.0-130*		*01/27/2022 13:16*	WG1808148
(S) 2,4,6-Tribromophenol	*35.4*			*10.0-155*		*01/27/2022 13:16*	WG1808148
(S) p-Terphenyl-d14	*53.4*			*10.0-128*		*01/27/2022 13:16*	WG1808148

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Anthracene	U		0.0190	0.0500	1	01/27/2022 03:33	WG1807883
Acenaphthene	U		0.0190	0.0500	1	01/27/2022 03:33	WG1807883
Acenaphthylene	U		0.0171	0.0500	1	01/27/2022 03:33	WG1807883
Benzo(a)anthracene	U		0.0203	0.0500	1	01/27/2022 03:33	WG1807883
Benzo(a)pyrene	U		0.0184	0.0500	1	01/27/2022 03:33	WG1807883
Benzo(b)fluoranthene	U		0.0168	0.0500	1	01/27/2022 03:33	WG1807883
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	01/27/2022 03:33	WG1807883
Benzo(k)fluoranthene	U		0.0202	0.0500	1	01/27/2022 03:33	WG1807883
Chrysene	U		0.0179	0.0500	1	01/27/2022 03:33	WG1807883
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	01/27/2022 03:33	WG1807883
Fluoranthene	U		0.0270	0.100	1	01/27/2022 03:33	WG1807883
Fluorene	U		0.0169	0.0500	1	01/27/2022 03:33	WG1807883
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	01/27/2022 03:33	WG1807883
Naphthalene	U		0.0917	0.250	1	01/27/2022 03:33	WG1807883
Phenanthrene	U		0.0180	0.0500	1	01/27/2022 03:33	WG1807883
Pyrene	U		0.0169	0.0500	1	01/27/2022 03:33	WG1807883
1-Methylnaphthalene	U		0.0687	0.250	1	01/27/2022 03:33	WG1807883
2-Methylnaphthalene	U		0.0674	0.250	1	01/27/2022 03:33	WG1807883
2-Chloronaphthalene	U		0.0682	0.250	1	01/27/2022 03:33	WG1807883
Tetraethyllead	U		0.0338	0.0500	1	01/27/2022 03:33	WG1807883
(S) Nitrobenzene-d5	*94.7*			*31.0-160*		*01/27/2022 03:33*	WG1807883
(S) 2-Fluorobiphenyl	*103*			*48.0-148*		*01/27/2022 03:33*	WG1807883
(S) p-Terphenyl-d14	*106*			*37.0-146*		*01/27/2022 03:33*	WG1807883

Wet Chemistry by Method 4500CN E-2016

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Cyanide	U		1.80	5.00	1	02/01/2022 21:03	WG1808560

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury	U		0.100	0.200	1	01/28/2022 10:50	WG1808899

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Arsenic	U		4.40	10.0	1	02/01/2022 22:34	WG1810663
Barium	3.25	J	0.736	5.00	1	02/01/2022 22:34	WG1810663
Boron	72.0	J	20.0	200	1	02/01/2022 22:34	WG1810663
Calcium	718	J	79.3	1000	1	02/01/2022 22:34	WG1810663
Chromium	U		1.40	10.0	1	02/01/2022 22:34	WG1810663
Cobalt	U		0.840	10.0	1	02/01/2022 22:34	WG1810663
Iron	U		18.0	100	1	02/01/2022 22:34	WG1810663
Magnesium	332	J	85.3	1000	1	02/01/2022 22:34	WG1810663
Manganese	9.21	J	0.934	10.0	1	02/01/2022 22:34	WG1810663
Molybdenum	U		1.16	5.00	1	02/01/2022 22:34	WG1810663
Nickel	U		1.61	10.0	1	02/01/2022 22:34	WG1810663
Potassium	U		261	2000	1	02/01/2022 22:34	WG1810663
Sodium	25400		504	3000	1	02/01/2022 22:34	WG1810663
Strontium	0.645	J	0.640	10.0	1	02/01/2022 22:34	WG1810663
Zinc	U		6.52	50.0	1	02/01/2022 22:34	WG1810663

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Aluminum	U		18.5	100	1	02/03/2022 23:08	WG1810062
Antimony	U		1.03	4.00	1	02/03/2022 23:08	WG1810062
Beryllium	U		0.190	2.00	1	02/03/2022 23:08	WG1810062
Cadmium	U		0.150	1.00	1	02/03/2022 23:08	WG1810062
Lead	U		0.849	2.00	1	02/03/2022 23:08	WG1810062
Selenium	U		0.300	2.00	1	02/04/2022 14:14	WG1810062
Silver	U		0.0700	2.00	1	02/03/2022 23:08	WG1810062
Thallium	U		0.121	2.00	1	02/03/2022 23:08	WG1810062
Titanium	U		2.18	20.0	1	02/04/2022 14:14	WG1810062
Vanadium	U		0.664	5.00	1	02/03/2022 23:08	WG1810062

Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methanol	U		4950	10000	1	01/26/2022 13:04	WG1808278
Ethanol	U		4760	10000	1	01/26/2022 13:04	WG1808278

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	01/25/2022 23:25	WG1807985
Benzene	1.56		0.0941	1.00	1	01/25/2022 23:25	WG1807985
Bromodichloromethane	0.421	J	0.136	1.00	1	01/25/2022 23:25	WG1807985
Bromoform	U		0.129	1.00	1	01/25/2022 23:25	WG1807985

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Bromomethane	U	J3	0.605	5.00	1	01/25/2022 23:25	WG1807985
Carbon disulfide	U		0.0962	1.00	1	01/25/2022 23:25	WG1807985
Carbon tetrachloride	U		0.128	1.00	1	01/25/2022 23:25	WG1807985
Chlorobenzene	U		0.116	1.00	1	01/25/2022 23:25	WG1807985
Chloroethane	U		0.192	5.00	1	01/25/2022 23:25	WG1807985
Chloroform	0.960	J	0.111	5.00	1	01/25/2022 23:25	WG1807985
Cyclohexane	U		0.188	1.00	1	01/25/2022 23:25	WG1807985
1,2-Dichlorobenzene	U	J3	0.107	1.00	1	01/25/2022 23:25	WG1807985
1,3-Dichlorobenzene	U		0.110	1.00	1	01/25/2022 23:25	WG1807985
1,4-Dichlorobenzene	U		0.120	1.00	1	01/25/2022 23:25	WG1807985
1,1-Dichloroethane	U		0.100	1.00	1	01/25/2022 23:25	WG1807985
1,2-Dichloroethane	U		0.0819	1.00	1	01/25/2022 23:25	WG1807985
1,1-Dichloroethene	U		0.188	1.00	1	01/25/2022 23:25	WG1807985
cis-1,2-Dichloroethene	U		0.126	1.00	1	01/25/2022 23:25	WG1807985
trans-1,2-Dichloroethene	U		0.149	1.00	1	01/25/2022 23:25	WG1807985
1,2-Dichloropropane	U		0.149	1.00	1	01/25/2022 23:25	WG1807985
1,3-Dichloropropane	U		0.110	1.00	1	01/25/2022 23:25	WG1807985
cis-1,3-Dichloropropene	U		0.111	1.00	1	01/25/2022 23:25	WG1807985
trans-1,3-Dichloropropene	U	J3 J4	0.118	1.00	1	01/25/2022 23:25	WG1807985
Ethylbenzene	1.99		0.137	1.00	1	01/25/2022 23:25	WG1807985
Hexachloro-1,3-butadiene	U		0.337	1.00	1	01/25/2022 23:25	WG1807985
n-Hexane	U		0.749	10.0	1	01/25/2022 23:25	WG1807985
Isopropylbenzene	U		0.105	1.00	1	01/25/2022 23:25	WG1807985
2-Butanone (MEK)	U		1.19	10.0	1	01/25/2022 23:25	WG1807985
Methylene Chloride	U		0.430	5.00	1	01/25/2022 23:25	WG1807985
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	01/25/2022 23:25	WG1807985
Methyl tert-butyl ether	U		0.101	1.00	1	01/25/2022 23:25	WG1807985
Naphthalene	U		1.00	5.00	1	01/25/2022 23:25	WG1807985
1-Methylnaphthalene	U		7.30	10.0	1	01/25/2022 23:25	WG1807985
2-Methylnaphthalene	U		7.18	10.0	1	01/25/2022 23:25	WG1807985
Styrene	U		0.118	1.00	1	01/25/2022 23:25	WG1807985
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	01/25/2022 23:25	WG1807985
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	01/25/2022 23:25	WG1807985
Tetrachloroethene	U		0.300	1.00	1	01/25/2022 23:25	WG1807985
Toluene	7.07		0.278	1.00	1	01/25/2022 23:25	WG1807985
1,2,3-Trichlorobenzene	U		0.230	1.00	1	01/25/2022 23:25	WG1807985
1,2,4-Trichlorobenzene	U		0.481	1.00	1	01/25/2022 23:25	WG1807985
1,1,1-Trichloroethane	U		0.149	1.00	1	01/25/2022 23:25	WG1807985
1,1,2-Trichloroethane	U		0.158	1.00	1	01/25/2022 23:25	WG1807985
Trichloroethene	U		0.190	1.00	1	01/25/2022 23:25	WG1807985
1,2,4-Trimethylbenzene	4.67	J4	0.322	1.00	1	01/25/2022 23:25	WG1807985
1,3,5-Trimethylbenzene	1.17		0.104	1.00	1	01/25/2022 23:25	WG1807985
Vinyl acetate	U		0.692	10.0	1	01/25/2022 23:25	WG1807985
Vinyl chloride	U		0.234	1.00	1	01/25/2022 23:25	WG1807985
Xylenes, Total	18.7		0.174	3.00	1	01/25/2022 23:25	WG1807985
Di-isopropyl ether	U		0.105	1.00	1	01/25/2022 23:25	WG1807985
Ethanol	U	J3	42.0	100	1	01/25/2022 23:25	WG1807985
3,3-Dimethyl-1-butanol	U		4.51	100	1	01/25/2022 23:25	WG1807985
Ethyl tert-butyl ether	U		0.101	1.00	1	01/25/2022 23:25	WG1807985
t-Amyl Alcohol	U		4.90	50.0	1	01/25/2022 23:25	WG1807985
tert-Butyl alcohol	U		4.06	5.00	1	01/25/2022 23:25	WG1807985
tert-Butyl Formate	U		4.51	20.0	1	01/25/2022 23:25	WG1807985
tert-Amyl Methyl Ether	U		0.195	1.00	1	01/25/2022 23:25	WG1807985
(S) 1,2-Dichloroethane-d4	*94.2*			*70.0-130*		*01/25/2022 23:25*	WG1807985
(S) Toluene-d8	*104*			*80.0-120*		*01/25/2022 23:25*	WG1807985
(S) 4-Bromofluorobenzene	*104*			*77.0-126*		*01/25/2022 23:25*	WG1807985

Volatile Organic Compounds (GC/MS) by Method 8260B-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	U		0.597	3.00	1	01/26/2022 14:37	WG1808136
(S) Toluene-d8	*92.3*			*77.0-127*		*01/26/2022 14:37*	WG1808136

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acenaphthene	U		0.0886	1.00	1	01/27/2022 13:37	WG1808148
Acenaphthylene	U		0.0921	1.00	1	01/27/2022 13:37	WG1808148
Anthracene	U		0.0804	1.00	1	01/27/2022 13:37	WG1808148
Benzidine	U	J4	3.74	10.0	1	01/27/2022 13:37	WG1808148
Benzo(a)anthracene	U		0.199	1.00	1	01/27/2022 13:37	WG1808148
Benzo(b)fluoranthene	U		0.130	1.00	1	01/27/2022 13:37	WG1808148
Benzo(k)fluoranthene	U		0.120	1.00	1	01/27/2022 13:37	WG1808148
Benzo(g,h,i)perylene	U		0.121	1.00	1	01/27/2022 13:37	WG1808148
Benzo(a)pyrene	U		0.0381	1.00	1	01/27/2022 13:37	WG1808148
Bis(2-chlorethoxy)methane	U		0.116	10.0	1	01/27/2022 13:37	WG1808148
Bis(2-chloroethyl)ether	U		0.137	10.0	1	01/27/2022 13:37	WG1808148
2,2-Oxybis(1-Chloropropane)	U		0.210	10.0	1	01/27/2022 13:37	WG1808148
4-Bromophenyl-phenylether	U		0.0877	10.0	1	01/27/2022 13:37	WG1808148
2-Chloronaphthalene	U		0.0648	1.00	1	01/27/2022 13:37	WG1808148
4-Chlorophenyl-phenylether	U		0.0926	10.0	1	01/27/2022 13:37	WG1808148
Chrysene	U		0.130	1.00	1	01/27/2022 13:37	WG1808148
Dibenz(a,h)anthracene	U		0.0644	1.00	1	01/27/2022 13:37	WG1808148
1,2-Dichlorobenzene	U		0.0713	10.0	1	01/27/2022 13:37	WG1808148
1,3-Dichlorobenzene	U		0.132	10.0	1	01/27/2022 13:37	WG1808148
1,4-Dichlorobenzene	U		0.0942	10.0	1	01/27/2022 13:37	WG1808148
3,3-Dichlorobenzidine	U		0.212	10.0	1	01/27/2022 13:37	WG1808148
2,4-Dinitrotoluene	U		0.0983	10.0	1	01/27/2022 13:37	WG1808148
2,6-Dinitrotoluene	U		0.250	10.0	1	01/27/2022 13:37	WG1808148
Fluoranthene	U		0.102	1.00	1	01/27/2022 13:37	WG1808148
Fluorene	U		0.0844	1.00	1	01/27/2022 13:37	WG1808148
Hexachlorobenzene	U		0.0755	1.00	1	01/27/2022 13:37	WG1808148
Hexachloro-1,3-butadiene	U		0.0968	10.0	1	01/27/2022 13:37	WG1808148
Hexachlorocyclopentadiene	U		0.0598	10.0	1	01/27/2022 13:37	WG1808148
Hexachloroethane	U		0.127	10.0	1	01/27/2022 13:37	WG1808148
Indeno(1,2,3-cd)pyrene	U		0.279	1.00	1	01/27/2022 13:37	WG1808148
Isophorone	U		0.143	10.0	1	01/27/2022 13:37	WG1808148
Naphthalene	U		0.159	1.00	1	01/27/2022 13:37	WG1808148
Nitrobenzene	U		0.297	10.0	1	01/27/2022 13:37	WG1808148
n-Nitrosodimethylamine	U		0.998	10.0	1	01/27/2022 13:37	WG1808148
n-Nitrosodiphenylamine	U		2.37	10.0	1	01/27/2022 13:37	WG1808148
n-Nitrosodi-n-propylamine	U		0.261	10.0	1	01/27/2022 13:37	WG1808148
Phenanthrene	U		0.112	1.00	1	01/27/2022 13:37	WG1808148
Benzylbutyl phthalate	U		0.765	3.00	1	01/27/2022 13:37	WG1808148
Bis(2-ethylhexyl)phthalate	U		0.895	3.00	1	01/27/2022 13:37	WG1808148
Di-n-butyl phthalate	U		0.453	3.00	1	01/27/2022 13:37	WG1808148
Diethyl phthalate	U		0.287	3.00	1	01/27/2022 13:37	WG1808148
Dimethyl phthalate	U		0.260	3.00	1	01/27/2022 13:37	WG1808148
Di-n-octyl phthalate	U		0.932	3.00	1	01/27/2022 13:37	WG1808148
Pyrene	U		0.107	1.00	1	01/27/2022 13:37	WG1808148
1,2,4-Trichlorobenzene	U		0.0698	10.0	1	01/27/2022 13:37	WG1808148
4-Chloro-3-methylphenol	U		0.131	10.0	1	01/27/2022 13:37	WG1808148
2-Chlorophenol	U		0.133	10.0	1	01/27/2022 13:37	WG1808148
2,4-Dichlorophenol	U		0.102	10.0	1	01/27/2022 13:37	WG1808148
2,4-Dimethylphenol	U		0.0636	10.0	1	01/27/2022 13:37	WG1808148
4,6-Dinitro-2-methylphenol	U		1.12	10.0	1	01/27/2022 13:37	WG1808148

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
2,4-Dinitrophenol	U		5.93	10.0	1	01/27/2022 13:37	WG1808148
2-Nitrophenol	U		0.117	10.0	1	01/27/2022 13:37	WG1808148
4-Nitrophenol	U		0.143	10.0	1	01/27/2022 13:37	WG1808148
Pentachlorophenol	U		0.313	10.0	1	01/27/2022 13:37	WG1808148
Phenol	U		4.33	10.0	1	01/27/2022 13:37	WG1808148
2,4,6-Trichlorophenol	U		0.100	10.0	1	01/27/2022 13:37	WG1808148
(S) 2-Fluorophenol	*28.4*			*10.0-120*		*01/27/2022 13:37*	WG1808148
(S) Phenol-d5	*17.5*			*10.0-120*		*01/27/2022 13:37*	WG1808148
(S) Nitrobenzene-d5	*59.7*			*10.0-127*		*01/27/2022 13:37*	WG1808148
(S) 2-Fluorobiphenyl	*64.9*			*10.0-130*		*01/27/2022 13:37*	WG1808148
(S) 2,4,6-Tribromophenol	*56.6*			*10.0-155*		*01/27/2022 13:37*	WG1808148
(S) p-Terphenyl-d14	*77.0*			*10.0-128*		*01/27/2022 13:37*	WG1808148

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Anthracene	U		0.0190	0.0500	1	01/27/2022 03:52	WG1807883
Acenaphthene	U		0.0190	0.0500	1	01/27/2022 03:52	WG1807883
Acenaphthylene	U		0.0171	0.0500	1	01/27/2022 03:52	WG1807883
Benzo(a)anthracene	U		0.0203	0.0500	1	01/27/2022 03:52	WG1807883
Benzo(a)pyrene	U		0.0184	0.0500	1	01/27/2022 03:52	WG1807883
Benzo(b)fluoranthene	U		0.0168	0.0500	1	01/27/2022 03:52	WG1807883
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	01/27/2022 03:52	WG1807883
Benzo(k)fluoranthene	U		0.0202	0.0500	1	01/27/2022 03:52	WG1807883
Chrysene	U		0.0179	0.0500	1	01/27/2022 03:52	WG1807883
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	01/27/2022 03:52	WG1807883
Fluoranthene	U		0.0270	0.100	1	01/27/2022 03:52	WG1807883
Fluorene	U		0.0169	0.0500	1	01/27/2022 03:52	WG1807883
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	01/27/2022 03:52	WG1807883
Naphthalene	U		0.0917	0.250	1	01/27/2022 03:52	WG1807883
Phenanthrene	U		0.0180	0.0500	1	01/27/2022 03:52	WG1807883
Pyrene	U		0.0169	0.0500	1	01/27/2022 03:52	WG1807883
1-Methylnaphthalene	U		0.0687	0.250	1	01/27/2022 03:52	WG1807883
2-Methylnaphthalene	U		0.0674	0.250	1	01/27/2022 03:52	WG1807883
2-Chloronaphthalene	U		0.0682	0.250	1	01/27/2022 03:52	WG1807883
Tetraethyllead	U		0.0338	0.0500	1	01/27/2022 03:52	WG1807883
(S) Nitrobenzene-d5	*96.3*			*31.0-160*		*01/27/2022 03:52*	WG1807883
(S) 2-Fluorobiphenyl	*107*			*48.0-148*		*01/27/2022 03:52*	WG1807883
(S) p-Terphenyl-d14	*112*			*37.0-146*		*01/27/2022 03:52*	WG1807883

Volatile Organic Compounds (GC/MS) by Method 8260B-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	U		0.597	3.00	1	01/26/2022 14:56	WG1808136
(S) Toluene-d8	*104*			*77.0-127*		*01/26/2022 14:56*	WG1808136

QUALITY CONTROL SUMMARY

L1454394-02,03,04

Method Blank (MB)

(MB) R3755902-1 02/01/22 20:47

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Cyanide	U		1.80	5.00

L1453392-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1453392-01 02/01/22 20:51 • (DUP) R3755902-3 02/01/22 20:52

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	29.3	30.2	1	3.03		20

L1454394-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1454394-04 02/01/22 21:03 • (DUP) R3755902-6 02/01/22 21:04

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3755902-2 02/01/22 20:48

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cyanide	100	98.6	98.6	87.1-120	

L1454327-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1454327-01 02/01/22 20:53 • (MS) R3755902-4 02/01/22 20:54 • (MSD) R3755902-5 02/01/22 20:55

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	100	U	95.2	83.3	95.2	83.3	1	90.0-110		J6	13.3	20

L1454394-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1454394-02 02/01/22 20:59 • (MS) R3755902-7 02/01/22 21:42 • (MSD) R3755902-8 02/01/22 21:43

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	100	U	93.3	71.8	93.3	71.8	1	90.0-110		J3 J6	26.0	20

QUALITY CONTROL SUMMARY

L1454394-01

Method Blank (MB)

(MB) R3756164-1 02/02/22 12:50

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Cyanide	U		1.80	5.00

L1454629-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1454629-01 02/02/22 12:58 • (DUP) R3756164-3 02/02/22 12:59

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	U	U	1	0.000		20

L1454740-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1454740-02 02/02/22 13:12 • (DUP) R3756164-6 02/02/22 13:15

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3756164-2 02/02/22 12:51

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cyanide	100	99.0	99.0	87.1-120	

L1454699-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1454699-02 02/02/22 13:05 • (MS) R3756164-4 02/02/22 13:06 • (MSD) R3756164-5 02/02/22 13:07

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	100	27.1	120	117	92.9	89.9	1	90.0-110		J6	2.53	20

L1455208-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1455208-02 02/02/22 13:21 • (MS) R3756164-7 02/02/22 13:22 • (MSD) R3756164-8 02/02/22 13:23

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	100	U	40.8	33.1	40.8	33.1	1	90.0-110	J6	J3 J6	20.8	20

QUALITY CONTROL SUMMARY

L1454394-01,02,03,04

Method Blank (MB)

(MB) R3754586-1 01/28/22 10:28

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Mercury	U		0.100	0.200

Laboratory Control Sample (LCS)

(LCS) R3754586-2 01/28/22 10:30

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Mercury	3.00	3.06	102	80.0-120	

L1455026-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1455026-10 01/28/22 10:37 • (MS) R3754586-3 01/28/22 10:39 • (MSD) R3754586-4 01/28/22 10:41

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Mercury	3.00	U	3.01	3.04	100	101	1	75.0-125			0.992	20

Method Blank (MB)

(MB) R3755926-1 02/01/22 21:46

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Arsenic	U		4.40	10.0
Barium	U		0.736	5.00
Boron	U		20.0	200
Calcium	U		79.3	1000
Chromium	U		1.40	10.0
Cobalt	U		0.840	10.0
Iron	U		18.0	100
Magnesium	U		85.3	1000
Manganese	U		0.934	10.0
Molybdenum	U		1.16	5.00
Nickel	U		1.61	10.0
Potassium	U		261	2000
Sodium	U		504	3000
Strontium	U		0.640	10.0
Zinc	U		6.52	50.0

Laboratory Control Sample (LCS)

(LCS) R3755926-2 02/01/22 21:48

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	1000	947	94.7	80.0-120	
Barium	1000	1000	100	80.0-120	
Boron	1000	969	96.9	80.0-120	
Calcium	10000	9900	99.0	80.0-120	
Chromium	1000	964	96.4	80.0-120	
Cobalt	1000	993	99.3	80.0-120	
Iron	10000	9730	97.3	80.0-120	
Magnesium	10000	9860	98.6	80.0-120	
Manganese	1000	979	97.9	80.0-120	
Molybdenum	1000	1020	102	80.0-120	
Nickel	1000	970	97.0	80.0-120	
Potassium	10000	8980	89.8	80.0-120	
Sodium	10000	10600	106	80.0-120	
Strontium	1000	976	97.6	80.0-120	
Zinc	1000	965	96.5	80.0-120	

L1454161-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1454161-01 02/01/22 21:51 • (MS) R3755926-4 02/01/22 21:57 • (MSD) R3755926-5 02/01/22 21:59

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	1000	24.6	1060	1050	103	102	1	75.0-125			0.966	20
Barium	1000	1660	2600	2600	94.6	94.1	1	75.0-125			0.183	20
Boron	1000	239	1210	1190	97.0	95.3	1	75.0-125			1.36	20
Calcium	10000	62400	71700	72000	92.1	95.1	1	75.0-125			0.415	20
Chromium	1000	U	961	945	96.1	94.5	1	75.0-125			1.72	20
Cobalt	1000	U	1050	1040	105	104	1	75.0-125			1.01	20
Iron	10000	2530	12100	11900	95.8	93.6	1	75.0-125			1.84	20
Magnesium	10000	138000	146000	145000	82.6	70.6	1	75.0-125		V	0.819	20
Manganese	1000	72.7	1030	1020	96.1	94.4	1	75.0-125			1.69	20
Molybdenum	1000	1.27	1030	1020	103	102	1	75.0-125			1.30	20
Nickel	1000	4.03	1010	1000	100	99.9	1	75.0-125			0.576	20
Potassium	10000	21300	31700	31700	104	104	1	75.0-125			0.148	20
Sodium	10000	1770000	1740000	1760000	0.000	0.000	1	75.0-125	E V	E V	1.04	20
Strontium	1000	1430	2430	2400	99.8	97.0	1	75.0-125			1.17	20
Zinc	1000	U	978	966	97.8	96.6	1	75.0-125			1.23	20

Method Blank (MB)

(MB) R3756924-1 02/03/22 22:05

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Aluminum	U		18.5	100
Antimony	U		1.03	4.00
Beryllium	U		0.190	2.00
Cadmium	U		0.150	1.00
Lead	U		0.849	2.00
Silver	U		0.0700	2.00
Thallium	U		0.121	2.00
Vanadium	U		0.664	5.00

Method Blank (MB)

(MB) R3756987-1 02/04/22 13:25

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Selenium	U		0.300	2.00
Titanium	U		2.18	20.0

Laboratory Control Sample (LCS)

(LCS) R3756924-2 02/03/22 22:08

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aluminum	5000	4770	95.5	80.0-120	
Antimony	50.0	47.8	95.7	80.0-120	
Beryllium	50.0	47.0	93.9	80.0-120	
Cadmium	50.0	49.7	99.3	80.0-120	
Lead	50.0	47.8	95.5	80.0-120	
Silver	50.0	47.9	95.8	80.0-120	
Thallium	50.0	46.0	92.1	80.0-120	
Vanadium	50.0	49.0	98.0	80.0-120	

Laboratory Control Sample (LCS)

(LCS) R3756987-2 02/04/22 13:29

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Selenium	50.0	52.6	105	80.0-120	
Titanium	50.0	50.1	100	80.0-120	

L1455648-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1455648-01 02/03/22 22:12 • (MS) R3756924-4 02/03/22 22:18 • (MSD) R3756924-5 02/03/22 22:22

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cadmium	50.0	U	44.0	47.2	88.1	94.3	10	75.0-125			6.87	20
Lead	50.0	U	46.2	44.0	92.3	88.1	10	75.0-125			4.71	20
Silver	50.0	U	46.2	46.3	92.4	92.7	10	75.0-125			0.340	20

L1455648-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1455648-01 02/03/22 22:25 • (MS) R3756924-7 02/03/22 22:32 • (MSD) R3756924-8 02/03/22 22:35

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony	50.0	U	51.5	51.2	103	102	1	75.0-125			0.646	20
Beryllium	50.0	U	44.7	46.7	89.5	93.5	1	75.0-125			4.37	20
Cadmium	50.0	U	49.1	48.7	98.1	97.4	1	75.0-125			0.773	20
Lead	50.0	U	47.3	47.0	94.7	94.0	1	75.0-125			0.689	20
Silver	50.0	U	46.6	46.3	93.2	92.7	1	75.0-125			0.541	20
Thallium	50.0	U	47.2	46.3	94.3	92.7	1	75.0-125			1.72	20
Vanadium	50.0	2.30	48.5	49.5	92.4	94.3	1	75.0-125			2.01	20

L1455648-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1455648-01 02/04/22 13:32 • (MS) R3756987-4 02/04/22 13:39 • (MSD) R3756987-5 02/04/22 13:42

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum	5000	294	5130	5030	96.7	94.8	10	75.0-125			1.96	20
Selenium	50.0	U	55.8	49.6	112	99.1	10	75.0-125			11.9	20
Titanium	50.0	U	49.6	47.7	99.2	95.4	10	75.0-125			3.81	20

Method Blank (MB)

(MB) R3753751-2 01/26/22 12:10

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methanol	U		4950	10000
Ethanol	U		4760	10000

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3753751-1 01/26/22 12:04 • (LCSD) R3753751-3 01/26/22 12:15

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Methanol	50000	52700	53500	105	107	61.0-132			1.51	21
Ethanol	50000	48600	48100	97.2	96.2	64.0-130			1.03	20

Method Blank (MB)

(MB) R3754677-3 01/25/22 22:42

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		11.3	50.0
Benzene	U		0.0941	1.00
Bromodichloromethane	U		0.136	1.00
Bromoform	U		0.129	1.00
Bromomethane	U		0.605	5.00
Carbon disulfide	U		0.0962	1.00
Carbon tetrachloride	U		0.128	1.00
Chlorobenzene	U		0.116	1.00
Chloroethane	U		0.192	5.00
Chloroform	U		0.111	5.00
Cyclohexane	U		0.188	1.00
1,2-Dichlorobenzene	U		0.107	1.00
1,3-Dichlorobenzene	U		0.110	1.00
1,4-Dichlorobenzene	U		0.120	1.00
1,1-Dichloroethane	U		0.100	1.00
1,2-Dichloroethane	U		0.0819	1.00
1,1-Dichloroethene	U		0.188	1.00
cis-1,2-Dichloroethene	U		0.126	1.00
trans-1,2-Dichloroethene	U		0.149	1.00
1,2-Dichloropropane	U		0.149	1.00
1,3-Dichloropropane	U		0.110	1.00
cis-1,3-Dichloropropene	U		0.111	1.00
trans-1,3-Dichloropropene	U		0.118	1.00
Di-isopropyl ether	U		0.105	1.00
Ethylbenzene	U		0.137	1.00
Ethanol	U		42.0	100
Hexachloro-1,3-butadiene	U		0.337	1.00
n-Hexane	U		0.749	10.0
Isopropylbenzene	U		0.105	1.00
2-Butanone (MEK)	U		1.19	10.0
Methylene Chloride	U		0.430	5.00
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0
Methyl tert-butyl ether	U		0.101	1.00
1-Methylnaphthalene	U		7.30	10.0
2-Methylnaphthalene	U		7.18	10.0
Naphthalene	U		1.00	5.00
Styrene	U		0.118	1.00
1,1,1,2-Tetrachloroethane	U		0.147	1.00
1,1,2,2-Tetrachloroethane	U		0.133	1.00
Tetrachloroethene	U		0.300	1.00

Method Blank (MB)

(MB) R3754677-3 01/25/22 22:42

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Toluene	U		0.278	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.481	1.00
1,1,1-Trichloroethane	U		0.149	1.00
1,1,2-Trichloroethane	U		0.158	1.00
Trichloroethene	U		0.190	1.00
1,2,4-Trimethylbenzene	U		0.322	1.00
1,3,5-Trimethylbenzene	U		0.104	1.00
Vinyl acetate	U		0.692	10.0
Vinyl chloride	U		0.234	1.00
Xylenes, Total	U		0.174	3.00
tert-Amyl Methyl Ether	U		0.195	1.00
Ethyl tert-butyl ether	U		0.101	1.00
tert-Butyl alcohol	U		4.06	5.00
3,3-Dimethyl-1-butanol	U		4.51	100
t-Amyl Alcohol	U		4.90	50.0
tert-Butyl formate	U		4.51	20.0
(S) Toluene-d8	*109*			*80.0-120*
(S) 4-Bromofluorobenzene	*101*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*94.9*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3754677-1 01/25/22 21:38 • (LCSD) R3754677-2 01/25/22 22:00

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
t-Amyl Alcohol	25.0	21.7	23.2	86.8	92.8	50.0-160			6.68	25
Acetone	25.0	23.6	27.2	94.4	109	19.0-160			14.2	27
Benzene	5.00	5.62	5.40	112	108	70.0-123			3.99	20
Bromodichloromethane	5.00	4.77	4.24	95.4	84.8	75.0-120			11.8	20
Bromoform	5.00	3.63	3.47	72.6	69.4	68.0-132			4.51	20
Bromomethane	5.00	5.01	3.16	100	63.2	10.0-160		J3	45.3	25
Carbon disulfide	5.00	4.51	4.05	90.2	81.0	61.0-128			10.7	20
Carbon tetrachloride	5.00	4.22	4.13	84.4	82.6	68.0-126			2.16	20
Chlorobenzene	5.00	5.53	4.86	111	97.2	80.0-121			12.9	20
Chloroethane	5.00	5.26	4.49	105	89.8	47.0-150			15.8	20
Chloroform	5.00	5.75	5.38	115	108	73.0-120			6.65	20
Cyclohexane	5.00	4.83	4.71	96.6	94.2	71.0-124			2.52	20
1,2-Dichlorobenzene	5.00	5.96	4.78	119	95.6	79.0-121		J3	22.0	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3754677-1 01/25/22 21:38 • (LCSD) R3754677-2 01/25/22 22:00

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,3-Dichlorobenzene	5.00	5.74	4.98	115	99.6	79.0-120			14.2	20
1,4-Dichlorobenzene	5.00	5.10	4.39	102	87.8	79.0-120			15.0	20
1,1-Dichloroethane	5.00	5.24	4.96	105	99.2	70.0-126			5.49	20
1,2-Dichloroethane	5.00	5.26	4.48	105	89.6	70.0-128			16.0	20
1,1-Dichloroethene	5.00	4.82	4.26	96.4	85.2	71.0-124			12.3	20
cis-1,2-Dichloroethene	5.00	5.12	4.67	102	93.4	73.0-120			9.19	20
trans-1,2-Dichloroethene	5.00	4.90	4.80	98.0	96.0	73.0-120			2.06	20
1,2-Dichloropropane	5.00	5.18	5.15	104	103	77.0-125			0.581	20
1,3-Dichloropropane	5.00	5.43	5.19	109	104	80.0-120			4.52	20
cis-1,3-Dichloropropene	5.00	4.74	4.39	94.8	87.8	80.0-123			7.67	20
trans-1,3-Dichloropropene	5.00	4.64	3.79	92.8	75.8	78.0-124		J3 J4	20.2	20
Di-isopropyl ether	5.00	5.34	5.00	107	100	58.0-138			6.58	20
Ethylbenzene	5.00	5.04	4.62	101	92.4	79.0-123			8.70	20
Hexachloro-1,3-butadiene	5.00	4.89	4.55	97.8	91.0	54.0-138			7.20	20
n-Hexane	5.00	4.65	4.48	93.0	89.6	57.0-133			3.72	20
Isopropylbenzene	5.00	5.39	4.90	108	98.0	76.0-127			9.52	20
2-Butanone (MEK)	25.0	23.1	24.8	92.4	99.2	44.0-160			7.10	20
Methylene Chloride	5.00	5.40	4.91	108	98.2	67.0-120			9.51	20
4-Methyl-2-pentanone (MIBK)	25.0	25.6	23.7	102	94.8	68.0-142			7.71	20
Methyl tert-butyl ether	5.00	5.86	5.44	117	109	68.0-125			7.43	20
1-Methylnaphthalene	5.00	4.11	4.76	82.2	95.2	14.0-154			14.7	40
2-Methylnaphthalene	5.00	2.61	3.26	52.2	65.2	15.0-159			22.1	40
Naphthalene	5.00	5.25	5.42	105	108	54.0-135			3.19	20
Styrene	5.00	4.78	4.35	95.6	87.0	73.0-130			9.42	20
1,1,1,2-Tetrachloroethane	5.00	4.32	3.82	86.4	76.4	75.0-125			12.3	20
1,1,2,2-Tetrachloroethane	5.00	5.25	4.85	105	97.0	65.0-130			7.92	20
Tetrachloroethene	5.00	5.01	4.65	100	93.0	72.0-132			7.45	20
Toluene	5.00	5.74	5.15	115	103	79.0-120			10.8	20
1,2,3-Trichlorobenzene	5.00	4.89	5.03	97.8	101	50.0-138			2.82	20
1,2,4-Trichlorobenzene	5.00	4.47	4.29	89.4	85.8	57.0-137			4.11	20
1,1,1-Trichloroethane	5.00	5.22	4.91	104	98.2	73.0-124			6.12	20
1,1,2-Trichloroethane	5.00	5.25	4.81	105	96.2	80.0-120			8.75	20
Trichloroethene	5.00	4.69	4.35	93.8	87.0	78.0-124			7.52	20
1,2,4-Trimethylbenzene	5.00	6.24	5.43	125	109	76.0-121	J4		13.9	20
1,3,5-Trimethylbenzene	5.00	5.72	5.24	114	105	76.0-122			8.76	20
Vinyl acetate	25.0	21.8	20.4	87.2	81.6	11.0-160			6.64	20
Vinyl chloride	5.00	5.78	5.19	116	104	67.0-131			10.8	20
Xylenes, Total	15.0	16.4	14.9	109	99.3	79.0-123			9.58	20
ethanol	250	178	249	71.2	99.6	10.0-160		J3	33.3	30
tert-Butyl alcohol	25.0	22.0	23.3	88.0	93.2	27.0-160			5.74	30

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3754677-1 01/25/22 21:38 • (LCSD) R3754677-2 01/25/22 22:00

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
tert-Amyl Methyl Ether	5.00	6.00	5.59	120	112	66.0-125			7.08	20
Ethyl tert-butyl ether	5.00	5.35	5.19	107	104	63.0-138			3.04	20
(S) Toluene-d8				*104*	*99.8*	*80.0-120*				
(S) 4-Bromofluorobenzene				*97.9*	*96.3*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*91.8*	*97.6*	*70.0-130*				

Method Blank (MB)

(MB) R3754747-3 01/26/22 11:08

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
1,4-Dioxane	U		0.597	3.00
(S) Toluene-d8	*85.1*			*77.0-127*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3754747-1 01/26/22 10:08 • (LCSD) R3754747-2 01/26/22 10:29

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
1,4-Dioxane	50.0	47.1	45.2	94.2	90.4	55.0-138			4.12	24
(S) Toluene-d8				*99.4*	*92.1*	*77.0-127*				

Method Blank (MB)

(MB) R3755016-2 01/29/22 16:18

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
1,4-Dioxane	U		0.597	3.00
(S) Toluene-d8	*98.2*			*77.0-127*

Laboratory Control Sample (LCS)

(LCS) R3755016-1 01/29/22 12:27

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
1,4-Dioxane	50.0	43.3	86.6	55.0-138	
(S) Toluene-d8			*89.2*	*77.0-127*	

Method Blank (MB)

(MB) R3755507-3 01/31/22 22:07

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
1,4-Dioxane	U		0.597	3.00
(S) Toluene-d8	*100*			*77.0-127*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3755507-1 01/31/22 21:07 • (LCSD) R3755507-2 01/31/22 21:27

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,4-Dioxane	50.0	47.5	43.8	95.0	87.6	55.0-138			8.11	24
(S) Toluene-d8				*98.5*	*99.4*	*77.0-127*				

Method Blank (MB)

(MB) R3754590-2 01/27/22 11:52

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acenaphthene	U		0.0886	1.00
Acenaphthylene	U		0.0921	1.00
Anthracene	U		0.0804	1.00
Benzidine	U		3.74	10.0
Benzo(a)anthracene	U		0.199	1.00
Benzo(b)fluoranthene	U		0.130	1.00
Benzo(k)fluoranthene	U		0.120	1.00
Benzo(g,h,i)perylene	U		0.121	1.00
Benzo(a)pyrene	U		0.0381	1.00
Bis(2-chlorethoxy)methane	U		0.116	10.0
Bis(2-chloroethyl)ether	U		0.137	10.0
2,2-oxybis(1-chloropropane)	U		0.210	10.0
4-Bromophenyl-phenylether	U		0.0877	10.0
2-Chloronaphthalene	U		0.0648	1.00
4-Chlorophenyl-phenylether	U		0.0926	10.0
Chrysene	U		0.130	1.00
Dibenz(a,h)anthracene	U		0.0644	1.00
1,2-Dichlorobenzene	U		0.0713	10.0
1,3-Dichlorobenzene	U		0.132	10.0
1,4-Dichlorobenzene	U		0.0942	10.0
3,3-Dichlorobenzidine	U		0.212	10.0
2,4-Dinitrotoluene	U		0.0983	10.0
2,6-Dinitrotoluene	U		0.250	10.0
Fluoranthene	U		0.102	1.00
Fluorene	U		0.0844	1.00
Hexachlorobenzene	U		0.0755	1.00
Hexachloro-1,3-butadiene	U		0.0968	10.0
Hexachlorocyclopentadiene	U		0.0598	10.0
Hexachloroethane	U		0.127	10.0
Indeno(1,2,3-cd)pyrene	U		0.279	1.00
Isophorone	U		0.143	10.0
Naphthalene	U		0.159	1.00
Nitrobenzene	U		0.297	10.0
n-Nitrosodimethylamine	U		0.998	10.0
n-Nitrosodiphenylamine	U		2.37	10.0
n-Nitrosodi-n-propylamine	U		0.261	10.0
Phenanthrene	U		0.112	1.00
Benzylbutyl phthalate	U		0.765	3.00
Bis(2-ethylhexyl)phthalate	U		0.895	3.00
Di-n-butyl phthalate	U		0.453	3.00

Method Blank (MB)

(MB) R3754590-2 01/27/22 11:52

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Diethyl phthalate	U		0.287	3.00
Dimethyl phthalate	U		0.260	3.00
Di-n-octyl phthalate	U		0.932	3.00
Pyrene	U		0.107	1.00
1,2,4-Trichlorobenzene	U		0.0698	10.0
4-Chloro-3-methylphenol	U		0.131	10.0
2-Chlorophenol	U		0.133	10.0
2-Nitrophenol	U		0.117	10.0
4-Nitrophenol	U		0.143	10.0
Pentachlorophenol	U		0.313	10.0
Phenol	U		4.33	10.0
2,4,6-Trichlorophenol	U		0.100	10.0
2,4-Dichlorophenol	U		0.102	10.0
2,4-Dimethylphenol	U		0.0636	10.0
4,6-Dinitro-2-methylphenol	U		1.12	10.0
2,4-Dinitrophenol	U		5.93	10.0
(S) Nitrobenzene-d5	*65.5*			*10.0-127*
(S) 2-Fluorobiphenyl	*71.4*			*10.0-130*
(S) p-Terphenyl-d14	*86.7*			*10.0-128*
(S) Phenol-d5	*20.1*			*10.0-120*
(S) 2-Fluorophenol	*34.9*			*10.0-120*
(S) 2,4,6-Tribromophenol	*66.0*			*10.0-155*

Laboratory Control Sample (LCS)

(LCS) R3754590-1 01/27/22 11:12

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	50.0	38.8	77.6	41.0-120	
Acenaphthylene	50.0	42.5	85.0	43.0-120	
Anthracene	50.0	42.5	85.0	45.0-120	
Benzidine	100	5.10	5.10	10.0-120	J4
Benzo(a)anthracene	50.0	44.6	89.2	47.0-120	
Benzo(b)fluoranthene	50.0	43.0	86.0	46.0-120	
Benzo(k)fluoranthene	50.0	44.0	88.0	46.0-120	
Benzo(g,h,i)perylene	50.0	43.1	86.2	48.0-121	
Benzo(a)pyrene	50.0	44.9	89.8	47.0-120	
Bis(2-chlorethoxy)methane	50.0	34.6	69.2	33.0-120	
Bis(2-chloroethyl)ether	50.0	39.1	78.2	23.0-120	

Laboratory Control Sample (LCS)

(LCS) R3754590-1 01/27/22 11:12

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
2,2-oxybis(1-chloropropane)	50.0	37.3	74.6	28.0-120	
4-Bromophenyl-phenylether	50.0	40.7	81.4	45.0-120	
2-Chloronaphthalene	50.0	37.6	75.2	37.0-120	
4-Chlorophenyl-phenylether	50.0	41.4	82.8	44.0-120	
Chrysene	50.0	44.0	88.0	48.0-120	
Dibenz(a,h)anthracene	50.0	43.2	86.4	47.0-120	
3,3-Dichlorobenzidine	100	78.9	78.9	44.0-120	
2,4-Dinitrotoluene	50.0	43.3	86.6	49.0-124	
2,6-Dinitrotoluene	50.0	40.8	81.6	46.0-120	
Fluoranthene	50.0	45.4	90.8	51.0-120	
Fluorene	50.0	42.2	84.4	47.0-120	
Hexachlorobenzene	50.0	40.8	81.6	44.0-120	
Hexachloro-1,3-butadiene	50.0	30.5	61.0	19.0-120	
Hexachlorocyclopentadiene	50.0	21.4	42.8	15.0-120	
Hexachloroethane	50.0	35.7	71.4	15.0-120	
Indeno(1,2,3-cd)pyrene	50.0	43.8	87.6	49.0-122	
Isophorone	50.0	35.2	70.4	36.0-120	
Naphthalene	50.0	33.5	67.0	27.0-120	
Nitrobenzene	50.0	31.5	63.0	27.0-120	
n-Nitrosodimethylamine	50.0	19.7	39.4	10.0-120	
n-Nitrosodiphenylamine	50.0	37.1	74.2	47.0-120	
n-Nitrosodi-n-propylamine	50.0	41.6	83.2	31.0-120	
Phenanthrene	50.0	42.6	85.2	46.0-120	
Benzylbutyl phthalate	50.0	42.5	85.0	43.0-121	
Bis(2-ethylhexyl)phthalate	50.0	44.2	88.4	43.0-122	
Di-n-butyl phthalate	50.0	48.2	96.4	49.0-121	
Diethyl phthalate	50.0	44.7	89.4	48.0-122	
Dimethyl phthalate	50.0	43.2	86.4	48.0-120	
Di-n-octyl phthalate	50.0	43.5	87.0	42.0-125	
Pyrene	50.0	41.8	83.6	47.0-120	
1,2,4-Trichlorobenzene	50.0	30.9	61.8	24.0-120	
4-Chloro-3-methylphenol	50.0	30.8	61.6	40.0-120	
2-Chlorophenol	50.0	30.6	61.2	25.0-120	
2,4-Dichlorophenol	50.0	30.9	61.8	36.0-120	
2,4-Dimethylphenol	50.0	29.4	58.8	33.0-120	
4,6-Dinitro-2-methylphenol	50.0	39.4	78.8	38.0-138	
2,4-Dinitrophenol	50.0	33.6	67.2	10.0-120	
2-Nitrophenol	50.0	30.5	61.0	31.0-120	
4-Nitrophenol	50.0	11.9	23.8	10.0-120	
Pentachlorophenol	50.0	35.2	70.4	23.0-120	

Laboratory Control Sample (LCS)

(LCS) R3754590-1 01/27/22 11:12

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Phenol	50.0	10.6	21.2	10.0-120	
2,4,6-Trichlorophenol	50.0	36.2	72.4	42.0-120	
1,2-Dichlorobenzene	50.0	36.2	72.4	20.0-120	
1,3-Dichlorobenzene	50.0	35.7	71.4	17.0-120	
1,4-Dichlorobenzene	50.0	35.7	71.4	18.0-120	
(S) Nitrobenzene-d5			*55.7*	*10.0-127*	
(S) 2-Fluorobiphenyl			*71.3*	*10.0-130*	
(S) p-Terphenyl-d14			*75.5*	*10.0-128*	
(S) Phenol-d5			*20.3*	*10.0-120*	
(S) 2-Fluorophenol			*31.2*	*10.0-120*	
(S) 2,4,6-Tribromophenol			*72.0*	*10.0-155*	

L1454361-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1454361-03 01/28/22 19:14 • (MS) R3755191-1 01/28/22 19:36 • (MSD) R3755191-2 01/28/22 19:57

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	50.0	U	33.8	33.7	67.6	67.4	5	28.0-120			0.296	25
Acenaphthylene	50.0	U	33.3	34.1	66.6	68.2	5	31.0-121			2.37	25
Anthracene	50.0	U	38.2	37.5	76.4	75.0	5	36.0-120			1.85	23
Benzidine	100	U	U	U	0.000	0.000	5	10.0-120	J6	J6	0.000	37
Benzo(a)anthracene	50.0	U	38.1	37.6	76.2	75.2	5	39.0-120			1.32	23
Benzo(b)fluoranthene	50.0	U	36.8	37.2	73.6	74.4	5	37.0-120			1.08	23
Benzo(k)fluoranthene	50.0	U	37.7	36.6	75.4	73.2	5	37.0-120			2.96	26
Benzo(g,h,i)perylene	50.0	U	36.4	35.2	72.8	70.4	5	37.0-123			3.35	25
Benzo(a)pyrene	50.0	U	37.2	37.7	74.4	75.4	5	37.0-120			1.34	24
Bis(2-chlorethoxy)methane	50.0	U	32.9	31.6	65.8	63.2	5	17.0-120			4.03	31
Bis(2-chloroethyl)ether	50.0	U	28.6	28.8	57.2	57.6	5	14.0-120			0.697	33
2,2-oxybis(1-chloropropane)	50.0	U	28.9	27.3	57.8	54.6	5	18.0-120			5.69	34
4-Bromophenyl-phenylether	50.0	U	40.3	41.9	80.6	83.8	5	37.0-120			3.89	24
2-Chloronaphthalene	50.0	U	34.7	33.6	69.4	67.2	5	29.0-120			3.22	28
4-Chlorophenyl-phenylether	50.0	U	33.0	32.7	66.0	65.4	5	36.0-120			0.913	23
Chrysene	50.0	U	39.2	37.4	78.4	74.8	5	38.0-120			4.70	23
Dibenz(a,h)anthracene	50.0	U	35.4	35.1	70.8	70.2	5	36.0-121			0.851	24
3,3-Dichlorobenzidine	100	U	42.0	40.4	42.0	40.4	5	10.0-134			3.88	30
2,4-Dinitrotoluene	50.0	U	30.4	32.0	60.8	64.0	5	39.0-125			5.13	25
2,6-Dinitrotoluene	50.0	U	32.8	33.7	65.6	67.4	5	36.0-120			2.71	27
Fluoranthene	50.0	U	31.4	31.0	62.8	62.0	5	41.0-121			1.28	22
Fluorene	50.0	U	33.0	33.4	66.0	66.8	5	37.0-120			1.20	24

L1454361-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1454361-03 01/28/22 19:14 • (MS) R3755191-1 01/28/22 19:36 • (MSD) R3755191-2 01/28/22 19:57

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexachlorobenzene	50.0	U	40.9	42.8	81.8	85.6	5	35.0-122			4.54	24
Hexachloro-1,3-butadiene	50.0	U	32.2	29.8	64.4	59.6	5	12.0-120			7.74	34
Hexachlorocyclopentadiene	50.0	U	13.5	12.5	27.0	25.0	5	10.0-120			7.69	33
Hexachloroethane	50.0	U	29.5	26.4	59.0	52.8	5	10.0-120			11.1	40
Indeno(1,2,3-cd)pyrene	50.0	U	38.4	36.7	76.8	73.4	5	38.0-125			4.53	24
Isophorone	50.0	U	32.9	32.7	65.8	65.4	5	21.0-120			0.610	27
Naphthalene	50.0	U	30.0	27.8	60.0	55.6	5	10.0-120			7.61	31
Nitrobenzene	50.0	U	34.1	33.1	68.2	66.2	5	12.0-120			2.98	30
n-Nitrosodimethylamine	50.0	U	18.9	23.9	37.8	47.8	5	10.0-120			23.4	40
n-Nitrosodiphenylamine	50.0	U	40.8	40.7	81.6	81.4	5	37.0-120			0.245	24
n-Nitrosodi-n-propylamine	50.0	U	31.8	33.3	63.6	66.6	5	16.0-120			4.61	30
Phenanthrene	50.0	U	36.9	37.8	73.8	75.6	5	33.0-120			2.41	22
Benzylbutyl phthalate	50.0	U	49.5	47.9	99.0	95.8	5	34.0-126			3.29	24
Bis(2-ethylhexyl)phthalate	50.0	U	46.8	45.5	93.6	91.0	5	33.0-126			2.82	25
Di-n-butyl phthalate	50.0	U	40.4	40.9	80.8	81.8	5	35.0-128			1.23	23
Diethyl phthalate	50.0	U	34.9	35.7	69.8	71.4	5	39.0-125			2.27	24
Dimethyl phthalate	50.0	U	33.6	35.1	67.2	70.2	5	37.0-120			4.37	24
Di-n-octyl phthalate	50.0	U	43.4	41.7	86.8	83.4	5	25.0-135			4.00	26
Pyrene	50.0	U	42.8	43.7	85.6	87.4	5	39.0-120			2.08	22
1,2,4-Trichlorobenzene	50.0	U	31.6	29.1	63.2	58.2	5	15.0-120			8.24	31
4-Chloro-3-methylphenol	50.0	U	26.3	24.4	52.6	48.8	5	26.0-120			7.50	27
2-Chlorophenol	50.0	U	23.0	19.4	46.0	38.8	5	18.0-120			17.0	34
2,4-Dichlorophenol	50.0	U	27.6	26.5	55.2	53.0	5	19.0-120			4.07	27
2,4-Dimethylphenol	50.0	U	30.1	28.0	60.2	56.0	5	15.0-120			7.23	28
4,6-Dinitro-2-methylphenol	50.0	U	10.4	10.7	20.8	21.4	5	10.0-144			2.84	39
2,4-Dinitrophenol	50.0	U	U	U	0.000	0.000	5	10.0-120	J6	J6	0.000	40
2-Nitrophenol	50.0	U	28.4	26.9	56.8	53.8	5	20.0-120			5.42	30
4-Nitrophenol	50.0	U	7.59	6.18	15.2	12.4	5	10.0-120			20.5	40
1,2-Dichlorobenzene	50.0	U	27.8	26.1	55.6	52.2	5	18.0-120			6.31	40
Pentachlorophenol	50.0	U	27.7	25.2	55.4	50.4	5	10.0-128			9.45	37
1,3-Dichlorobenzene	50.0	U	26.6	25.4	53.2	50.8	5	15.0-120			4.62	40
Phenol	50.0	U	22.3	U	44.6	0.000	5	10.0-120		J3 J6	200	40
1,4-Dichlorobenzene	50.0	1.36	29.0	26.9	55.3	51.1	5	17.0-120			7.51	40
2,4,6-Trichlorophenol	50.0	U	32.2	29.6	64.4	59.2	5	26.0-120			8.41	31
(S) Nitrobenzene-d5					*60.0*	*57.8*		*10.0-127*				
(S) 2-Fluorobiphenyl					*71.4*	*71.5*		*10.0-130*				
(S) p-Terphenyl-d14					*94.9*	*93.2*		*10.0-128*				
(S) Phenol-d5					*21.6*	*16.9*		*10.0-120*				
(S) 2-Fluorophenol					*25.5*	*22.2*		*10.0-120*				
(S) 2,4,6-Tribromophenol					*69.0*	*60.0*		*10.0-155*				

L1454361-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1454361-03 01/28/22 19:14 • (MS) R3755191-1 01/28/22 19:36 • (MSD) R3755191-2 01/28/22 19:57

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %

Sample Narrative:

OS: Dilution due to matrix.

Method Blank (MB)

(MB) R3754228-3 01/26/22 19:17

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Anthracene	U		0.0190	0.0500
Acenaphthene	U		0.0190	0.0500
Acenaphthylene	U		0.0171	0.0500
Benzo(a)anthracene	U		0.0203	0.0500
Benzo(a)pyrene	U		0.0184	0.0500
Benzo(b)fluoranthene	U		0.0168	0.0500
Benzo(g,h,i)perylene	U		0.0184	0.0500
Benzo(k)fluoranthene	U		0.0202	0.0500
Chrysene	U		0.0179	0.0500
Dibenz(a,h)anthracene	U		0.0160	0.0500
Fluoranthene	U		0.0270	0.100
Fluorene	U		0.0169	0.0500
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500
Naphthalene	U		0.0917	0.250
Phenanthrene	U		0.0180	0.0500
Pyrene	U		0.0169	0.0500
Tetraethyllead	U		0.0338	0.0500
1-Methylnaphthalene	U		0.0687	0.250
2-Methylnaphthalene	U		0.0674	0.250
2-Chloronaphthalene	U		0.0682	0.250
(S) Nitrobenzene-d5	*103*			*31.0-160*
(S) 2-Fluorobiphenyl	*101*			*48.0-148*
(S) p-Terphenyl-d14	*104*			*37.0-146*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3754228-1 01/26/22 18:37 • (LCSD) R3754228-2 01/26/22 18:57

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Anthracene	2.00	1.78	1.74	89.0	87.0	67.0-150			2.27	20
Acenaphthene	2.00	1.90	1.87	95.0	93.5	65.0-138			1.59	20
Acenaphthylene	2.00	1.88	1.83	94.0	91.5	66.0-140			2.70	20
Benzo(a)anthracene	2.00	1.81	1.77	90.5	88.5	61.0-140			2.23	20
Benzo(a)pyrene	2.00	1.89	1.90	94.5	95.0	60.0-143			0.528	20
Benzo(b)fluoranthene	2.00	1.77	1.80	88.5	90.0	58.0-141			1.68	20
Benzo(g,h,i)perylene	2.00	1.52	1.57	76.0	78.5	52.0-153			3.24	20
Benzo(k)fluoranthene	2.00	1.85	1.80	92.5	90.0	58.0-148			2.74	20
Chrysene	2.00	1.94	1.89	97.0	94.5	64.0-144			2.61	20
Dibenz(a,h)anthracene	2.00	1.51	1.56	75.5	78.0	52.0-155			3.26	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3754228-1 01/26/22 18:37 • (LCSD) R3754228-2 01/26/22 18:57

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Fluoranthene	2.00	1.77	1.74	88.5	87.0	69.0-153			1.71	20
Fluorene	2.00	1.90	1.87	95.0	93.5	64.0-136			1.59	20
Indeno(1,2,3-cd)pyrene	2.00	1.66	1.70	83.0	85.0	54.0-153			2.38	20
Naphthalene	2.00	1.78	1.79	89.0	89.5	61.0-137			0.560	20
Phenanthrene	2.00	1.77	1.76	88.5	88.0	62.0-137			0.567	20
Pyrene	2.00	2.05	2.04	102	102	60.0-142			0.489	20
Tetraethyllead	2.00	1.80	1.78	90.0	89.0	50.0-150			1.12	20
1-Methylnaphthalene	2.00	1.79	1.80	89.5	90.0	66.0-142			0.557	20
2-Methylnaphthalene	2.00	1.82	1.84	91.0	92.0	62.0-136			1.09	20
2-Chloronaphthalene	2.00	1.91	1.89	95.5	94.5	64.0-140			1.05	20
(S) Nitrobenzene-d5				*99.0*	*97.0*	*31.0-160*				
(S) 2-Fluorobiphenyl				*102*	*99.0*	*48.0-148*				
(S) p-Terphenyl-d14				*99.0*	*96.5*	*37.0-146*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Pace Analytical
www.pacelabs.com

J015

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

L1454394

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Detroit Axle	Report To:	ryann.scott@oneatlas.com	Attention:	Ryann Scott
Address:	1600 W. 8 Mile Road	Copy To:		Company Name:	Atlas Technical Consultants LLC
	Ferndale, Michigan			Address:	46555 Humboldt Drive, Suite 100, Novi MI 48377
Email To:	ryann.scott@oneatlas.com	Purchase Order No.		Pace Quote Reference:	
Phone:	248-669-5140 Fax 248-669-5147	Client Project ID:	NPDAX19001	Pace Project Manager:	
Requested Due Date/TAT:	Standard	Container Order Number:		Pace Profile #:	

Regulatory Agency
EGLE
State / Location
MI

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

Requested Analysis Filtered (Y/N)

ITEM#	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	E220 160 ml Amb Na (Ms-)	CN 250 ml HDPE Amb-NaOH	MEETAC 40 ml Clr-HCl	MeOH ETOH-Pace Ind 40 ml Amb-HCl	Metals Part 201	PAHSIMLVITEL 40 ml Amb	VOC 40 LL 14D 40 ml Amb	VOC 40 OXY 40 ml Amb	n-Butanol -Pace Indy	Residual Chlorine (Y/N)	
1	MW-104	WT	G	1/20/2022	1118	1/20/2022	1118		16	BA									X	X	X	X	X	X	X	X	X		01
2	MW-120	WT	G	1/20/2022	1336	1/20/2022	1336		1										X	X	X	X	X	X	X	X	X		02
3	DUP-1	WT	G	1/20/2022	0000	1/20/2022	0000												X	X	X	X	X	X	X	X	X		03
4	Field Blank	WT	G	1/20/22	1000	1/20/22	1000												X	X	X	X	X	X	X	X	X		04
5	Trip Blank	WT	G	1/20/22	0000		0000		1	BA									X	X	X	X	X	X	X	X	X		05
6																													
7																													
8																													
9																													
10																													
11																													
12																													

Sample Receipt Checklist

COC Seal Present/Intact:	Y N	If Applicable	
COC Signed/Accurate:	Y N	VOA Zero Headspace:	Y N
Bottles arrive intact:	Y N	Pres.Correct/Check:	Y N
Correct bottles used:	Y N		
Sufficient volume sent:	Y N		
RAD Screen <0.5 mR/hr:	Y N		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
					1/25/22	0715	

4.9+0=4.9 NSA

9362 4958 2304

SAMPLER NAME AND SIGNATURE					
PRINT Name of SAMPLER:	Madelyn Haas	~~Ryann Scott~~			
SIGNATURE of SAMPLER:	Madelyn Haas	DATE Signed:	1/24/22		

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

ANALYTICAL REPORT

January 17, 2022

ATC Group Services - Novi, MI

Sample Delivery Group:	L1442096
Samples Received:	12/14/2021
Project Number:	
Description:	Detroit Axle 1600 W. 8 Mile Road
Report To:	Ryann Scott 46555 Humboldt Drive Suite 100 Novi, MI 48377

Entire Report Reviewed By:

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

TABLE OF CONTENTS

MW-106 L1442096-01 GW

Collected by: Nick Priehs | Collected date/time: 12/10/21 14:29 | Received date/time: 12/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG1789744	1	12/20/21 00:00	12/20/21 00:00	-	Indianapolis, IN 46268

MW-107 L1442096-02 GW

Collected by: Nick Priehs | Collected date/time: 12/10/21 12:54 | Received date/time: 12/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG1789744	1	12/20/21 00:00	12/20/21 00:00	-	Indianapolis, IN 46268

MW-108 L1442096-03 GW

Collected by: Nick Priehs | Collected date/time: 12/10/21 11:29 | Received date/time: 12/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG1789744	1	12/20/21 00:00	12/20/21 00:00	-	Indianapolis, IN 46268

MW-109 L1442096-04 GW

Collected by: Nick Priehs | Collected date/time: 12/10/21 10:32 | Received date/time: 12/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG1789744	1	12/20/21 00:00	12/20/21 00:00	-	Indianapolis, IN 46268

MW-110 L1442096-05 GW

Collected by: Nick Priehs | Collected date/time: 12/10/21 10:45 | Received date/time: 12/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG1789744	1	12/20/21 00:00	12/20/21 00:00	-	Indianapolis, IN 46268

MW-111 L1442096-06 GW

Collected by: Nick Priehs | Collected date/time: 12/10/21 12:00 | Received date/time: 12/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG1789744	1	12/20/21 00:00	12/20/21 00:00	-	Indianapolis, IN 46268

MW-112 L1442096-07 GW

Collected by: Nick Priehs | Collected date/time: 12/10/21 13:10 | Received date/time: 12/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG1789744	1	12/20/21 00:00	12/20/21 00:00	-	Indianapolis, IN 46268

MW-113 L1442096-08 GW

Collected by: Nick Priehs | Collected date/time: 12/10/21 15:20 | Received date/time: 12/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG1789744	1	12/20/21 00:00	12/20/21 00:00	-	Indianapolis, IN 46268

MW-119 L1442096-09 GW

Collected by: Nick Priehs | Collected date/time: 12/10/21 14:30 | Received date/time: 12/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG1789744	1	12/20/21 00:00	12/20/21 00:00	-	Indianapolis, IN 46268

MW-121 L1442096-10 GW

Collected by: Nick Priehs | Collected date/time: 12/10/21 16:19 | Received date/time: 12/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG1789744	1	12/20/21 00:00	12/20/21 00:00	-	Indianapolis, IN 46268

DUP-1 L1442096-11 GW

Collected by: Nick Priehs | Collected date/time: 12/10/21 00:00 | Received date/time: 12/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG1789744	1	12/20/21 00:00	12/20/21 00:00	-	Indianapolis, IN 46268

DUP-2 L1442096-12 GW

Collected by: Nick Priehs | Collected date/time: 12/10/21 00:00 | Received date/time: 12/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG1789744	1	12/20/21 00:00	12/20/21 00:00	-	Indianapolis, IN 46268

TRIP BLANK L1442096-13 GW

Collected by: Nick Priehs | Collected date/time: 12/10/21 18:00 | Received date/time: 12/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG1789744	1	12/20/21 00:00	12/20/21 00:00	-	Indianapolis, IN 46268

FIELD BLANK L1442096-14 GW

Collected by: Nick Priehs | Collected date/time: 12/10/21 09:15 | Received date/time: 12/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG1789744	1	12/20/21 00:00	12/20/21 00:00	-	Indianapolis, IN 46268

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

John Hawkins
Project Manager

Project Narrative

L1442096 -01, -02, -03, -04, -05, -06, -07, -08, -09, -10, -11, -12, -13, -14 contains subout data that is included after the chain of custody.

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

SDG	Sample Delivery Group.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
ATC Group Services - Novi, MI
46555 Humboldt Drive Suite 100
Novi, MI 48377

Billing Information:
Accounts Payable
46555 Humboldt Dr., Ste.100
Novi, MI 48377

Pres Chk

Report to: Ryann Scott

Email To: Ryann.Scott@oneatlas.com

Project Description: Detroit Axle 1600 W. 8 Mile Road

City/State Collected: Ferndale, MI

Please Circle: PT MT CT ET

Phone: 248-669-5140

Client Project #

Lab Project # ATCNMI-DETROIT AXLE

Collected by (print): Nick Prichs/Maddi Haas

Site/Facility ID #

P.O. #

Collected by (signature):

Quote #

Immediately Packed on Ice N ___ Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	8270 100ml Amb NoPres	CN 250mlHDPEAmb-NaOH	MEETAC 40mlClr-HCl	MEOH ETOH - Pace Ind 40mlAmb-HCl	Metals MI Part 201 250mlHDPE-HNO3	PAHSIMLVITEL 40mlAmb-NoPres-WT	V8260LL14D 40mlAmb-HCl	V8260LL14D 40mlAmb-HCl-Blk	V8260OXY 40mlAmb-HCl	V8260OXY 40mlAmb-HCl-Blk	Remarks	Sample # (lab only)
MW-106	G	GW		12/10/21	1429	16	X	X	X	X	X	X	X		X			-01
MW-107		GW			1254	16	X	X	X	X	X	X	X		X			-02
MW-108		GW			1129	16	X	X	X	X	X	X	X		X			-03
MW-109		GW			1032	16	X	X	X	X	X	X	X		X			-04
MW-110		GW			1045	16	X	X	X	X	X	X	X		X			-05
MW-111		GW			1200	16	X	X	X	X	X	X	X		X			-06
MW-112		GW			1316	16	X	X	X	X	X	X	X		X			-07
MW-113		GW			1520 ~~1613~~	16	X	X	X	X	X	X	X		X			-08
MW-119		GW			1436 ~~1611~~	16	X	X	X	X	X	X	X		X			-09
MW-121		GW			1619	16	X	X	X	X	X	X	X		X			-10

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: 12/14

pH _____ Temp _____

Flow _____ Other _____

Samples returned via: __UPS __FedEx __Courier _____

Tracking # 5318/9959 6310 /6331 /6309

Sample Receipt Checklist
COC Seal Present/Intact: __NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No, HCl / MeoH, TBR	If preservation required by Login: Date/Time
	12/13/21	1615		3	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: DKAPC 4,8+0=4.8 Bottles Received: 21	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 12/14/21 Time: 900	Hold: Condition: NCF / OK

Chain of Custody Page 1 of 4

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SDG # 14920576 12/14

B021

Acctnum: ATCNMI
Template: T199196
Prelogin: P886691
PM: 341 - John Hawkins
PB: 11/11/21
Shipped Via: FedEX Ground

Company Name/Address:
ATC Group Services - Novi, MI

46555 Humboldt Drive Suite 100
Novi, MI 48377

Billing Information:
Accounts Payable
46555 Humboldt Dr., Ste.100
Novi, MI 48377

Pres Chk

Report to: **Ryann Scott**

Email To: **Ryann.Scott@oneatlas.com**

Project Description: **Detroit Axle 1600 W. 8 Mile Road**

City/State Collected: Ferndale, MI

Please Circle: PT MT CT (ET)

Phone: **248-669-5140**

Client Project #

Lab Project # **ATCNMI-DETROIT AXLE**

Collected by (print): Nick Pricks / Maddi Haw

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

n-Butanol- Pace Indy 40ml Amb-HCl

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time			Remarks	Sample # (lab only)
MW-106	G	GW		12/10/21	1429	16	X		-01
MW-107		GW			1254	16	X		-02
MW-108		GW			1129	16	X		-03
MW-109		GW			1032	16	X		-04
MW-110		GW			1045	16	X		-05
MW-111		GW			1200	16	X		-06
MW-112		GW			1310	16	X		-07
MW-113		GW			1520	~~16~~ 13	X		-08
MW-119		GW			1430	~~16~~ 14	X		-09
MW-121		GW			1619	16	X		-10

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: 12/12/14

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Trip Blank Received: Yes / No
HCl / MeoH
TBR

Temp: DRATC 4.8+0=4.8

Bottles Received: 219

Relinquished by : (Signature)

Date: 12/13/21

Time: 1615

Received by: (Signature)

Relinquished by : (Signature)

Date:

Time:

Received by: (Signature)

Relinquished by : (Signature)

Date:

Time:

Received for lab by: (Signature)

Date: 12/14/21

Time: 900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y N
COC Signed/Accurate:		Y N
Bottles arrive intact:		Y N
Correct bottles used:		Y N
Sufficient volume sent:		Y N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		Y N
RAD Screen <0.5 mR/hr:		Y N

Chain of Custody Page 1 of 1

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SDG # 1942057

Table # 12/14

Acctnum: **ATCNMI**

Template: **T199196**

Prelogin: **P886691**

PM: **341 - John Hawkins**

PB: 11/11/21 MW

Shipped Via: **FedEX Ground**

Company Name/Address:
ATC Group Services - Novi, MI
46555 Humboldt Drive Suite 100
Novi, MI 48377

Billing Information:
Accounts Payable
46555 Humboldt Dr., Ste.100
Novi, MI 48377

Pres Chk

Report to: Ryann Scott

Email To: Ryann.Scott@oneatlas.com

Project Description: Detroit Axle 1600 W. 8 Mile Road

City/State Collected: Ferndale, MI

Please Circle: PT MT CT (ET)

Phone: 248-669-5140

Client Project #

Lab Project # ATCNMI-DETROIT AXLE

Collected by (print): Nick Procky/Maddi Haas

Site/Facility ID #

P.O. #

Collected by (signature):

Quote #

Immediately Packed on Ice N ____ Y ____

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	8270 100ml Amb NoPres	CN 250mlHDPEAmb-NaOH	MEETAC 40mlClr-HCl	MEOH ETOH - Pace Ind 40mlAmb-HCl	Metals MI Part 201 250mlHDPE-HNO3	PAHSIMLVITEL 40mlAmb-NoPres-WT	V8260LL14D 40mlAmb-HCl	V8260LL14D 40mlAmb-HCl-Blk	V8260OXY 40mlAmb-HCl	V8260OXY 40mlAmb-HCl-Blk	Remarks	Sample # (lab only)
DUP-1	Grab	GW		12/10/21	0000	16	X	X	X	X	X	X	X		X			-11
DUP-2		GW			0000	16	X	X	X	X	X	X	X		X			-12
Trip Blank		GW			1800	16	X	X	X	X	X	X	X		X			-13
Field Blank		GW			0915	16	X	X	X	X	X	X	X		X			-14
		GW				16	X	X	X	X	X	X	X		X			
		GW				16	X	X	X	X	X	X	X		X			
MS		GW				16	X	X	X	X	X	X	X		X			
MSD		GW				16	X	X	X	X	X	X	X		X			
TRIP BLANK		GW				3Z								X		X		-15
						12/14												

Chain of Custody Page 3 of 4

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SDG # 194205 96 12/14

Table #

Acctnum: ATCNMI

Template: T199196

Prelogin: P886691

PM: 341 - John Hawkins

PB: 11/11/21 MM6

Shipped Via: FedEX Ground

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	NP	Y / N
COC Signed/Accurate:		Y / N
Bottles arrive intact:		Y / N
Correct bottles used:		Y / N
Sufficient volume sent:		Y / N
If Applicable		
VOA Zero Headspace:		Y / N
Preservation Correct/Checked:		Y / N
RAD Screen <0.5 mR/hr:		Y / N

Relinquished by : (Signature)	Date: 12/13/21	Time: 1615	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeOH TBR
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 4.7C 4.8+0.1=4.8 Bottles Received: 219
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 12/14/21 Time: 900

If preservation required by Login: Date/Time

Hold:

Condition: (NCF) / OK

Company Name/Address:
ATC Group Services - Novi, MI

46555 Humboldt Drive Suite 100
Novi, MI 48377

Billing Information:
Accounts Payable
46555 Humboldt Dr., Ste.100
Novi, MI 48377

Report to: **Ryann Scott**

Email To: **Ryann.Scott@oneatlas.com**

Project Description: **Detroit Axle 1600 W. 8 Mile Road**

City/State Collected: Ferndale, MI

Please Circle: PT MT CT (ET)

Phone: **248-669-5140**

Client Project #

Lab Project # **ATCNMI-DETROIT AXLE**

Collected by (print): Nick Piccin/Maddi Hawkins

Site/Facility ID #

P.O. #

Collected by (signature):

Quote #

Immediately Packed on Ice N ___ Y ___

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

No. of Cntrs

Analysis / Container / Preservative

Pres Chk

n-Butanol- Pace Indy 40ml Amb-HCl

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	n-Butanol- Pace Indy 40ml Amb-HCl	Remarks	Sample # (lab only)
DUP-1	G	GW		12/10/21	0000	16	X		-11
DUP-2	↓	GW		↓	0000	16	X		-12
Trip Blank		GW			1800	16	X		-13
field Blank		GW			0915	16	X		-14
		GW				16	X		
		GW				16	X		
		GW				16	X		
MS		GW				16	X		
MSD		GW				16	X		
TRIP BLANK		GW				3			-15 12/14
						12/14			

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SDG # 14420 12/14

Table #

Acctnum: **ATCNMI**

Template: **T199196**

Prelogin: **P886691**

PM: 341 - John Hawkins

PB: 11/11/21

Shipped Via: **FedEX Ground**

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact: __NP	Y	N
COC Signed/Accurate:	Y	N
Bottles arrive intact:	Y	N
Correct bottles used:	Y	N
Sufficient volume sent:	Y	N
If Applicable		
VOA Zero Headspace:	Y	N
Preservation Correct/Checked:	Y	N
RAD Screen <0.5 mR/hr:	Y	N

Relinquished by : (Signature)	Date: 12/13/21	Time: 1615	Received by: (Signature)	Trip Blank Received: (Yes) / No HCl / MeoH TBR
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: DUAL °C 4.8+0=4.8 Bottles Received: 24
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 12/14/21 Time: 900

If preservation required by Login: Date/Time

Hold:

Condition: (NCF) / OK

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

December 20, 2021

Jimmy Huckaba

,

RE: Project: Detroit Axle 1600 / WG1789744
Pace Project No.: 50305370

Dear Jimmy Huckaba:

Enclosed are the analytical results for sample(s) received by the laboratory on December 16, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Olivia Deck
olivia.deck@pacelabs.com
(317)228-3102
Project Manager

Enclosures

cc: Pace National Subout Team

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Detroit Axle 1600 / WG1789744
Pace Project No.: 50305370

Pace Analytical Services Indianapolis

7726 Moller Road, Indianapolis, IN 46268
Illinois Accreditation #: 200074
Indiana Drinking Water Laboratory #: C-49-06
Kansas/TNI Certification #: E-10177
Kentucky UST Agency Interest #: 80226
Kentucky WW Laboratory ID #: 98019
Michigan Drinking Water Laboratory #9050
Ohio VAP Certified Laboratory #: CL0065
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Wisconsin Laboratory #: 999788130
USDA Soil Permit #: P330-19-00257

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Detroit Axle 1600 / WG1789744
Pace Project No.: 50305370

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50305370001	**MW-106**	Water	12/10/21 14:29	12/16/21 10:20
50305370002	**MW-107**	Water	12/10/21 12:54	12/16/21 10:20
50305370003	**MW-108**	Water	12/10/21 11:29	12/16/21 10:20
50305370004	**MW-109**	Water	12/10/21 10:32	12/16/21 10:20
50305370005	**MW-110**	Water	12/10/21 10:45	12/16/21 10:20
50305370006	**MW-111**	Water	12/10/21 12:00	12/16/21 10:20
50305370007	**MW-112**	Water	12/10/21 13:10	12/16/21 10:20
50305370008	**MW-113**	Water	12/10/21 15:20	12/16/21 10:20
50305370009	**MW-119**	Water	12/10/21 14:30	12/16/21 10:20
50305370010	**MW-121**	Water	12/10/21 16:19	12/16/21 10:20
50305370011	**DUP-1**	Water	12/10/21 00:01	12/16/21 10:20
50305370012	**DUP-2**	Water	12/10/21 00:01	12/16/21 10:20
50305370013	**TRIP BLANK**	Water	12/10/21 18:00	12/16/21 10:20
50305370014	**FIELD BLANK**	Water	12/10/21 09:15	12/16/21 10:20

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Detroit Axle 1600 / WG1789744
Pace Project No.: 50305370

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50305370001	**MW-106**	EPA 8015 Alcohol-Glycol	CPH	3	PASI-I
50305370002	**MW-107**	EPA 8015 Alcohol-Glycol	CPH	3	PASI-I
50305370003	**MW-108**	EPA 8015 Alcohol-Glycol	CPH	3	PASI-I
50305370004	**MW-109**	EPA 8015 Alcohol-Glycol	CPH	3	PASI-I
50305370005	**MW-110**	EPA 8015 Alcohol-Glycol	CPH	3	PASI-I
50305370006	**MW-111**	EPA 8015 Alcohol-Glycol	CPH	3	PASI-I
50305370007	**MW-112**	EPA 8015 Alcohol-Glycol	CPH	3	PASI-I
50305370008	**MW-113**	EPA 8015 Alcohol-Glycol	CPH	3	PASI-I
50305370009	**MW-119**	EPA 8015 Alcohol-Glycol	CPH	3	PASI-I
50305370010	**MW-121**	EPA 8015 Alcohol-Glycol	CPH	3	PASI-I
50305370011	**DUP-1**	EPA 8015 Alcohol-Glycol	CPH	3	PASI-I
50305370012	**DUP-2**	EPA 8015 Alcohol-Glycol	CPH	3	PASI-I
50305370013	**TRIP BLANK**	EPA 8015 Alcohol-Glycol	CPH	3	PASI-I
50305370014	**FIELD BLANK**	EPA 8015 Alcohol-Glycol	CPH	3	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Detroit Axle 1600 / WG1789744
Pace Project No.: 50305370

Sample: MW-106 **Lab ID: 50305370001** Collected: 12/10/21 14:29 Received: 12/16/21 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015M Alcohols in water	Analytical Method: EPA 8015 Alcohol-Glycol Initial Volume/Weight: 1 mL Final Volume/Weight: 1 mL Pace Analytical Services - Indianapolis							
n-Butanol	ND	mg/L	50.0	10		12/16/21 16:51	71-36-3	ED
Ethanol	ND	mg/L	50.0	10		12/16/21 16:51	64-17-5	
Methanol	ND	mg/L	50.0	10		12/16/21 16:51	67-56-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Detroit Axle 1600 / WG1789744
Pace Project No.: 50305370

Sample: MW-107 **Lab ID: 50305370002** Collected: 12/10/21 12:54 Received: 12/16/21 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015M Alcohols in water	Analytical Method: EPA 8015 Alcohol-Glycol Initial Volume/Weight: 1 mL Final Volume/Weight: 1 mL Pace Analytical Services - Indianapolis							
n-Butanol	ND	mg/L	50.0	10		12/16/21 17:00	71-36-3	ED
Ethanol	ND	mg/L	50.0	10		12/16/21 17:00	64-17-5	
Methanol	ND	mg/L	50.0	10		12/16/21 17:00	67-56-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Detroit Axle 1600 / WG1789744
Pace Project No.: 50305370

Sample: MW-108 **Lab ID: 50305370003** Collected: 12/10/21 11:29 Received: 12/16/21 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015M Alcohols in water	Analytical Method: EPA 8015 Alcohol-Glycol Initial Volume/Weight: 1 mL Final Volume/Weight: 1 mL Pace Analytical Services - Indianapolis							
n-Butanol	ND	mg/L	50.0	10		12/16/21 17:09	71-36-3	ED
Ethanol	ND	mg/L	50.0	10		12/16/21 17:09	64-17-5	
Methanol	ND	mg/L	50.0	10		12/16/21 17:09	67-56-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Detroit Axle 1600 / WG1789744
Pace Project No.: 50305370

Sample: MW-109 **Lab ID: 50305370004** Collected: 12/10/21 10:32 Received: 12/16/21 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015M Alcohols in water	Analytical Method: EPA 8015 Alcohol-Glycol Initial Volume/Weight: 1 mL Final Volume/Weight: 1 mL Pace Analytical Services - Indianapolis							
n-Butanol	ND	mg/L	50.0	10		12/16/21 17:18	71-36-3	ED
Ethanol	ND	mg/L	50.0	10		12/16/21 17:18	64-17-5	
Methanol	ND	mg/L	50.0	10		12/16/21 17:18	67-56-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Detroit Axle 1600 / WG1789744
Pace Project No.: 50305370

Sample: MW-110 **Lab ID: 50305370005** Collected: 12/10/21 10:45 Received: 12/16/21 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015M Alcohols in water	Analytical Method: EPA 8015 Alcohol-Glycol Initial Volume/Weight: 1 mL Final Volume/Weight: 1 mL Pace Analytical Services - Indianapolis							
n-Butanol	ND	mg/L	50.0	10		12/16/21 17:28	71-36-3	ED
Ethanol	ND	mg/L	50.0	10		12/16/21 17:28	64-17-5	
Methanol	ND	mg/L	50.0	10		12/16/21 17:28	67-56-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Detroit Axle 1600 / WG1789744
Pace Project No.: 50305370

Sample: MW-111 **Lab ID: 50305370006** Collected: 12/10/21 12:00 Received: 12/16/21 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015M Alcohols in water	Analytical Method: EPA 8015 Alcohol-Glycol Initial Volume/Weight: 1 mL Final Volume/Weight: 1 mL Pace Analytical Services - Indianapolis							
n-Butanol	ND	mg/L	50.0	10		12/16/21 17:37	71-36-3	ED
Ethanol	ND	mg/L	50.0	10		12/16/21 17:37	64-17-5	
Methanol	ND	mg/L	50.0	10		12/16/21 17:37	67-56-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Detroit Axle 1600 / WG1789744
Pace Project No.: 50305370

Sample: MW-112 **Lab ID: 50305370007** Collected: 12/10/21 13:10 Received: 12/16/21 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015M Alcohols in water	Analytical Method: EPA 8015 Alcohol-Glycol Initial Volume/Weight: 1 mL Final Volume/Weight: 1 mL Pace Analytical Services - Indianapolis							
n-Butanol	ND	mg/L	50.0	10		12/16/21 17:47	71-36-3	ED
Ethanol	ND	mg/L	50.0	10		12/16/21 17:47	64-17-5	
Methanol	ND	mg/L	50.0	10		12/16/21 17:47	67-56-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Detroit Axle 1600 / WG1789744
Pace Project No.: 50305370

Sample: MW-113 **Lab ID: 50305370008** Collected: 12/10/21 15:20 Received: 12/16/21 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015M Alcohols in water	Analytical Method: EPA 8015 Alcohol-Glycol Initial Volume/Weight: 1 mL Final Volume/Weight: 1 mL Pace Analytical Services - Indianapolis							
n-Butanol	ND	mg/L	50.0	10		12/16/21 17:56	71-36-3	ED
Ethanol	ND	mg/L	50.0	10		12/16/21 17:56	64-17-5	
Methanol	ND	mg/L	50.0	10		12/16/21 17:56	67-56-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Detroit Axle 1600 / WG1789744
Pace Project No.: 50305370

Sample: MW-119 **Lab ID: 50305370009** Collected: 12/10/21 14:30 Received: 12/16/21 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015M Alcohols in water	Analytical Method: EPA 8015 Alcohol-Glycol Initial Volume/Weight: 1 mL Final Volume/Weight: 1 mL Pace Analytical Services - Indianapolis							
n-Butanol	ND	mg/L	50.0	10		12/16/21 18:06	71-36-3	ED
Ethanol	ND	mg/L	50.0	10		12/16/21 18:06	64-17-5	
Methanol	ND	mg/L	50.0	10		12/16/21 18:06	67-56-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Detroit Axle 1600 / WG1789744
Pace Project No.: 50305370

Sample: MW-121 **Lab ID: 50305370010** Collected: 12/10/21 16:19 Received: 12/16/21 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015M Alcohols in water	Analytical Method: EPA 8015 Alcohol-Glycol Initial Volume/Weight: 1 mL Final Volume/Weight: 1 mL Pace Analytical Services - Indianapolis							
n-Butanol	ND	mg/L	50.0	10		12/16/21 18:15	71-36-3	ED
Ethanol	ND	mg/L	50.0	10		12/16/21 18:15	64-17-5	
Methanol	ND	mg/L	50.0	10		12/16/21 18:15	67-56-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Detroit Axle 1600 / WG1789744
Pace Project No.: 50305370

Sample: DUP-1 **Lab ID: 50305370011** Collected: 12/10/21 00:01 Received: 12/16/21 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015M Alcohols in water	Analytical Method: EPA 8015 Alcohol-Glycol Initial Volume/Weight: 1 mL Final Volume/Weight: 1 mL Pace Analytical Services - Indianapolis							
n-Butanol	ND	mg/L	50.0	10		12/16/21 18:25	71-36-3	ED
Ethanol	ND	mg/L	50.0	10		12/16/21 18:25	64-17-5	
Methanol	ND	mg/L	50.0	10		12/16/21 18:25	67-56-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Detroit Axle 1600 / WG1789744
Pace Project No.: 50305370

Sample: DUP-2 **Lab ID: 50305370012** Collected: 12/10/21 00:01 Received: 12/16/21 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015M Alcohols in water	Analytical Method: EPA 8015 Alcohol-Glycol Initial Volume/Weight: 1 mL Final Volume/Weight: 1 mL Pace Analytical Services - Indianapolis							
n-Butanol	ND	mg/L	50.0	10		12/16/21 18:34	71-36-3	ED
Ethanol	ND	mg/L	50.0	10		12/16/21 18:34	64-17-5	
Methanol	ND	mg/L	50.0	10		12/16/21 18:34	67-56-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Detroit Axle 1600 / WG1789744
Pace Project No.: 50305370

Sample: TRIP BLANK **Lab ID: 50305370013** Collected: 12/10/21 18:00 Received: 12/16/21 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015M Alcohols in water	Analytical Method: EPA 8015 Alcohol-Glycol Initial Volume/Weight: 1 mL Final Volume/Weight: 1 mL Pace Analytical Services - Indianapolis							
n-Butanol	ND	mg/L	50.0	10		12/16/21 18:44	71-36-3	ED
Ethanol	ND	mg/L	50.0	10		12/16/21 18:44	64-17-5	
Methanol	ND	mg/L	50.0	10		12/16/21 18:44	67-56-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Detroit Axle 1600 / WG1789744
Pace Project No.: 50305370

Sample: FIELD BLANK **Lab ID: 50305370014** Collected: 12/10/21 09:15 Received: 12/16/21 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015M Alcohols in water	Analytical Method: EPA 8015 Alcohol-Glycol Initial Volume/Weight: 1 mL Final Volume/Weight: 1 mL Pace Analytical Services - Indianapolis							
n-Butanol	ND	mg/L	50.0	10		12/16/21 18:53	71-36-3	ED
Ethanol	ND	mg/L	50.0	10		12/16/21 18:53	64-17-5	
Methanol	ND	mg/L	50.0	10		12/16/21 18:53	67-56-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Detroit Axle 1600 / WG1789744
Pace Project No.: 50305370

QC Batch: 655331
QC Batch Method: EPA 8015 Alcohol-Glycol
Analysis Method: EPA 8015 Alcohol-Glycol
Analysis Description: EPA 8015 Modified
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50305370001, 50305370002, 50305370003, 50305370004, 50305370005, 50305370006, 50305370007, 50305370008, 50305370009, 50305370010, 50305370011, 50305370012, 50305370013, 50305370014

METHOD BLANK: 3021014 Matrix: Water
Associated Lab Samples: 50305370001, 50305370002, 50305370003, 50305370004, 50305370005, 50305370006, 50305370007, 50305370008, 50305370009, 50305370010, 50305370011, 50305370012, 50305370013, 50305370014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethanol	mg/L	ND	5.0	12/16/21 15:47	
Methanol	mg/L	ND	5.0	12/16/21 15:47	
n-Butanol	mg/L	ND	5.0	12/16/21 15:47	

LABORATORY CONTROL SAMPLE: 3021015

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethanol	mg/L	50	50.1	100	63-128	
Methanol	mg/L	50	48.5	97	66-117	
n-Butanol	mg/L	50	51.0	102	73-117	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3021016 3021017

Parameter	Units	60388428001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Ethanol	mg/L	ND	50	50	48.0	51.7	96	103	61-129	7	20	
Methanol	mg/L	ND	50	50	43.3	46.2	87	92	63-118	6	20	
n-Butanol	mg/L	ND	50	50	46.7	49.8	93	100	68-119	6	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Detroit Axle 1600 / WG1789744
Pace Project No.: 50305370

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

ED	Due to the extract's physical characteristics, the analysis was performed at dilution.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Detroit Axle 1600 / WG1789744
Pace Project No.: 50305370

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50305370001	**MW-106**	EPA 8015 Alcohol-Glycol	655331		
50305370002	**MW-107**	EPA 8015 Alcohol-Glycol	655331		
50305370003	**MW-108**	EPA 8015 Alcohol-Glycol	655331		
50305370004	**MW-109**	EPA 8015 Alcohol-Glycol	655331		
50305370005	**MW-110**	EPA 8015 Alcohol-Glycol	655331		
50305370006	**MW-111**	EPA 8015 Alcohol-Glycol	655331		
50305370007	**MW-112**	EPA 8015 Alcohol-Glycol	655331		
50305370008	**MW-113**	EPA 8015 Alcohol-Glycol	655331		
50305370009	**MW-119**	EPA 8015 Alcohol-Glycol	655331		
50305370010	**MW-121**	EPA 8015 Alcohol-Glycol	655331		
50305370011	**DUP-1**	EPA 8015 Alcohol-Glycol	655331		
50305370012	**DUP-2**	EPA 8015 Alcohol-Glycol	655331		
50305370013	**TRIP BLANK**	EPA 8015 Alcohol-Glycol	655331		
50305370014	**FIELD BLANK**	EPA 8015 Alcohol-Glycol	655331		

CHAIN-OF-CUSTODY / Analytical Request D

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields mu

WO# : 50305370

50305370

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	
Company: Pace Analytical	Report To: Pace Analytical Subout Team	Attention: Ryann Scott	
Address: 12065 Lebanon Rd.	Copy To:	Company Name:	
Mt. Juliet, TN 37122		Address:	Regulatory Agency
Email: MTJLSuboutTeam@pacelabs.com	Purchase Order #: L1442096	Pace Quote:	
Phone: (615) 773-9756 Fax: (615) 758-5859	Project Name: Detroit Axle 1600 W. 8 Mile Road	Pace Project Manager: Olivia Deck	State / Location
Requested Due Date: 29-Dec	Project #:	Pace Profile #: 38076	MI

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	n-Butanol 8015	8015 Methanol & Ethanol	Residual Chlorine (Y/N)	
1	MW-106	WT				10-Dec	14:29		1								1		X	X		001
2	MW-107	WT				10-Dec	12:54		1								1		X	X		002
3	MW-108	WT				10-Dec	11:29		1								1		X	X		003
4	MW-109	WT				10-Dec	10:32		1								1		X	X		004
5	MW-110	WT				10-Dec	10:45		1								1		X	X		005
6	MW-111	WT				10-Dec	12:00		1								1		X	X		006
7	MW-112	WT				10-Dec	13:10		1								1		X	X		007
8	MW-113	WT				10-Dec	15:20		1								1		X	X		008
9	MW-119	WT				10-Dec	14:30		1								1		X	X		009
10	MW-121	WT				10-Dec	16:19		1								1		X	X		010
11	DUP-1	WT				10-Dec	0:01		1								1		X	X		011
12	DUP-2	WT				10-Dec	0:01		1								1		X	X		012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	James C Huckaba	15-Dec	11:03	Fedex						
Pace Analytical Batch: WG1789744	Fedex	12/16	10:20		12/16	10:20	2.3	Y	Y	Y
Pace Analytical SDGs: L1442096										
Location: Indianapolis, IN 46268										

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:			
SIGNATURE of SAMPLER:	DATE Signed:		

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Pace Analytical	Report To:	Pace Analytical Subout Team	Attention:	Ryann Scott
Address:	12065 Lebanon Rd.	Copy To:		Company Name:	
Mt. Juliet, TN 37122				Address:	
Email:	MTJLSuboutTeam@pacelabs.com	Purchase Order #:	L1442096	Pace Quote:	
Phone:	(615) 773-9756 Fax (615) 758-5859	Project Name:	Detroit Axle 1600 W. 8 Mile Road	Pace Project Manager:	Olivia Deck
Requested Due Date:	29-Dec	Project #:		Pace Profile #:	38076

Regulatory Agency
State / Location
MI

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	Requested Analysis Filtered (Y/N): n-Butanol 8015	8015 Methanol & Ethanol	Residual Chlorine (Y/N)	
1	TRIP BLANK	WT				10-Dec	18:00		1								1		X	X		013
2	FIELD BLANK	WT				10-Dec	9:15		1								1		X	X		014
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	James C Huckaba	15-Dec	11:03				
Pace Analytical Batch: WG1789744							
Pace Analytical SDGs: L1442096							
Location: Indianapolis, IN 46268							

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: **DATE Signed:**

TEMP in C	Received on Ice (Y/N)	Custody Seal Cooler (Y/N)	Samples Intact (Y/N)

Pace Analytical®

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: TR 12/16/21 12:00

1. **Courier:** ☑ FED EX ☐ UPS ☐ CLIENT ☐ PACE ☐ USPS ☐ OTHER _____
2. **Custody Seal on Cooler/Box Present:** ☑ Yes ☐ No
   (If yes)Seals Intact: ☑ Yes ☐ No **(leave blank if no seals were present)**
3. **Thermometer:** 1 2 3 4 5 6 A B C D E F
4. **Cooler Temperature:** 2.0/2.3
   Temp should be above freezing to 6°C **(Initial/Corrected)**

5. **Packing Material:** ☑ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other _____
6. **Ice Type:** ☑ Wet ☐ Blue ☐ None
7. **If temp. is over 6°C or under 0°C, was the PM notified?:** ☐ Yes ☐ No

All discrepancies will be written out in the comments section below.

	Yes	No
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓
Short Hold Time Analysis (48 hours or less)? Analysis:		✓
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:	
Rush TAT Requested (4 days or less):		✓
Custody Signatures Present?	✓	
Containers Intact?:	✓	
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	✓	
Extra labels on Terracore Vials? (soils only)		✓

	Yes	No	N/A
All containers needing acid/base pres. Have been CHECKED?: **exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.** **Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form			✓
	Present	Absent	N/A
Residual Chlorine Check (SVOC 625 Pest/PCB 608)			✓
Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Headspace Wisconsin Sulfide?			✓
	Present	Absent	No VOA Vials Sent
Headspace in VOA Vials (>6mm): See Containter Count form for details		✓	
Trip Blank Present?	✓		
Trip Blank Custody Seals?:	✓		

COMMENTS:

COC PAGE 1 **of** 2

Sample Container Count

SBS
DI
MeOH (only)
BK
Kit

** Place a RED dot on containers that are out of conformance **

COC Line Item	WGFU	R	DG9H VG9H	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit			Matrix	HNO3/ H2SO4 pH <2	NaOH/ ZNAc pH >9	NaOH pH>10
1			2																									WT			
2			2																									WT			
3			2																									WT			
4			2																									WT			
5			2																									WT			
6			2																									WT			
7			2																									WT			
8			2																									WT			
9			2																									WT			
10			2																									WT			
11			2																									WT			
12			2																									WT			

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic

Plastic / Misc.

BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic

Syringe Kit	LL Cr+6 sampling kit

AF	Air Filter
C	Air Cassettes
R	Terracore kit
SP5T	120mL Coliform Na Thiosulfate
U	Summa Can
ZPLC	Ziploc Bag

WT		Water	
SL		Solid	
NAL	OL	Non-aqueous liquid	Oil
WP		Wipe	

COC PAGE 2 **of** 2

Sample Container Count

SBS
DI
MeOH (only)
BK
Kit

** Place a RED dot on containers that are out of conformance **

COC Line Item	WGFU	R	DG9H / VG9H	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit			Matrix	HNO3/ H2SO4 pH <2	NaOH/ ZNAc pH >9	NaOH pH>10
1			2																												
2			2																												
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic

Plastic / Misc.

BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic

Syringe Kit	LL Cr+6 sampling kit

AF	Air Filter
C	Air Cassettes
R	Terracore kit
SP5T	120mL Coliform Na Thiosulfate
U	Summa Can
ZPLC	Ziploc Bag

WT		Water	
SL		Solid	
NAL	OL	Non-aqueous liquid	Oil
WP		Wipe	

ANALYTICAL REPORT

February 08, 2022

ATC Group Services - Novi, MI

Sample Delivery Group:	L1454431
Samples Received:	01/25/2022
Project Number:	
Description:	Detroit Axle 1600 W. 8 Mile Road
Report To:	Ryann Scott 46555 Humboldt Drive Suite 100 Novi, MI 48377

Entire Report Reviewed By:

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

TABLE OF CONTENTS

MW-104 L1454431-01 GW

Collected by	Collected date/time	Received date/time
	01/20/22 11:18	01/25/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG1808231	1	02/02/22 00:00	02/02/22 00:00	-	Indianapolis, IN 46268

MW-120 L1454431-02 GW

Collected by	Collected date/time	Received date/time
	01/20/22 13:36	01/25/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG1808231	1	02/02/22 00:00	02/02/22 00:00	-	Indianapolis, IN 46268

DUP-1 L1454431-03 GW

Collected by	Collected date/time	Received date/time
	01/20/22 00:00	01/25/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG1808231	1	02/02/22 00:00	02/02/22 00:00	-	Indianapolis, IN 46268

FIELD BLANK L1454431-04 GW

Collected by	Collected date/time	Received date/time
	01/20/22 10:00	01/25/22 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG1808231	1	02/02/22 00:00	02/02/22 00:00	-	Indianapolis, IN 46268

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

John Hawkins
Project Manager

Project Narrative

L1454431 -01, -02, -03, -04 contains subout data that is included after the chain of custody.

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

SDG	Sample Delivery Group.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Pace Analytical
www.pacelabs.com

J015

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

L1454431
~~L1454394~~

Page : 1 Of 1

Section A
Required Client Information:

Company:	Detroit Axle
Address:	1600 W. 8 Mile Road, Ferndale, Michigan
Email To:	ryann.scott@oneatlas.com
Phone:	248-669-5140
Fax	248-669-5147
Requested Due Date/TAT:	Standard

Section B
Required Project Information:

Report To:	ryann.scott@oneatlas.com
Copy To:	
Purchase Order No.	
Client Project ID:	NPDAX19001
Container Order Number:	

Section C
Invoice Information:

Attention:	Ryann Scott
Company Name:	Atlas Technical Consultants LLC
Address:	46555 Humboldt Drive, Suite 100, Novi MI 48377
Pace Quote Reference:	
Pace Project Manager:	
Pace Profile #:	

Regulatory Agency	State / Location
EGLE	MI

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

Requested Analysis Filtered (Y/N)

Preservatives: Unpreserved, H2SO4, HNO3, HCl, NaOH, Na2S2O3, Methanol, Other

ITEM#	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	START DATE	START TIME	END DATE	END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	E270 100ml Amb No Pres-	CN 250ml HDPE Amb-NaOH	MEETAC 40ml Clr-HCl	MeOH ETOH-Pace Ind 40ml Amb-HCl	Metals Part 201	PAHSIMLVITEL 40ml Amb	V8260LL14D 40ml Amb	V8260 OXY 40ml Amb	n-Butanol -Pace Indy	Residual Chlorine (Y/N)	
1	MW-104	WT	G	1/20/2022	1118	1/20/2022	1118		16 BA	X	X	X	X	X	X	X	X	X		01
2	MW-120	WT	G	1/20/2022	1336	1/20/2022	1336		↓	X	X	X	X	X	X	X	X	X		02
3	DUP-1	WT	G	1/20/2022	0000	1/20/2022	0000		↓	X	X	X	X	X	X	X	X	X		03
4	Field Blank	WT	G	1/20/22	1000	1/20/22	1000		↓ BA	X	X	X	X	X	X	X	X	X		04
5	Trip Blank	WT	G	1/20/22	0000		0000		1	X	X	X	X	X	X	X	X	X		
6																				
7																				
8																				
9																				
10																				
11																				
12																				

Sample Receipt Checklist
COC Seal Present/Intact: _Y ✓N
COC Signed/Accurate: ✓Y _N
Bottles arrive intact: ✓Y _N
Correct bottles used: ✓Y _N
Sufficient volume sent: ✓Y _N
RAD Screen <0.5 mR/hr: ✓Y _N
If Applicable
VOA Zero Headspace: ✓Y _N
Pres.Correct/Check: ✓Y _N

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
				[signature]	1/25/22	0915				
							TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Madelyn Haas ~~Ryann Scott~~
SIGNATURE of SAMPLER: Madelyn Haas
DATE Signed: 1/24/22

4.9±0=4.9 NSA7

9362 4958 2304

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

February 02, 2022

Jimmy Huckaba

,

RE: Project: Detroit Axle 1600 W/ WG1808231
Pace Project No.: 50307960

Dear Jimmy Huckaba:

Enclosed are the analytical results for sample(s) received by the laboratory on January 27, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Olivia Deck
olivia.deck@pacelabs.com
(317)228-3102
Project Manager

Enclosures

cc: Pace National Subout Team

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Detroit Axle 1600 W/ WG1808231
Pace Project No.: 50307960

Pace Analytical Services Indianapolis

7726 Moller Road, Indianapolis, IN 46268
Illinois Accreditation #: 200074
Indiana Drinking Water Laboratory #: C-49-06
Kansas/TNI Certification #: E-10177
Kentucky UST Agency Interest #: 80226
Kentucky WW Laboratory ID #: 98019
Michigan Drinking Water Laboratory #9050
Ohio VAP Certified Laboratory #: CL0065
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Wisconsin Laboratory #: 999788130
USDA Soil Permit #: P330-19-00257

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Detroit Axle 1600 W/ WG1808231
Pace Project No.: 50307960

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50307960001	**MW-104**	Water	01/20/22 11:18	01/27/22 17:45
50307960002	**MW-120**	Water	01/20/22 13:36	01/27/22 17:45
50307960003	**DUP-1**	Water	01/20/22 00:01	01/27/22 17:45
50307960004	**FIELD BLANK**	Water	01/20/22 10:00	01/27/22 17:45

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE ANALYTE COUNT

Project: Detroit Axle 1600 W/ WG1808231
Pace Project No.: 50307960

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50307960001	**MW-104**	EPA 8015 Alcohol-Glycol	CPH	3	PASI-I
50307960002	**MW-120**	EPA 8015 Alcohol-Glycol	CPH	3	PASI-I
50307960003	**DUP-1**	EPA 8015 Alcohol-Glycol	CPH	3	PASI-I
50307960004	**FIELD BLANK**	EPA 8015 Alcohol-Glycol	CPH	3	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Detroit Axle 1600 W/ WG1808231
Pace Project No.: 50307960

Sample: MW-104 **Lab ID: 50307960001** Collected: 01/20/22 11:18 Received: 01/27/22 17:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015M Alcohols in water	Analytical Method: EPA 8015 Alcohol-Glycol Initial Volume/Weight: 1 mL Final Volume/Weight: 1 mL Pace Analytical Services - Indianapolis							
n-Butanol	ND	mg/L	50.0	10		01/31/22 16:46	71-36-3	ED
Ethanol	ND	mg/L	50.0	10		01/31/22 16:46	64-17-5	
Methanol	ND	mg/L	50.0	10		01/31/22 16:46	67-56-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Detroit Axle 1600 W/ WG1808231
Pace Project No.: 50307960

Sample: MW-120 **Lab ID: 50307960002** Collected: 01/20/22 13:36 Received: 01/27/22 17:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015M Alcohols in water	Analytical Method: EPA 8015 Alcohol-Glycol Initial Volume/Weight: 1 mL Final Volume/Weight: 1 mL Pace Analytical Services - Indianapolis							
n-Butanol	ND	mg/L	50.0	10		01/31/22 16:56	71-36-3	ED
Ethanol	ND	mg/L	50.0	10		01/31/22 16:56	64-17-5	
Methanol	ND	mg/L	50.0	10		01/31/22 16:56	67-56-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Detroit Axle 1600 W/ WG1808231
Pace Project No.: 50307960

Sample: DUP-1 **Lab ID: 50307960003** Collected: 01/20/22 00:01 Received: 01/27/22 17:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015M Alcohols in water	Analytical Method: EPA 8015 Alcohol-Glycol Initial Volume/Weight: 1 mL Final Volume/Weight: 1 mL Pace Analytical Services - Indianapolis							
n-Butanol	ND	mg/L	50.0	10		01/31/22 17:05	71-36-3	ED
Ethanol	ND	mg/L	50.0	10		01/31/22 17:05	64-17-5	
Methanol	ND	mg/L	50.0	10		01/31/22 17:05	67-56-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Detroit Axle 1600 W/ WG1808231
Pace Project No.: 50307960

Sample: FIELD BLANK **Lab ID: 50307960004** Collected: 01/20/22 10:00 Received: 01/27/22 17:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8015M Alcohols in water	Analytical Method: EPA 8015 Alcohol-Glycol Initial Volume/Weight: 1 mL Final Volume/Weight: 1 mL Pace Analytical Services - Indianapolis							
n-Butanol	ND	mg/L	50.0	10		01/31/22 17:14	71-36-3	ED
Ethanol	ND	mg/L	50.0	10		01/31/22 17:14	64-17-5	
Methanol	ND	mg/L	50.0	10		01/31/22 17:14	67-56-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Detroit Axle 1600 W/ WG1808231
Pace Project No.: 50307960

QC Batch: 660424
QC Batch Method: EPA 8015 Alcohol-Glycol
Analysis Method: EPA 8015 Alcohol-Glycol
Analysis Description: EPA 8015 Modified
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50307960001, 50307960002, 50307960003, 50307960004

METHOD BLANK: 3042114 Matrix: Water
Associated Lab Samples: 50307960001, 50307960002, 50307960003, 50307960004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethanol	mg/L	ND	5.0	01/31/22 16:28	
Methanol	mg/L	ND	5.0	01/31/22 16:28	
n-Butanol	mg/L	ND	5.0	01/31/22 16:28	

LABORATORY CONTROL SAMPLE: 3042115

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethanol	mg/L	50	47.0	94	63-128	
Methanol	mg/L	50	43.7	87	66-117	
n-Butanol	mg/L	50	45.4	91	73-117	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3042116 3042117

Parameter	Units	60391479001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Ethanol	mg/L	ND	50	50	51.0	51.0	102	102	61-129	0	20	
Methanol	mg/L	ND	50	50	45.3	47.3	91	95	63-118	4	20	
n-Butanol	mg/L	ND	50	50	47.6	49.3	95	99	68-119	3	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Detroit Axle 1600 W/ WG1808231
Pace Project No.: 50307960

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

ED	Due to the extract's physical characteristics, the analysis was performed at dilution.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Detroit Axle 1600 W/ WG1808231
Pace Project No.: 50307960

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50307960001	**MW-104**	EPA 8015 Alcohol-Glycol	660424		
50307960002	**MW-120**	EPA 8015 Alcohol-Glycol	660424		
50307960003	**DUP-1**	EPA 8015 Alcohol-Glycol	660424		
50307960004	**FIELD BLANK**	EPA 8015 Alcohol-Glycol	660424		

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must

WO# : 50307960

50307960

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Pace Analytical	Report To:	Pace Analytical Subout Team	Attention:	Ryann Scott
Address:	12065 Lebanon Rd.	Copy To:		Company Name:	
Mt. Juliet, TN 37122				Address:	
Email:	MTJLSuboutTeam@pacelabs.com	Purchase Order #:	L1454431	Pace Quote:	
Phone:	(615) 773-9756 Fax: (615) 758-5859	Project Name:	Detroit Axle 1600 W. 8 Mile Road	Pace Project Manager:	Olivia Deck
Requested Due Date:	1-Feb	Project #:		Pace Profile #:	38076

State / Location
MI

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample Ids must be unique

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Requested Analysis Filtered (Y/N) Y/N	Analyses Test: 8015 N-Butanol	8015 Ethanol & Methanol	Residual Chlorine (Y/N)	
1	MW-104	WT				20-Jan	11:18		1								1		X	X		001
2	MW-120	WT				20-Jan	13:36		1								1		X	X		002
3	DUP-1	WT				20-Jan	0:01		1								1		X	X		003
4	FIELD BLANK	WT				20-Jan	10:00		1								1		X	X		004
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	James C Huckaba	26-Jan	10:48	Fedex						
Pace Analytical Batch: WG1808231	FE			Bailey B	1/27/26	1745	2.4	4	4	4
Pace Analytical SDGs: L1454431										
Location: Indianapolis, IN 46268										

SAMPLER NAME AND SIGNATURE				
PRINT Name of SAMPLER:				
SIGNATURE of SAMPLER:	DATE Signed:	TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Pace Analytical®

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: BC 1835 1/27/22

1. **Courier:** ☒ FED EX ☐ UPS ☐ CLIENT ☐ PACE ☐ USPS ☐ OTHER _____

2. **Custody Seal on Cooler/Box Present:** ☒ Yes ☐ No

(If yes)Seals Intact: ☒ Yes ☐ No **(leave blank if no seals were present)**

3. **Thermometer:** 1 2 3 4 5 6 A (B) C D E F

4. **Cooler Temperature:** 2.1/2.4
Temp should be above freezing to 6°C **(Initial/Corrected)**

5. **Packing Material:** ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other _____

6. **Ice Type:** ☒ Wet ☐ Blue ☐ None

7. **If temp. is over 6°C or under 0°C, was the PM notified?:** ☐ Yes ☐ No

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓	All containers needing acid/base pres. Have been CHECKED?: **exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.** **Circle:** **HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form			✓
Short Hold Time Analysis (48 hours or less)? Analysis:		✓				
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:	✓		Present	Absent	N/A ✓
Rush TAT Requested (4 days or less):		✓	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			
Custody Signatures Present?	✓		Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Containers Intact?:	✓		Headspace Wisconsin Sulfide?			✓
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	✓		Headspace in VOA Vials (>6mm): See Containter Count form for details	Present	Absent ✓	No VOA Vials Sent
Extra labels on Terracore Vials? (soils only)		✓	Trip Blank Present?		✓	
			Trip Blank Custody Seals?:			✓

COMMENTS:

COC PAGE 1 **of** 1

Sample Container Count

SBS
DI
MeOH (only)
BK
Kit

** Place a RED dot on containers that are out of conformance **

COC Line Item	WGFU	R	DG9H	VG9H	VOA VIAL HS (>6mm)	VG9U	DG9U	VG9T	AG0U	AG1H	AG1U	AG2U	AG3S	AG3SF	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	Syringe Kit			Matrix	HNO3/ H2SO4 pH <2	NaOH/ ZNAc pH >9	NaOH pH>10
1			2	2																									WT			
2			2	2																									↓			
3			2	2																												
4			2	2																												
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	1L Na Thiosulfate clear glass	BP1B	1L NaOH plastic
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass	BP1N	1L HNO3 plastic
DG9S	40mL H2SO4 amber vial	BG3H	250mL HCl Clear Glass	BP1S	1L H2SO4 plastic
DG9T	40mL Na Thio amber vial	BG3U	250mL Unpres Clear Glass	BP1U	1L unpreserved plastic
DG9U	40mL unpreserved amber vial	AG0U	100mL unpres amber glass	BP1Z	1L NaOH, Zn, Ac
VG9H	40mL HCl clear vial	AG1H	1L HCl amber glass	BP2N	500mL HNO3 plastic
VG9T	40mL Na Thio. clear vial	AG1S	1L H2SO4 amber glass	BP2C	500mL NaOH plastic
VG9U	40mL unpreserved clear vial	AG1T	1L Na Thiosulfate amber glass	BP2S	500mL H2SO4 plastic
I	40mL w/hexane wipe vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic
WGKU	8oz unpreserved clear jar	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Ac
WGFU	4oz clear soil jar	AG2S	500mL H2SO4 amber glass	BP3B	250mL NaOH plastic
JGFU	4oz unpreserved amber wide	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic
CG3H	250mL clear glass HCl	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic-field filtered
BG1H	1L HCl clear glass	AG3SF	250mL H2SO4 amb glass -field filtered	BP3U	250mL unpreserved plastic
BG1S	1L H2SO4 clear glass	AG3U	250mL unpres amber glass	BP3S	250mL H2SO4 plastic
GN	General	AG3C	250mL NaOH amber glass	BP3Z	250mL NaOH, ZnAc plastic

Plastic / Misc.

BP4U	125mL unpreserved plastic
BP4N	125mL HNO3 plastic
BP4S	125mL H2SO4 plastic

Syringe Kit	LL Cr+6 sampling kit

AF	Air Filter
C	Air Cassettes
R	Terracore kit
SP5T	120mL Coliform Na Thiosulfate
U	Summa Can
ZPLC	Ziploc Bag

WT		Water	
SL		Solid	
NAL	OL	Non-aqueous liquid	Oil
WP		Wipe	

Report of Analysis

ATC Group Services
46555 Humboldt Drive, Suite 100
Novi, MI 48377
Attention: Ryann.Scott@OneAtlas.com Ryann.Scott@OneAtlas.com

Project Name: Atlas PFAS_Detroit Axle

Project Number: NPDAX19001

Lot Number:**WL14079**

Date Completed:12/27/2021

12/29/2021 4:49 PM
Approved and released by:
Project Manager II: **Marcia K. McGinnity**

Case Narrative
ATC Group Services
Lot Number: WL14079

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved The NELAC Institute (TNI) standards, the Pace Analytical Services, LLC ("Pace") Laboratory Quality Manual, standard operating procedures (SOPs), and Pace policies. Any exceptions to the TNI standards, the Laboratory Quality Manual, SOPs or policies are qualified on the results page or discussed below.

Pace is a TNI accredited laboratory; however, the following analyses are currently not listed on our TNI scope of accreditation:

Biological Tissue: All, Non-Potable Water: SGT-HEM EPA 1664B, Silica EPA 200.7, Boron, Calcium, Silicon, Strontium EPA 200.8, Bicarbonate, Carbonate, and Hydroxide Alkalinity SM 2320 B-2011, Fecal Coliform SM 9221 C E-2006 & SM 9222D-2006, Strontium SW-846 6010D, VOC SM 6200 B-2011, Drinking Water: VOC (excluding BTEX, MTBE, Naphthalene, & 1,2-dichloroethane) EPA 524.2, Solid Chemical Material: TOC Walkley-Black.

If you have any questions regarding this report please contact the Pace Project Manager listed on the cover page.

Sample Notes:

Recoveries for one or more Surrogate (SUR; Extracted Internal Standard/EIS) were outside control limits for the listed samples. The recovery is high and the associated analyte is non-detect. Re-extraction/re-analysis was not performed. Associated results are qualified “Q”.
WL14079-001 (MW-106) (Run 1) (Analysis Batch 26627) (Prep Batch 26411) PFAS - MI 28
WL14079-002 (MW-107) (Run 1) (Analysis Batch 26627) (Prep Batch 26411) PFAS - MI 28
WL14079-003 (MW-108) (Run 1) (Analysis Batch 26627) (Prep Batch 26411) PFAS - MI 28
WL14079-004 (MW-109) (Run 1) (Analysis Batch 26627) (Prep Batch 26411) PFAS - MI 28
WL14079-005 (MW-110) (Run 1) (Analysis Batch 26627) (Prep Batch 26411) PFAS - MI 28
WL14079-006 (MW-111) (Run 1) (Analysis Batch 26627) (Prep Batch 26411) PFAS - MI 28
WL14079-007 (MW-112) (Run 1) (Analysis Batch 26627) (Prep Batch 26411) PFAS - MI 28
WL14079-008 (MW-113) (Run 1) (Analysis Batch 26627) (Prep Batch 26411) PFAS - MI 28
WL14079-009 (MW-119) (Run 1) (Analysis Batch 26627) (Prep Batch 26411) PFAS - MI 28
WL14079-010 (MW-121) (Run 1) (Analysis Batch 26627) (Prep Batch 26411) PFAS - MI 28
WL14079-011 (DUP-1) (Run 1) (Analysis Batch 26627) (Prep Batch 26411) PFAS - MI 28
WL14079-012 (DUP-2) (Run 1) (Analysis Batch 26627) (Prep Batch 26411) PFAS - MI 28
WL14079-014 (Field Blank) (Run 1) (Analysis Batch 26627) (Prep Batch 26411) PFAS - MI 28

Sample Summary
ATC Group Services
Lot Number: WL14079

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-106	Aqueous	12/10/2021 1429	12/14/2021
002	MW-107	Aqueous	12/10/2021 1254	12/14/2021
003	MW-108	Aqueous	12/10/2021 1129	12/14/2021
004	MW-109	Aqueous	12/10/2021 1032	12/14/2021
005	MW-110	Aqueous	12/10/2021 1045	12/14/2021
006	MW-111	Aqueous	12/10/2021 1200	12/14/2021
007	MW-112	Aqueous	12/10/2021 1310	12/14/2021
008	MW-113	Aqueous	12/10/2021 1520	12/14/2021
009	MW-119	Aqueous	12/10/2021 1430	12/14/2021
010	MW-121	Aqueous	12/10/2021 1619	12/14/2021
011	DUP-1	Aqueous	12/10/2021	12/14/2021
012	DUP-2	Aqueous	12/10/2021	12/14/2021
013	Trip Blank	Aqueous	12/10/2021 1800	12/14/2021
014	Field Blank	Aqueous	12/10/2021 0915	12/14/2021

(14 samples)

Detection Summary
ATC Group Services
Lot Number: WL14079

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-106	Aqueous	6:2 FTS	PFAS by ID	3.5	JQ	ng/L	8
001	MW-106	Aqueous	PFBS	PFAS by ID	5.3		ng/L	8
001	MW-106	Aqueous	PFPeS	PFAS by ID	0.95	J	ng/L	8
001	MW-106	Aqueous	PFHxS	PFAS by ID	8.4		ng/L	8
001	MW-106	Aqueous	PFBA	PFAS by ID	7.8		ng/L	8
001	MW-106	Aqueous	PFDA	PFAS by ID	0.54	J	ng/L	8
001	MW-106	Aqueous	PFHpA	PFAS by ID	3.4		ng/L	8
001	MW-106	Aqueous	PFHxA	PFAS by ID	3.6		ng/L	8
001	MW-106	Aqueous	PFNA	PFAS by ID	0.63	J	ng/L	8
001	MW-106	Aqueous	PFOA	PFAS by ID	9.9		ng/L	8
001	MW-106	Aqueous	PFPeA	PFAS by ID	2.7	J	ng/L	8
001	MW-106	Aqueous	PFOS	PFAS by ID	3.2	J	ng/L	8
002	MW-107	Aqueous	PFBS	PFAS by ID	3.5		ng/L	10
002	MW-107	Aqueous	PFHxS	PFAS by ID	2.7	J	ng/L	10
002	MW-107	Aqueous	PFBA	PFAS by ID	6.4		ng/L	10
002	MW-107	Aqueous	PFHpA	PFAS by ID	5.7		ng/L	10
002	MW-107	Aqueous	PFHxA	PFAS by ID	12		ng/L	10
002	MW-107	Aqueous	PFOA	PFAS by ID	16		ng/L	10
002	MW-107	Aqueous	PFPeA	PFAS by ID	7.7		ng/L	10
003	MW-108	Aqueous	PFBS	PFAS by ID	5.5		ng/L	12
003	MW-108	Aqueous	PFPeS	PFAS by ID	0.64	J	ng/L	12
003	MW-108	Aqueous	PFHxS	PFAS by ID	2.4	J	ng/L	12
003	MW-108	Aqueous	PFBA	PFAS by ID	15		ng/L	12
003	MW-108	Aqueous	PFHpA	PFAS by ID	2.2	J	ng/L	12
003	MW-108	Aqueous	PFHxA	PFAS by ID	3.1	J	ng/L	12
003	MW-108	Aqueous	PFOA	PFAS by ID	9.3		ng/L	12
003	MW-108	Aqueous	PFPeA	PFAS by ID	4.0		ng/L	12
004	MW-109	Aqueous	PFBS	PFAS by ID	5.7		ng/L	14
004	MW-109	Aqueous	PFPeS	PFAS by ID	0.73	J	ng/L	14
004	MW-109	Aqueous	PFHxS	PFAS by ID	1.9	J	ng/L	14
004	MW-109	Aqueous	PFBA	PFAS by ID	12		ng/L	14
004	MW-109	Aqueous	PFHpA	PFAS by ID	12		ng/L	14
004	MW-109	Aqueous	PFHxA	PFAS by ID	15		ng/L	14
004	MW-109	Aqueous	PFOA	PFAS by ID	21		ng/L	14
004	MW-109	Aqueous	PFPeA	PFAS by ID	12		ng/L	14
005	MW-110	Aqueous	PFBS	PFAS by ID	5.6		ng/L	16
005	MW-110	Aqueous	PFHxS	PFAS by ID	1.5	J	ng/L	16
005	MW-110	Aqueous	PFBA	PFAS by ID	8.2		ng/L	16
005	MW-110	Aqueous	PFHpA	PFAS by ID	5.8		ng/L	16
005	MW-110	Aqueous	PFHxA	PFAS by ID	6.9		ng/L	16
005	MW-110	Aqueous	PFOA	PFAS by ID	14		ng/L	16
005	MW-110	Aqueous	PFPeA	PFAS by ID	6.8		ng/L	16
005	MW-110	Aqueous	PFOS	PFAS by ID	2.5	J	ng/L	16
006	MW-111	Aqueous	PFBS	PFAS by ID	2.7	J	ng/L	18
006	MW-111	Aqueous	PFHxS	PFAS by ID	1.8	J	ng/L	18

Detection Summary (Continued)

Lot Number: WL14079

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
006	MW-111	Aqueous	PFBA	PFAS by ID	3.1	J	ng/L	18
006	MW-111	Aqueous	PFHpA	PFAS by ID	1.5	J	ng/L	18
006	MW-111	Aqueous	PFHxA	PFAS by ID	1.9	J	ng/L	18
006	MW-111	Aqueous	PFOA	PFAS by ID	8.7		ng/L	18
006	MW-111	Aqueous	PFPeA	PFAS by ID	1.4	J	ng/L	18
007	MW-112	Aqueous	PFBS	PFAS by ID	8.6		ng/L	20
007	MW-112	Aqueous	PFPeS	PFAS by ID	1.6	J	ng/L	20
007	MW-112	Aqueous	PFHxS	PFAS by ID	4.2		ng/L	20
007	MW-112	Aqueous	PFBA	PFAS by ID	20		ng/L	20
007	MW-112	Aqueous	PFHpA	PFAS by ID	3.3	J	ng/L	20
007	MW-112	Aqueous	PFHxA	PFAS by ID	4.8		ng/L	20
007	MW-112	Aqueous	PFOA	PFAS by ID	69		ng/L	20
007	MW-112	Aqueous	PFPeA	PFAS by ID	3.5	J	ng/L	20
007	MW-112	Aqueous	PFOS	PFAS by ID	7.8		ng/L	20
008	MW-113	Aqueous	PFBS	PFAS by ID	0.75	J	ng/L	22
008	MW-113	Aqueous	PFHxS	PFAS by ID	2.4	J	ng/L	22
008	MW-113	Aqueous	PFBA	PFAS by ID	1.1	J	ng/L	22
010	MW-121	Aqueous	PFBS	PFAS by ID	3.7		ng/L	26
010	MW-121	Aqueous	PFPeS	PFAS by ID	1.2	J	ng/L	26
010	MW-121	Aqueous	PFHxS	PFAS by ID	7.4		ng/L	26
010	MW-121	Aqueous	PFBA	PFAS by ID	7.1		ng/L	26
010	MW-121	Aqueous	PFHpA	PFAS by ID	13		ng/L	26
010	MW-121	Aqueous	PFHxA	PFAS by ID	16		ng/L	26
010	MW-121	Aqueous	PFNA	PFAS by ID	2.7	J	ng/L	26
010	MW-121	Aqueous	PFOA	PFAS by ID	37		ng/L	26
010	MW-121	Aqueous	PFPeA	PFAS by ID	12		ng/L	26
010	MW-121	Aqueous	PFOS	PFAS by ID	3.6		ng/L	26
011	DUP-1	Aqueous	PFBS	PFAS by ID	3.8		ng/L	28
011	DUP-1	Aqueous	PFHpS	PFAS by ID	0.44	J	ng/L	28
011	DUP-1	Aqueous	PFPeS	PFAS by ID	1.4	J	ng/L	28
011	DUP-1	Aqueous	PFHxS	PFAS by ID	6.5		ng/L	28
011	DUP-1	Aqueous	PFBA	PFAS by ID	7.2		ng/L	28
011	DUP-1	Aqueous	PFHpA	PFAS by ID	13		ng/L	28
011	DUP-1	Aqueous	PFHxA	PFAS by ID	16		ng/L	28
011	DUP-1	Aqueous	PFNA	PFAS by ID	2.9	J	ng/L	28
011	DUP-1	Aqueous	PFOA	PFAS by ID	36		ng/L	28
011	DUP-1	Aqueous	PFPeA	PFAS by ID	12		ng/L	28
011	DUP-1	Aqueous	PFOS	PFAS by ID	3.6		ng/L	28
012	DUP-2	Aqueous	PFBS	PFAS by ID	8.7		ng/L	30
012	DUP-2	Aqueous	PFPeS	PFAS by ID	1.5	J	ng/L	30
012	DUP-2	Aqueous	PFHxS	PFAS by ID	4.7		ng/L	30
012	DUP-2	Aqueous	PFBA	PFAS by ID	19		ng/L	30
012	DUP-2	Aqueous	PFHpA	PFAS by ID	3.0	J	ng/L	30
012	DUP-2	Aqueous	PFHxA	PFAS by ID	4.6		ng/L	30
012	DUP-2	Aqueous	PFOA	PFAS by ID	68		ng/L	30
012	DUP-2	Aqueous	PFPeA	PFAS by ID	3.6		ng/L	30
012	DUP-2	Aqueous	PFOS	PFAS by ID	7.8		ng/L	30

Detection Summary (Continued)

Lot Number: WL14079

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page

(92 detections)

PFAS by LC/MS/MS

Client: **ATC Group Services** Laboratory ID: **WL14079-001**

Description: **MW-106** Matrix: **Aqueous**

Date Sampled: **12/10/2021 1429**

Date Received: **12/14/2021**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	12/23/2021 1144	MMM	12/21/2021 1616	26411

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.8	0.41	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		6.8	0.57	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		6.8	1.4	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	**27619-97-2**	**PFAS by ID SOP**	**3.5**	**JQ**	**6.8**	**1.7**	**ng/L**	**1**
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	Q	6.8	0.75	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		6.8	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		6.8	0.41	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		6.8	0.64	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.8	0.80	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	**375-73-5**	**PFAS by ID SOP**	**5.3**		**3.4**	**0.35**	**ng/L**	**1**
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.4	0.66	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.4	0.43	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.4	0.61	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.4	0.52	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	**2706-91-4**	**PFAS by ID SOP**	**0.95**	**J**	**3.4**	**0.51**	**ng/L**	**1**
Perfluorohexanesulfonic acid (PFHxS)	**355-46-4**	**PFAS by ID SOP**	**8.4**		**3.4**	**0.47**	**ng/L**	**1**
Perfluoro-n-butanoic acid (PFBA)	**375-22-4**	**PFAS by ID SOP**	**7.8**		**3.4**	**0.51**	**ng/L**	**1**
Perfluoro-n-decanoic acid (PFDA)	**335-76-2**	**PFAS by ID SOP**	**0.54**	**J**	**3.4**	**0.45**	**ng/L**	**1**
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.4	0.40	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	**375-85-9**	**PFAS by ID SOP**	**3.4**		**3.4**	**0.38**	**ng/L**	**1**
Perfluoro-n-hexanoic acid (PFHxA)	**307-24-4**	**PFAS by ID SOP**	**3.6**		**3.4**	**0.59**	**ng/L**	**1**
Perfluoro-n-nonanoic acid (PFNA)	**375-95-1**	**PFAS by ID SOP**	**0.63**	**J**	**3.4**	**0.39**	**ng/L**	**1**
Perfluoro-n-octanoic acid (PFOA)	**335-67-1**	**PFAS by ID SOP**	**9.9**		**3.4**	**0.71**	**ng/L**	**1**
Perfluoro-n-pentanoic acid (PFPeA)	**2706-90-3**	**PFAS by ID SOP**	**2.7**	**J**	**3.4**	**0.46**	**ng/L**	**1**
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.4	0.51	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.4	0.45	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.4	0.53	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	**1763-23-1**	**PFAS by ID SOP**	**3.2**	**J**	**3.4**	**1.7**	**ng/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS	N	197	25-150
13C2_6:2FTS	N	167	25-150
13C2_8:2FTS		115	25-150
13C2_PFDoA		108	25-150
13C2_PFTeDA		99	25-150
13C3_PFBS		105	25-150
13C3_PFHxS		115	25-150
13C3-HFPO-DA		100	25-150
13C4_PFBA		76	25-150
13C4_PFHpA		114	25-150
13C5_PFHxA		110	25-150
13C5_PFPeA		100	25-150
13C6_PFDA		107	25-150
13C7_PFUdA		110	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **ATC Group Services**
Laboratory ID: **WL14079-001**
Description: **MW-106**
Matrix: **Aqueous**
Date Sampled: **12/10/2021 1429**
Date Received: **12/14/2021**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C8_PFOA		109	25-150
13C8_PFOS		113	25-150
13C8_PFOSA		120	10-150
13C9_PFNA		112	25-150
d5-EtFOSAA		118	25-150
d3-MeFOSAA		114	25-150

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
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E = Quantitation of compound exceeded the calibration range
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PFAS by LC/MS/MS

Client: **ATC Group Services** Laboratory ID: **WL14079-002**

Description: **MW-107** Matrix: **Aqueous**

Date Sampled: **12/10/2021 1254**

Date Received: **12/14/2021**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	12/23/2021 1155	MMM	12/21/2021 1616	26411

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.9	0.42	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		6.9	0.58	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		6.9	1.4	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND	Q	6.9	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	Q	6.9	0.76	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		6.9	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		6.9	0.42	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		6.9	0.65	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.9	0.81	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	**375-73-5**	**PFAS by ID SOP**	**3.5**		**3.5**	**0.36**	**ng/L**	**1**
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.68	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.5	0.43	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.62	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.53	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.5	0.52	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	**355-46-4**	**PFAS by ID SOP**	**2.7**	**J**	**3.5**	**0.48**	**ng/L**	**1**
Perfluoro-n-butanoic acid (PFBA)	**375-22-4**	**PFAS by ID SOP**	**6.4**		**3.5**	**0.52**	**ng/L**	**1**
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.46	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.41	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	**375-85-9**	**PFAS by ID SOP**	**5.7**		**3.5**	**0.39**	**ng/L**	**1**
Perfluoro-n-hexanoic acid (PFHxA)	**307-24-4**	**PFAS by ID SOP**	**12**		**3.5**	**0.60**	**ng/L**	**1**
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.40	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	**335-67-1**	**PFAS by ID SOP**	**16**		**3.5**	**0.72**	**ng/L**	**1**
Perfluoro-n-pentanoic acid (PFPeA)	**2706-90-3**	**PFAS by ID SOP**	**7.7**		**3.5**	**0.47**	**ng/L**	**1**
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.52	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.46	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.54	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		3.5	1.7	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS	N	197	25-150
13C2_6:2FTS	N	155	25-150
13C2_8:2FTS		107	25-150
13C2_PFDoA		109	25-150
13C2_PFTeDA		96	25-150
13C3_PFBS		101	25-150
13C3_PFHxS		106	25-150
13C3-HFPO-DA		102	25-150
13C4_PFBA		82	25-150
13C4_PFHpA		111	25-150
13C5_PFHxA		103	25-150
13C5_PFPeA		100	25-150
13C6_PFDA		104	25-150
13C7_PFUdA		97	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
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S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **ATC Group Services**
Laboratory ID: **WL14079-002**
Description: **MW-107**
Matrix: **Aqueous**
Date Sampled: **12/10/2021 1254**
Date Received: **12/14/2021**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C8_PFOA		103	25-150
13C8_PFOS		109	25-150
13C8_PFOSA		115	10-150
13C9_PFNA		105	25-150
d5-EtFOSAA		106	25-150
d3-MeFOSAA		108	25-150

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
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DL = Detection Limit
J = Estimated result < LOQ and ≥ DL
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PFAS by LC/MS/MS

Client: **ATC Group Services** Laboratory ID: **WL14079-003**

Description: **MW-108** Matrix: **Aqueous**

Date Sampled: **12/10/2021 1129**

Date Received: **12/14/2021**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	12/23/2021 1205	MMM	12/21/2021 1616	26411

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.0	0.42	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.0	0.58	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.0	1.4	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND	Q	7.0	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	Q	7.0	0.76	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.0	0.42	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.0	0.66	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.0	0.81	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	**375-73-5**	**PFAS by ID SOP**	**5.5**		**3.5**	**0.36**	**ng/L**	**1**
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.68	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.5	0.44	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.62	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.54	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	**2706-91-4**	**PFAS by ID SOP**	**0.64**	**J**	**3.5**	**0.52**	**ng/L**	**1**
Perfluorohexanesulfonic acid (PFHxS)	**355-46-4**	**PFAS by ID SOP**	**2.4**	**J**	**3.5**	**0.48**	**ng/L**	**1**
Perfluoro-n-butanoic acid (PFBA)	**375-22-4**	**PFAS by ID SOP**	**15**		**3.5**	**0.52**	**ng/L**	**1**
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.46	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.41	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	**375-85-9**	**PFAS by ID SOP**	**2.2**	**J**	**3.5**	**0.39**	**ng/L**	**1**
Perfluoro-n-hexanoic acid (PFHxA)	**307-24-4**	**PFAS by ID SOP**	**3.1**	**J**	**3.5**	**0.60**	**ng/L**	**1**
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.40	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	**335-67-1**	**PFAS by ID SOP**	**9.3**		**3.5**	**0.72**	**ng/L**	**1**
Perfluoro-n-pentanoic acid (PFPeA)	**2706-90-3**	**PFAS by ID SOP**	**4.0**		**3.5**	**0.48**	**ng/L**	**1**
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.52	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.46	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.55	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		3.5	1.7	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS	N	204	25-150
13C2_6:2FTS	N	161	25-150
13C2_8:2FTS		112	25-150
13C2_PFDoA		118	25-150
13C2_PFTeDA		97	25-150
13C3_PFBS		109	25-150
13C3_PFHxS		115	25-150
13C3-HFPO-DA		98	25-150
13C4_PFBA		68	25-150
13C4_PFHpA		115	25-150
13C5_PFHxA		114	25-150
13C5_PFPeA		100	25-150
13C6_PFDA		99	25-150
13C7_PFUdA		103	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **ATC Group Services**
Laboratory ID: **WL14079-003**
Description: **MW-108**
Matrix: **Aqueous**
Date Sampled: **12/10/2021 1129**
Date Received: **12/14/2021**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C8_PFOA		108	25-150
13C8_PFOS		105	25-150
13C8_PFOSA		118	10-150
13C9_PFNA		110	25-150
d5-EtFOSAA		110	25-150
d3-MeFOSAA		101	25-150

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL
Q = Surrogate failure
L = LCS/LCSD failure
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **ATC Group Services** Laboratory ID: **WL14079-004**

Description: **MW-109** Matrix: **Aqueous**

Date Sampled: **12/10/2021 1032**

Date Received: **12/14/2021**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	12/23/2021 1216	MMM	12/21/2021 1616	26411

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.9	0.42	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		6.9	0.57	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		6.9	1.4	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND	Q	6.9	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	Q	6.9	0.76	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		6.9	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		6.9	0.42	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		6.9	0.65	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.9	0.81	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	**375-73-5**	**PFAS by ID SOP**	**5.7**		**3.5**	**0.36**	**ng/L**	**1**
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.67	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.5	0.43	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.62	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.53	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	**2706-91-4**	**PFAS by ID SOP**	**0.73**	**J**	**3.5**	**0.51**	**ng/L**	**1**
Perfluorohexanesulfonic acid (PFHxS)	**355-46-4**	**PFAS by ID SOP**	**1.9**	**J**	**3.5**	**0.48**	**ng/L**	**1**
Perfluoro-n-butanoic acid (PFBA)	**375-22-4**	**PFAS by ID SOP**	**12**		**3.5**	**0.52**	**ng/L**	**1**
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.45	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.41	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	**375-85-9**	**PFAS by ID SOP**	**12**		**3.5**	**0.39**	**ng/L**	**1**
Perfluoro-n-hexanoic acid (PFHxA)	**307-24-4**	**PFAS by ID SOP**	**15**		**3.5**	**0.60**	**ng/L**	**1**
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.40	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	**335-67-1**	**PFAS by ID SOP**	**21**		**3.5**	**0.72**	**ng/L**	**1**
Perfluoro-n-pentanoic acid (PFPeA)	**2706-90-3**	**PFAS by ID SOP**	**12**		**3.5**	**0.47**	**ng/L**	**1**
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.52	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.46	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.54	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		3.5	1.7	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS	N	208	25-150
13C2_6:2FTS	N	173	25-150
13C2_8:2FTS		116	25-150
13C2_PFDoA		107	25-150
13C2_PFTeDA		98	25-150
13C3_PFBS		104	25-150
13C3_PFHxS		111	25-150
13C3-HFPO-DA		96	25-150
13C4_PFBA		64	25-150
13C4_PFHpA		113	25-150
13C5_PFHxA		105	25-150
13C5_PFPeA		95	25-150
13C6_PFDA		107	25-150
13C7_PFUdA		108	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **ATC Group Services**
Laboratory ID: **WL14079-004**
Description: **MW-109**
Matrix: **Aqueous**
Date Sampled: **12/10/2021 1032**
Date Received: **12/14/2021**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C8_PFOA		110	25-150
13C8_PFOS		106	25-150
13C8_PFOSA		120	10-150
13C9_PFNA		113	25-150
d5-EtFOSAA		95	25-150
d3-MeFOSAA		106	25-150

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL
Q = Surrogate failure
L = LCS/LCSD failure
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **ATC Group Services** Laboratory ID: **WL14079-005**

Description: **MW-110** Matrix: **Aqueous**

Date Sampled: **12/10/2021 1045**

Date Received: **12/14/2021**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	12/23/2021 1226	MMM	12/21/2021 1616	26411

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.0	0.42	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.0	0.58	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.0	1.4	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND	Q	7.0	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	Q	7.0	0.77	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.0	0.43	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.0	0.66	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.0	0.82	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	**375-73-5**	**PFAS by ID SOP**	**5.6**		**3.5**	**0.36**	**ng/L**	**1**
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.68	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.5	0.44	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.63	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.54	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.5	0.52	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	**355-46-4**	**PFAS by ID SOP**	**1.5**	**J**	**3.5**	**0.49**	**ng/L**	**1**
Perfluoro-n-butanoic acid (PFBA)	**375-22-4**	**PFAS by ID SOP**	**8.2**		**3.5**	**0.53**	**ng/L**	**1**
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.46	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.42	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	**375-85-9**	**PFAS by ID SOP**	**5.8**		**3.5**	**0.39**	**ng/L**	**1**
Perfluoro-n-hexanoic acid (PFHxA)	**307-24-4**	**PFAS by ID SOP**	**6.9**		**3.5**	**0.61**	**ng/L**	**1**
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.41	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	**335-67-1**	**PFAS by ID SOP**	**14**		**3.5**	**0.73**	**ng/L**	**1**
Perfluoro-n-pentanoic acid (PFPeA)	**2706-90-3**	**PFAS by ID SOP**	**6.8**		**3.5**	**0.48**	**ng/L**	**1**
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.53	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.47	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.55	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	**1763-23-1**	**PFAS by ID SOP**	**2.5**	**J**	**3.5**	**1.8**	**ng/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS	N	199	25-150
13C2_6:2FTS	N	162	25-150
13C2_8:2FTS		115	25-150
13C2_PFDoA		102	25-150
13C2_PFTeDA		91	25-150
13C3_PFBS		98	25-150
13C3_PFHxS		114	25-150
13C3-HFPO-DA		95	25-150
13C4_PFBA		74	25-150
13C4_PFHpA		107	25-150
13C5_PFHxA		108	25-150
13C5_PFPeA		97	25-150
13C6_PFDA		91	25-150
13C7_PFUdA		97	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **ATC Group Services**
Laboratory ID: **WL14079-005**
Description: **MW-110**
Matrix: **Aqueous**
Date Sampled: **12/10/2021 1045**
Date Received: **12/14/2021**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C8_PFOA		94	25-150
13C8_PFOS		104	25-150
13C8_PFOSA		116	10-150
13C9_PFNA		108	25-150
d5-EtFOSAA		102	25-150
d3-MeFOSAA		102	25-150

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
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J = Estimated result < LOQ and ≥ DL
Q = Surrogate failure
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S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **ATC Group Services** Laboratory ID: **WL14079-006**

Description: **MW-111** Matrix: **Aqueous**

Date Sampled: **12/10/2021 1200**

Date Received: **12/14/2021**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	12/23/2021 1237	MMM	12/21/2021 1616	26411

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.1	0.43	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.1	0.59	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.1	1.4	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND	Q	7.1	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	Q	7.1	0.78	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.1	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.1	0.43	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.1	0.67	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.1	0.83	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	**375-73-5**	**PFAS by ID SOP**	**2.7**	**J**	**3.6**	**0.37**	**ng/L**	**1**
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.6	0.69	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.6	0.44	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.6	0.63	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.6	0.55	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.6	0.53	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	**355-46-4**	**PFAS by ID SOP**	**1.8**	**J**	**3.6**	**0.49**	**ng/L**	**1**
Perfluoro-n-butanoic acid (PFBA)	**375-22-4**	**PFAS by ID SOP**	**3.1**	**J**	**3.6**	**0.53**	**ng/L**	**1**
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.6	0.47	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.42	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	**375-85-9**	**PFAS by ID SOP**	**1.5**	**J**	**3.6**	**0.40**	**ng/L**	**1**
Perfluoro-n-hexanoic acid (PFHxA)	**307-24-4**	**PFAS by ID SOP**	**1.9**	**J**	**3.6**	**0.61**	**ng/L**	**1**
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.41	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	**335-67-1**	**PFAS by ID SOP**	**8.7**		**3.6**	**0.74**	**ng/L**	**1**
Perfluoro-n-pentanoic acid (PFPeA)	**2706-90-3**	**PFAS by ID SOP**	**1.4**	**J**	**3.6**	**0.48**	**ng/L**	**1**
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.6	0.53	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.6	0.47	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.6	0.56	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		3.6	1.8	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS	N	215	25-150
13C2_6:2FTS	N	185	25-150
13C2_8:2FTS		118	25-150
13C2_PFDoA		102	25-150
13C2_PFTeDA		94	25-150
13C3_PFBS		102	25-150
13C3_PFHxS		115	25-150
13C3-HFPO-DA		93	25-150
13C4_PFBA		72	25-150
13C4_PFHpA		113	25-150
13C5_PFHxA		106	25-150
13C5_PFPeA		96	25-150
13C6_PFDA		101	25-150
13C7_PFUdA		98	25-150

LOQ = Limit of Quantitation
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DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **ATC Group Services**
Laboratory ID: **WL14079-006**
Description: **MW-111**
Matrix: **Aqueous**
Date Sampled: **12/10/2021 1200**
Date Received: **12/14/2021**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C8_PFOA		105	25-150
13C8_PFOS		107	25-150
13C8_PFOSA		116	10-150
13C9_PFNA		113	25-150
d5-EtFOSAA		103	25-150
d3-MeFOSAA		105	25-150

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL
Q = Surrogate failure
L = LCS/LCSD failure
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **ATC Group Services** Laboratory ID: **WL14079-007**

Description: **MW-112** Matrix: **Aqueous**

Date Sampled: **12/10/2021 1310**

Date Received: **12/14/2021**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	12/23/2021 1258	MMM	12/21/2021 1616	26411

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.3	0.44	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.3	0.60	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.3	1.5	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND	Q	7.3	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	Q	7.3	0.80	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.3	1.9	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.3	0.44	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.3	0.68	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.3	0.85	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	**375-73-5**	**PFAS by ID SOP**	**8.6**		**3.6**	**0.38**	**ng/L**	**1**
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.6	0.71	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.6	0.46	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.6	0.65	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.6	0.56	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	**2706-91-4**	**PFAS by ID SOP**	**1.6**	**J**	**3.6**	**0.54**	**ng/L**	**1**
Perfluorohexanesulfonic acid (PFHxS)	**355-46-4**	**PFAS by ID SOP**	**4.2**		**3.6**	**0.50**	**ng/L**	**1**
Perfluoro-n-butanoic acid (PFBA)	**375-22-4**	**PFAS by ID SOP**	**20**		**3.6**	**0.55**	**ng/L**	**1**
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.6	0.48	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.43	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	**375-85-9**	**PFAS by ID SOP**	**3.3**	**J**	**3.6**	**0.41**	**ng/L**	**1**
Perfluoro-n-hexanoic acid (PFHxA)	**307-24-4**	**PFAS by ID SOP**	**4.8**		**3.6**	**0.63**	**ng/L**	**1**
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.42	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	**335-67-1**	**PFAS by ID SOP**	**69**		**3.6**	**0.76**	**ng/L**	**1**
Perfluoro-n-pentanoic acid (PFPeA)	**2706-90-3**	**PFAS by ID SOP**	**3.5**	**J**	**3.6**	**0.50**	**ng/L**	**1**
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.6	0.55	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.6	0.48	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.6	0.57	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	**1763-23-1**	**PFAS by ID SOP**	**7.8**		**3.6**	**1.8**	**ng/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS	N	207	25-150
13C2_6:2FTS	N	168	25-150
13C2_8:2FTS		115	25-150
13C2_PFDoA		105	25-150
13C2_PFTeDA		95	25-150
13C3_PFBS		100	25-150
13C3_PFHxS		110	25-150
13C3-HFPO-DA		83	25-150
13C4_PFBA		52	25-150
13C4_PFHpA		107	25-150
13C5_PFHxA		101	25-150
13C5_PFPeA		88	25-150
13C6_PFDA		89	25-150
13C7_PFUdA		98	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **ATC Group Services**
Laboratory ID: **WL14079-007**
Description: **MW-112**
Matrix: **Aqueous**
Date Sampled: **12/10/2021 1310**
Date Received: **12/14/2021**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C8_PFOA		100	25-150
13C8_PFOS		102	25-150
13C8_PFOSA		115	10-150
13C9_PFNA		105	25-150
d5-EtFOSAA		107	25-150
d3-MeFOSAA		107	25-150

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL
Q = Surrogate failure
L = LCS/LCSD failure
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **ATC Group Services** Laboratory ID: **WL14079-008**

Description: **MW-113** Matrix: **Aqueous**

Date Sampled: **12/10/2021 1520**

Date Received: **12/14/2021**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	12/23/2021 1309	MMM	12/21/2021 1616	26411

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.0	0.42	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.0	0.58	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.0	1.4	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND	Q	7.0	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	Q	7.0	0.76	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.0	0.42	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.0	0.65	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.0	0.81	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	**375-73-5**	**PFAS by ID SOP**	**0.75**	**J**	**3.5**	**0.36**	**ng/L**	**1**
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.68	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.5	0.43	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.62	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.53	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.5	0.52	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	**355-46-4**	**PFAS by ID SOP**	**2.4**	**J**	**3.5**	**0.48**	**ng/L**	**1**
Perfluoro-n-butanoic acid (PFBA)	**375-22-4**	**PFAS by ID SOP**	**1.1**	**J**	**3.5**	**0.52**	**ng/L**	**1**
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.46	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.41	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.5	0.39	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.5	0.60	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.40	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.5	0.72	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.5	0.47	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.52	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.46	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.55	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		3.5	1.7	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS	N	228	25-150
13C2_6:2FTS	N	189	25-150
13C2_8:2FTS		135	25-150
13C2_PFDoA		115	25-150
13C2_PFTeDA		101	25-150
13C3_PFBS		110	25-150
13C3_PFHxS		113	25-150
13C3-HFPO-DA		89	25-150
13C4_PFBA		73	25-150
13C4_PFHpA		110	25-150
13C5_PFHxA		115	25-150
13C5_PFPeA		95	25-150
13C6_PFDA		114	25-150
13C7_PFUdA		108	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **ATC Group Services**
Laboratory ID: **WL14079-008**
Description: **MW-113**
Matrix: **Aqueous**
Date Sampled: **12/10/2021 1520**
Date Received: **12/14/2021**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C8_PFOA		104	25-150
13C8_PFOS		111	25-150
13C8_PFOSA		120	10-150
13C9_PFNA		113	25-150
d5-EtFOSAA		113	25-150
d3-MeFOSAA		113	25-150

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
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DL = Detection Limit
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PFAS by LC/MS/MS

Client: **ATC Group Services** Laboratory ID: **WL14079-009**

Description: **MW-119** Matrix: **Aqueous**

Date Sampled: **12/10/2021 1430**

Date Received: **12/14/2021**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	12/23/2021 1320	MMM	12/21/2021 1616	26411

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.0	0.42	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.0	0.58	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.0	1.4	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND	Q	7.0	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	Q	7.0	0.76	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.0	0.42	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.0	0.66	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.0	0.81	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	ND		3.5	0.36	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.68	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.5	0.44	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.62	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.54	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.5	0.52	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	ND		3.5	0.48	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	ND		3.5	0.52	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.46	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.41	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.5	0.39	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.5	0.60	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.40	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.5	0.72	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.5	0.48	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.52	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.46	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.55	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		3.5	1.7	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS	N	176	25-150
13C2_6:2FTS	N	212	25-150
13C2_8:2FTS		116	25-150
13C2_PFDoA		108	25-150
13C2_PFTeDA		89	25-150
13C3_PFBS		106	25-150
13C3_PFHxS		111	25-150
13C3-HFPO-DA		94	25-150
13C4_PFBA		89	25-150
13C4_PFHpA		112	25-150
13C5_PFHxA		110	25-150
13C5_PFPeA		107	25-150
13C6_PFDA		101	25-150
13C7_PFUdA		104	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **ATC Group Services**
Laboratory ID: **WL14079-009**
Description: **MW-119**
Matrix: **Aqueous**
Date Sampled: **12/10/2021 1430**
Date Received: **12/14/2021**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C8_PFOA		108	25-150
13C8_PFOS		103	25-150
13C8_PFOSA		115	10-150
13C9_PFNA		110	25-150
d5-EtFOSAA		103	25-150
d3-MeFOSAA		110	25-150

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL
Q = Surrogate failure
L = LCS/LCSD failure
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **ATC Group Services** Laboratory ID: **WL14079-010**

Description: **MW-121** Matrix: **Aqueous**

Date Sampled: **12/10/2021 1619**

Date Received: **12/14/2021**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	12/23/2021 1351	MMM	12/21/2021 1616	26411

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.8	0.41	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		6.8	0.56	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		6.8	1.4	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	Q	6.8	0.74	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		6.8	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		6.8	0.41	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		6.8	0.64	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.8	0.79	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	**375-73-5**	**PFAS by ID SOP**	**3.7**		**3.4**	**0.35**	**ng/L**	**1**
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.4	0.66	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.4	0.42	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.4	0.61	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.4	0.52	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	**2706-91-4**	**PFAS by ID SOP**	**1.2**	**J**	**3.4**	**0.51**	**ng/L**	**1**
Perfluorohexanesulfonic acid (PFHxS)	**355-46-4**	**PFAS by ID SOP**	**7.4**		**3.4**	**0.47**	**ng/L**	**1**
Perfluoro-n-butanoic acid (PFBA)	**375-22-4**	**PFAS by ID SOP**	**7.1**		**3.4**	**0.51**	**ng/L**	**1**
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.4	0.45	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.4	0.40	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	**375-85-9**	**PFAS by ID SOP**	**13**		**3.4**	**0.38**	**ng/L**	**1**
Perfluoro-n-hexanoic acid (PFHxA)	**307-24-4**	**PFAS by ID SOP**	**16**		**3.4**	**0.58**	**ng/L**	**1**
Perfluoro-n-nonanoic acid (PFNA)	**375-95-1**	**PFAS by ID SOP**	**2.7**	**J**	**3.4**	**0.39**	**ng/L**	**1**
Perfluoro-n-octanoic acid (PFOA)	**335-67-1**	**PFAS by ID SOP**	**37**		**3.4**	**0.71**	**ng/L**	**1**
Perfluoro-n-pentanoic acid (PFPeA)	**2706-90-3**	**PFAS by ID SOP**	**12**		**3.4**	**0.46**	**ng/L**	**1**
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.4	0.51	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.4	0.45	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.4	0.53	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	**1763-23-1**	**PFAS by ID SOP**	**3.6**		**3.4**	**1.7**	**ng/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS	N	233	25-150
13C2_6:2FTS		150	25-150
13C2_8:2FTS		116	25-150
13C2_PFDoA		105	25-150
13C2_PFTeDA		93	25-150
13C3_PFBS		109	25-150
13C3_PFHxS		110	25-150
13C3-HFPO-DA		93	25-150
13C4_PFBA		69	25-150
13C4_PFHpA		113	25-150
13C5_PFHxA		105	25-150
13C5_PFPeA		94	25-150
13C6_PFDA		103	25-150
13C7_PFUdA		104	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **ATC Group Services**
Laboratory ID: **WL14079-010**
Description: **MW-121**
Matrix: **Aqueous**
Date Sampled: **12/10/2021 1619**
Date Received: **12/14/2021**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C8_PFOA		106	25-150
13C8_PFOS		107	25-150
13C8_PFOSA		120	10-150
13C9_PFNA		111	25-150
d5-EtFOSAA		104	25-150
d3-MeFOSAA		113	25-150

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL
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PFAS by LC/MS/MS

Client: **ATC Group Services** Laboratory ID: **WL14079-011**

Description: **DUP-1** Matrix: **Aqueous**

Date Sampled: **12/10/2021**

Date Received: **12/14/2021**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	12/23/2021 1412	MMM	12/21/2021 1616	26411

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.8	0.41	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		6.8	0.57	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		6.8	1.4	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND	Q	6.8	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	Q	6.8	0.75	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		6.8	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		6.8	0.41	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		6.8	0.64	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.8	0.80	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	**375-73-5**	**PFAS by ID SOP**	**3.8**		**3.4**	**0.35**	**ng/L**	**1**
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.4	0.67	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	**375-92-8**	**PFAS by ID SOP**	**0.44**	**J**	**3.4**	**0.43**	**ng/L**	**1**
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.4	0.61	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.4	0.52	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	**2706-91-4**	**PFAS by ID SOP**	**1.4**	**J**	**3.4**	**0.51**	**ng/L**	**1**
Perfluorohexanesulfonic acid (PFHxS)	**355-46-4**	**PFAS by ID SOP**	**6.5**		**3.4**	**0.47**	**ng/L**	**1**
Perfluoro-n-butanoic acid (PFBA)	**375-22-4**	**PFAS by ID SOP**	**7.2**		**3.4**	**0.51**	**ng/L**	**1**
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.4	0.45	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.4	0.40	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	**375-85-9**	**PFAS by ID SOP**	**13**		**3.4**	**0.38**	**ng/L**	**1**
Perfluoro-n-hexanoic acid (PFHxA)	**307-24-4**	**PFAS by ID SOP**	**16**		**3.4**	**0.59**	**ng/L**	**1**
Perfluoro-n-nonanoic acid (PFNA)	**375-95-1**	**PFAS by ID SOP**	**2.9**	**J**	**3.4**	**0.40**	**ng/L**	**1**
Perfluoro-n-octanoic acid (PFOA)	**335-67-1**	**PFAS by ID SOP**	**36**		**3.4**	**0.71**	**ng/L**	**1**
Perfluoro-n-pentanoic acid (PFPeA)	**2706-90-3**	**PFAS by ID SOP**	**12**		**3.4**	**0.47**	**ng/L**	**1**
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.4	0.51	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.4	0.45	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.4	0.54	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	**1763-23-1**	**PFAS by ID SOP**	**3.6**		**3.4**	**1.7**	**ng/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS	N	215	25-150
13C2_6:2FTS	N	168	25-150
13C2_8:2FTS		112	25-150
13C2_PFDoA		105	25-150
13C2_PFTeDA		89	25-150
13C3_PFBS		98	25-150
13C3_PFHxS		109	25-150
13C3-HFPO-DA		88	25-150
13C4_PFBA		67	25-150
13C4_PFHpA		108	25-150
13C5_PFHxA		99	25-150
13C5_PFPeA		91	25-150
13C6_PFDA		99	25-150
13C7_PFUdA		96	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **ATC Group Services**
Laboratory ID: **WL14079-011**
Description: **DUP-1**
Matrix: **Aqueous**
Date Sampled: **12/10/2021**
Date Received: **12/14/2021**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C8_PFOA		104	25-150
13C8_PFOS		102	25-150
13C8_PFOSA		117	10-150
13C9_PFNA		105	25-150
d5-EtFOSAA		110	25-150
d3-MeFOSAA		112	25-150

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL
Q = Surrogate failure
L = LCS/LCSD failure
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **ATC Group Services** Laboratory ID: **WL14079-012**

Description: **DUP-2** Matrix: **Aqueous**

Date Sampled: **12/10/2021**

Date Received: **12/14/2021**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	12/23/2021 1423	MMM	12/21/2021 1616	26411

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.9	0.42	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		6.9	0.57	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		6.9	1.4	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND	Q	6.9	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	Q	6.9	0.76	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		6.9	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		6.9	0.42	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		6.9	0.65	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.9	0.81	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	**375-73-5**	**PFAS by ID SOP**	**8.7**		**3.5**	**0.36**	**ng/L**	**1**
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.67	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.5	0.43	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.62	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.53	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	**2706-91-4**	**PFAS by ID SOP**	**1.5**	**J**	**3.5**	**0.51**	**ng/L**	**1**
Perfluorohexanesulfonic acid (PFHxS)	**355-46-4**	**PFAS by ID SOP**	**4.7**		**3.5**	**0.48**	**ng/L**	**1**
Perfluoro-n-butanoic acid (PFBA)	**375-22-4**	**PFAS by ID SOP**	**19**		**3.5**	**0.52**	**ng/L**	**1**
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.45	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.41	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	**375-85-9**	**PFAS by ID SOP**	**3.0**	**J**	**3.5**	**0.39**	**ng/L**	**1**
Perfluoro-n-hexanoic acid (PFHxA)	**307-24-4**	**PFAS by ID SOP**	**4.6**		**3.5**	**0.60**	**ng/L**	**1**
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.40	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	**335-67-1**	**PFAS by ID SOP**	**68**		**3.5**	**0.72**	**ng/L**	**1**
Perfluoro-n-pentanoic acid (PFPeA)	**2706-90-3**	**PFAS by ID SOP**	**3.6**		**3.5**	**0.47**	**ng/L**	**1**
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.52	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.46	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.54	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	**1763-23-1**	**PFAS by ID SOP**	**7.8**		**3.5**	**1.7**	**ng/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS	N	205	25-150
13C2_6:2FTS	N	162	25-150
13C2_8:2FTS		114	25-150
13C2_PFDoA		100	25-150
13C2_PFTeDA		87	25-150
13C3_PFBS		99	25-150
13C3_PFHxS		111	25-150
13C3-HFPO-DA		80	25-150
13C4_PFBA		51	25-150
13C4_PFHpA		109	25-150
13C5_PFHxA		101	25-150
13C5_PFPeA		84	25-150
13C6_PFDA		96	25-150
13C7_PFUdA		102	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **ATC Group Services**
Laboratory ID: **WL14079-012**
Description: **DUP-2**
Matrix: **Aqueous**
Date Sampled: **12/10/2021**
Date Received: **12/14/2021**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C8_PFOA		103	25-150
13C8_PFOS		104	25-150
13C8_PFOSA		112	10-150
13C9_PFNA		108	25-150
d5-EtFOSAA		102	25-150
d3-MeFOSAA		104	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
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H = Out of holding time
W = Reported on wet weight basis
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PFAS by LC/MS/MS

Client: **ATC Group Services** Laboratory ID: **WL14079-013**

Description: **Trip Blank** Matrix: **Aqueous**

Date Sampled: **12/10/2021 1800**

Date Received: **12/14/2021**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	12/23/2021 1434	MMM	12/21/2021 1616	26411

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		8.1	0.49	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		8.1	0.67	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		8.1	1.6	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		8.1	2.0	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		8.1	0.88	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		8.1	2.1	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		8.1	0.49	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		8.1	0.76	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		8.1	0.94	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	ND		4.0	0.42	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		4.0	0.78	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		4.0	0.50	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		4.0	0.72	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		4.0	0.62	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		4.0	0.60	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	ND		4.0	0.56	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	ND		4.0	0.60	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		4.0	0.53	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		4.0	0.48	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		4.0	0.45	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		4.0	0.69	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		4.0	0.47	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		4.0	0.84	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		4.0	0.55	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		4.0	0.60	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		4.0	0.53	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		4.0	0.63	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		4.0	2.0	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		142	25-150
13C2_6:2FTS		123	25-150
13C2_8:2FTS		118	25-150
13C2_PFDoA		108	25-150
13C2_PFTeDA		84	25-150
13C3_PFBS		117	25-150
13C3_PFHxS		120	25-150
13C3-HFPO-DA		111	25-150
13C4_PFBA		115	25-150
13C4_PFHpA		115	25-150
13C5_PFHxA		123	25-150
13C5_PFPeA		114	25-150
13C6_PFDA		106	25-150
13C7_PFUdA		105	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **ATC Group Services**
Laboratory ID: **WL14079-013**
Description: **Trip Blank**
Matrix: **Aqueous**
Date Sampled: **12/10/2021 1800**
Date Received: **12/14/2021**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C8_PFOA		110	25-150
13C8_PFOS		114	25-150
13C8_PFOSA		120	10-150
13C9_PFNA		112	25-150
d5-EtFOSAA		114	25-150
d3-MeFOSAA		113	25-150

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
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S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **ATC Group Services** Laboratory ID: **WL14079-014**

Description: **Field Blank** Matrix: **Aqueous**

Date Sampled: **12/10/2021 0915**

Date Received: **12/14/2021**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	12/23/2021 1444	MMM	12/21/2021 1616	26411

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.0	0.42	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.0	0.58	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.0	1.4	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND	Q	7.0	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	Q	7.0	0.77	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.0	0.43	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.0	0.66	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.0	0.82	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	ND		3.5	0.36	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.68	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.5	0.44	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.63	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.54	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.5	0.52	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	ND		3.5	0.49	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	ND		3.5	0.53	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.46	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.42	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.5	0.39	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.5	0.61	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.41	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.5	0.73	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.5	0.48	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.53	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.47	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.55	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		3.5	1.8	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS	N	159	25-150
13C2_6:2FTS	N	152	25-150
13C2_8:2FTS		113	25-150
13C2_PFDoA		112	25-150
13C2_PFTeDA		94	25-150
13C3_PFBS		112	25-150
13C3_PFHxS		113	25-150
13C3-HFPO-DA		107	25-150
13C4_PFBA		113	25-150
13C4_PFHpA		118	25-150
13C5_PFHxA		113	25-150
13C5_PFPeA		116	25-150
13C6_PFDA		109	25-150
13C7_PFUdA		100	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: **ATC Group Services**
Laboratory ID: **WL14079-014**
Description: **Field Blank**
Matrix: **Aqueous**
Date Sampled: **12/10/2021 0915**
Date Received: **12/14/2021**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C8_PFOA		109	25-150
13C8_PFOS		113	25-150
13C8_PFOSA		120	10-150
13C9_PFNA		113	25-150
d5-EtFOSAA		108	25-150
d3-MeFOSAA		113	25-150

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL
Q = Surrogate failure
L = LCS/LCSD failure
S = MS/MSD failure

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QC Summary

PFAS by LC/MS/MS - MB

Sample ID: WQ26411-001
Batch: 26411
Analytical Method: PFAS by ID SOP
Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 12/21/2021 1616

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
9Cl-PF3ONS	ND		1	8.0	0.48	ng/L	12/22/2021 2159
11Cl-PF3OUdS	ND		1	8.0	0.66	ng/L	12/22/2021 2159
8:2 FTS	ND		1	8.0	1.6	ng/L	12/22/2021 2159
6:2 FTS	ND		1	8.0	2.0	ng/L	12/22/2021 2159
4:2 FTS	ND		1	8.0	0.87	ng/L	12/22/2021 2159
GenX	ND		1	8.0	2.1	ng/L	12/22/2021 2159
ADONA	ND		1	8.0	0.48	ng/L	12/22/2021 2159
EtFOSAA	ND		1	8.0	0.75	ng/L	12/22/2021 2159
MeFOSAA	ND		1	8.0	0.93	ng/L	12/22/2021 2159
PFBS	ND		1	4.0	0.41	ng/L	12/22/2021 2159
PFDS	ND		1	4.0	0.78	ng/L	12/22/2021 2159
PFHpS	ND		1	4.0	0.50	ng/L	12/22/2021 2159
PFNS	ND		1	4.0	0.71	ng/L	12/22/2021 2159
PFOSA	ND		1	4.0	0.61	ng/L	12/22/2021 2159
PFPeS	ND		1	4.0	0.59	ng/L	12/22/2021 2159
PFHxS	ND		1	4.0	0.55	ng/L	12/22/2021 2159
PFBA	ND		1	4.0	0.60	ng/L	12/22/2021 2159
PFDA	ND		1	4.0	0.52	ng/L	12/22/2021 2159
PFDoA	ND		1	4.0	0.47	ng/L	12/22/2021 2159
PFHpA	ND		1	4.0	0.45	ng/L	12/22/2021 2159
PFHxA	ND		1	4.0	0.69	ng/L	12/22/2021 2159
PFNA	ND		1	4.0	0.46	ng/L	12/22/2021 2159
PFOA	ND		1	4.0	0.83	ng/L	12/22/2021 2159
PFPeA	ND		1	4.0	0.54	ng/L	12/22/2021 2159
PFTeDA	ND		1	4.0	0.60	ng/L	12/22/2021 2159
PFTrDA	ND		1	4.0	0.53	ng/L	12/22/2021 2159
PFUdA	ND		1	4.0	0.63	ng/L	12/22/2021 2159
PFOS	ND		1	4.0	2.0	ng/L	12/22/2021 2159

Surrogate	Q	% Rec	Acceptance Limit
13C2_4:2FTS		115	25-150
13C2_6:2FTS		131	25-150
13C2_8:2FTS		104	25-150
13C2_PFDoA		95	25-150
13C2_PFTeDA		94	25-150
13C3_PFBS		98	25-150
13C3_PFHxS		99	25-150
13C3-HFPO-DA		94	25-150
13C4_PFBA		98	25-150
13C4_PFHpA		106	25-150
13C5_PFHxA		102	25-150
13C5_PFPeA		104	25-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - MB

Sample ID: WQ26411-001
Batch: 26411
Analytical Method: PFAS by ID SOP

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 12/21/2021 1616

Surrogate	Q	% Rec	Acceptance Limit
13C6_PFDA		100	25-150
13C7_PFUdA		101	25-150
13C8_PFOA		105	25-150
13C8_PFOS		97	25-150
13C8_PFOSA		98	10-150
13C9_PFNA		99	25-150
d5-EtFOSAA		102	25-150
d3-MeFOSAA		88	25-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - LCS

Sample ID: WQ26411-002
Batch: 26411
Analytical Method: PFAS by ID SOP
Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 12/21/2021 1616

Parameter	Spike Amount (ng/L)	Result (ng/L)	Q	Dil	% Rec	%Rec Limit	Analysis Date
9Cl-PF3ONS	15	14		1	94	50-150	12/22/2021 2209
11Cl-PF3OUdS	15	14		1	91	50-150	12/22/2021 2209
8:2 FTS	15	15		1	99	50-150	12/22/2021 2209
6:2 FTS	15	16		1	105	50-150	12/22/2021 2209
4:2 FTS	15	14		1	91	50-150	12/22/2021 2209
GenX	32	35		1	110	50-150	12/22/2021 2209
ADONA	15	15		1	98	50-150	12/22/2021 2209
EtFOSAA	16	15		1	91	50-150	12/22/2021 2209
MeFOSAA	16	15		1	96	50-150	12/22/2021 2209
PFBS	14	13		1	93	50-150	12/22/2021 2209
PFDS	15	15		1	99	50-150	12/22/2021 2209
PFHpS	15	15		1	100	50-150	12/22/2021 2209
PFNS	15	15		1	100	50-150	12/22/2021 2209
PFOSA	16	16		1	98	50-150	12/22/2021 2209
PFPeS	15	16		1	105	50-150	12/22/2021 2209
PFHxS	15	14		1	99	50-150	12/22/2021 2209
PFBA	16	16		1	97	50-150	12/22/2021 2209
PFDA	16	16		1	99	50-150	12/22/2021 2209
PFDoA	16	20		1	125	50-150	12/22/2021 2209
PFHpA	16	17		1	109	50-150	12/22/2021 2209
PFHxA	16	17		1	107	50-150	12/22/2021 2209
PFNA	16	16		1	101	50-150	12/22/2021 2209
PFOA	16	17		1	106	50-150	12/22/2021 2209
PFPeA	16	16		1	102	50-150	12/22/2021 2209
PFTeDA	16	17		1	108	50-150	12/22/2021 2209
PFTrDA	16	17		1	106	50-150	12/22/2021 2209
PFUdA	16	15		1	95	50-150	12/22/2021 2209
PFOS	15	15		1	104	50-150	12/22/2021 2209

Surrogate	Q	% Rec	Acceptance Limit
13C2_4:2FTS		120	25-150
13C2_6:2FTS	N	199	25-150
13C2_8:2FTS		103	25-150
13C2_PFDoA		81	25-150
13C2_PFTeDA		84	25-150
13C3_PFBS		97	25-150
13C3_PFHxS		100	25-150
13C3-HFPO-DA		87	25-150
13C4_PFBA		100	25-150
13C4_PFHpA		103	25-150
13C5_PFHxA		101	25-150
13C5_PFPeA		106	25-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - LCS

Sample ID: WQ26411-002
Batch: 26411
Analytical Method: PFAS by ID SOP

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 12/21/2021 1616

Surrogate	Q	% Rec	Acceptance Limit
13C6_PFDA		97	25-150
13C7_PFUdA		99	25-150
13C8_PFOA		108	25-150
13C8_PFOS		101	25-150
13C8_PFOSA		102	10-150
13C9_PFNA		99	25-150
d5-EtFOSAA		98	25-150
d3-MeFOSAA		92	25-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - MS

Sample ID: WL14079-006MS
Batch: 26411
Analytical Method: PFAS by ID SOP

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 12/21/2021 1616

Parameter	Sample Amount (ng/L)	Spike Amount (ng/L)	Result (ng/L)	Q	Dil	% Rec	%Rec Limit	Analysis Date
9Cl-PF3ONS	ND	13	13		1	98	50-150	12/23/2021 1248
11Cl-PF3OUdS	ND	13	12		1	93	50-150	12/23/2021 1248
8:2 FTS	ND	13	12		1	93	50-150	12/23/2021 1248
6:2 FTS	ND	13	13		1	96	50-150	12/23/2021 1248
4:2 FTS	ND	13	12		1	92	50-150	12/23/2021 1248
GenX	ND	28	31		1	110	50-150	12/23/2021 1248
ADONA	ND	13	13		1	101	50-150	12/23/2021 1248
EtFOSAA	ND	14	15		1	106	50-150	12/23/2021 1248
MeFOSAA	ND	14	13		1	90	50-150	12/23/2021 1248
PFBS	2.7	12	15		1	97	50-150	12/23/2021 1248
PFDS	ND	14	13		1	97	50-150	12/23/2021 1248
PFHpS	ND	13	14		1	102	50-150	12/23/2021 1248
PFNS	ND	13	13		1	97	50-150	12/23/2021 1248
PFOSA	ND	14	14		1	101	50-150	12/23/2021 1248
PFPeS	ND	13	14		1	104	50-150	12/23/2021 1248
PFHxS	1.8	13	14		1	99	50-150	12/23/2021 1248
PFBA	3.1	14	17		1	100	50-150	12/23/2021 1248
PFDA	ND	14	14		1	98	50-150	12/23/2021 1248
PFDoA	ND	14	15		1	107	50-150	12/23/2021 1248
PFHpA	1.5	14	16		1	102	50-150	12/23/2021 1248
PFHxA	1.9	14	16		1	98	50-150	12/23/2021 1248
PFNA	ND	14	14		1	100	50-150	12/23/2021 1248
PFOA	8.7	14	22		1	97	50-150	12/23/2021 1248
PFPeA	1.4	14	15		1	96	50-150	12/23/2021 1248
PFTeDA	ND	14	14		1	103	50-150	12/23/2021 1248
PFTrDA	ND	14	14		1	97	50-150	12/23/2021 1248
PFUdA	ND	14	14		1	98	50-150	12/23/2021 1248
PFOS	ND	13	14		1	109	50-150	12/23/2021 1248

Surrogate	Q	% Rec	Acceptance Limit
13C2_4:2FTS	N	205	25-150
13C2_6:2FTS	N	168	25-150
13C2_8:2FTS		115	25-150
13C2_PFDoA		98	25-150
13C2_PFTeDA		98	25-150
13C3_PFBS		110	25-150
13C3_PFHxS		113	25-150
13C3-HFPO-DA		89	25-150
13C4_PFBA		69	25-150
13C4_PFHpA		114	25-150
13C5_PFHxA		106	25-150
13C5_PFPeA		96	25-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - MS

Sample ID: WL14079-006MS
Batch: 26411
Analytical Method: PFAS by ID SOP

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 12/21/2021 1616

Surrogate	Q	% Rec	Acceptance Limit
13C6_PFDA		100	25-150
13C7_PFUdA		98	25-150
13C8_PFOA		110	25-150
13C8_PFOS		107	25-150
13C8_PFOSA		115	10-150
13C9_PFNA		108	25-150
d5-EtFOSAA		94	25-150
d3-MeFOSAA		119	25-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - Duplicate

Sample ID: WL14079-010DU
Batch: 26411
Analytical Method: PFAS by ID SOP

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 12/21/2021 1616

Parameter	Sample Amount (ng/L)	Result (ng/L)	Q	Dil	% RPD	%RPD Limit	Analysis Date
9Cl-PF3ONS	ND	ND		1	0.00	20	12/23/2021 1402
11Cl-PF3OUdS	ND	ND		1	0.00	20	12/23/2021 1402
8:2 FTS	ND	ND		1	0.00	20	12/23/2021 1402
6:2 FTS	ND	ND		1	0.00	20	12/23/2021 1402
4:2 FTS	ND	ND		1	0.00	20	12/23/2021 1402
GenX	ND	ND		1	0.00	20	12/23/2021 1402
ADONA	ND	ND		1	0.00	20	12/23/2021 1402
EtFOSAA	ND	ND		1	0.00	20	12/23/2021 1402
MeFOSAA	ND	ND		1	0.00	20	12/23/2021 1402
PFBS	3.7	3.7		1	0.50	20	12/23/2021 1402
PFDS	ND	ND		1	0.00	20	12/23/2021 1402
PFHpS	ND	0.46		1	200	20	12/23/2021 1402
PFNS	ND	ND		1	0.00	20	12/23/2021 1402
PFOSA	ND	ND		1	0.00	20	12/23/2021 1402
PFPeS	1.2	1.3	J	1	6.1	20	12/23/2021 1402
PFHxS	7.4	7.2		1	2.4	20	12/23/2021 1402
PFBA	7.1	7.1		1	0.36	20	12/23/2021 1402
PFDA	ND	ND		1	0.00	20	12/23/2021 1402
PFDoA	ND	ND		1	0.00	20	12/23/2021 1402
PFHpA	13	14		1	3.4	20	12/23/2021 1402
PFHxA	16	15		1	7.9	20	12/23/2021 1402
PFNA	2.7	2.9	J	1	8.8	20	12/23/2021 1402
PFOA	37	35		1	5.7	20	12/23/2021 1402
PFPeA	12	12		1	5.8	20	12/23/2021 1402
PFTeDA	ND	ND		1	0.00	20	12/23/2021 1402
PFTrDA	ND	ND		1	0.00	20	12/23/2021 1402
PFUdA	ND	ND		1	0.00	20	12/23/2021 1402
PFOS	3.6	3.4	J	1	3.8	20	12/23/2021 1402

Surrogate	Q	% Rec	Acceptance Limit
13C2_4:2FTS	N	215	25-150
13C2_6:2FTS	N	177	25-150
13C2_8:2FTS		113	25-150
13C2_PFDoA		99	25-150
13C2_PFTeDA		92	25-150
13C3_PFBS		100	25-150
13C3_PFHxS		106	25-150
13C3-HFPO-DA		80	25-150
13C4_PFBA		67	25-150
13C4_PFHpA		105	25-150
13C5_PFHxA		108	25-150
13C5_PFPeA		92	25-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - Duplicate

Sample ID: WL14079-010DU
Batch: 26411
Analytical Method: PFAS by ID SOP

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 12/21/2021 1616

Surrogate	Q	% Rec	Acceptance Limit
13C6_PFDA		100	25-150
13C7_PFUdA		97	25-150
13C8_PFOA		104	25-150
13C8_PFOS		106	25-150
13C8_PFOSA		114	10-150
13C9_PFNA		110	25-150
d5-EtFOSAA		100	25-150
d3-MeFOSAA		102	25-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Chain of Custody
and
Miscellaneous Documents

Pace Analytical®

PACE ANALYTICAL SERVICES, LLC
106 Vantage Point Drive • West Columbia, SC 29172
Telephone No. 803-791-9700 Fax No. 803-791-9111
www.pacelabs.com

Number 128253

Client: Atlas Technical	Report to Contact: Ryann Scott	Telephone No. / E-mail: ryann.scott@oneatlas.com	Quote No.
Address: 46555 Humbolt Dr ste100	Sampler's Signature: x Madelyn Haas	Analysis (Attach list if more space is needed)	Page 1 of 2
City: Novi / State: MI / Zip Code: 48377	Printed Name: Madelyn Haas		
Project Name: Detroit Axle			
Project No.: NPDAX19001	P.O. No.		

Sample ID / Description (Containers for each sample may be combined on one line.)	Collection Date(s)	Collection Time (Military)	Grab/Composite	Matrix: Aqueous	Matrix: Solid	Matrix: Non-Aqueous	No. of Containers by Preservative Type: Unpres.	HNO3	NaOH	HCl	NaOH	ZnOAc/NaOH	Other	PFAS - QSM Table B-15	Remarks / Cooler I.D.
MW-106	12/10/21	1429	G	X			2							X	
MW-107		1254													
MW-108		1129													
MW-109		1032													
MW-110		1045													
MW-111		1200													
MW-112		1310													
MW-113		1520													
MW-119		1430													
MW-121	↓	1619	↓	↓			↓							↓	

WL14079
KEE2

Turn Around Time Required (Prior lab approval required for expedited TAT.): (X) Standard ( ) Rush (Specify)

Sample Disposal: ( ) Return to Client (X) Disposal by Lab

Possible Hazard Identification: (X) Non-Hazard ( ) Flammable ( ) Skin Irritant ( ) Poison ( ) Unknown

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished by: Madelyn Haas	12/13/21	1600	1. Received by		
2. Relinquished by			2. Received by		
3. Relinquished by			3. Received by		
4. Relinquished by: fedex	12-14-21	1520	4. Laboratory received by: Kaelynn Lawrence	12.14.21	1520

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on ice (Circle): (Yes) No Ice Pack
Receipt Temp: 2.9 °C
Temp Blank: (Y) N

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: ME009N2-01

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Number 128255

Client: Atlas Technical	Report to Contact: Ryann Scott	Telephone No. / E-mail: ryann.scott@oneatlas.com
Address: 46555 Humboldt Dr	Sampler's Signature: X Madelyn Haas	Quote No.
City: Novi / State: MI / Zip Code: 48377	Printed Name: Madelyn Haas	Analysis (Attach list if more space is needed): PFAS-QSM Table B-15
Project Name: Detroit Axle		Page 2 of 2
Project No.: NPDAX19001	PO No.	WL14079 KE32

Sample ID / Description (Containers for each sample may be combined on one line.)	Collection Date(s)	Collection Time (Military)	Grab/Composite	Matrix: Aqueous	Solid	Wipe/Swab	No. of Containers by Preservative Type: Unpres.	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Field Filtered	Remarks / Cooler I.D.
DUP-1	12/10/21	0000	G	X			2							
DUP-2	↓	0000	↓	↓			↓							
Trip Blank		1800												
Field Blank		0915												

Turn Around Time Required (Prior lab approval required for expedited TAT.): X Standard / Rush (Specify)

Sample Disposal: ☐ Return to Client ☑ Disposal by Lab

Possible Hazard Identification: X Non Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison ☐ Unknown

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished by: Madelyn Haas	12/13/21	1600	1. Received by		
2. Relinquished by			2. Received by		
3. Relinquished by			3. Received by		
4. Relinquished by: [illegible]	12-14-21	1520	4. Laboratory received by: [illegible]	12-14-21	1520

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY — Received on Ice (Circle): Yes No Ice Pack — Receipt Temp: 2.9 °C — Temp Blank: Y N

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

Document Number: MEG03NC-01

PACE ANALYTICAL SERVICES, LLC

Pace Analytical

Samples Receipt Checklist (SRC) (ME0018C-15)
Issuing Authority: Pace ENV - WCOL

Revised:9/29/2020
Page 1 of 1

Sample Receipt Checklist (SRC)

Client: Atlas Technical Cooler Inspected by/date: JRG2 / 12/14/2021 Lot #: WL14679

Means of receipt: ☐ Pace ☐ Client ☐ UPS ☑ FedEx ☐ Other:

☐ Yes	☑ No		1. Were custody seals present on the cooler?
☐ Yes	☐ No	☑ NA	2. If custody seals were present, were they intact and unbroken?

pH Strip ID: NA Chlorine Strip ID: NA Tested by: NA

Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: NA

2.9 / 2.9 °C NA / NA °C NA / NA °C NA / NA °C

Method: ☑ Temperature Blank ☐ Against Bottles IR Gun ID: 6 IR Gun Correction Factor: 0 °C

Method of coolant: ☑ Wet Ice ☐ Ice Packs ☐ Dry Ice ☐ None

☐ Yes	☐ No	☑ NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
☑ Yes	☐ No	☐ NA	4. Is the commercial courier's packing slip attached to this form?
☑ Yes	☐ No		5. Were proper custody procedures (relinquished/received) followed?
☑ Yes	☐ No		6. Were sample IDs listed on the COC?
☑ Yes	☐ No		7. Were sample IDs listed on all sample containers?
☑ Yes	☐ No		8. Was collection date & time listed on the COC?
☑ Yes	☐ No		9. Was collection date & time listed on all sample containers?
☑ Yes	☐ No		10. Did all container label information (ID, date, time) agree with the COC?
☑ Yes	☐ No		11. Were tests to be performed listed on the COC?
☑ Yes	☐ No		12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
☑ Yes	☐ No		13. Was adequate sample volume available?
☐ Yes	☑ No		14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
☐ Yes	☑ No		15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
☐ Yes	☐ No	☑ NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼"or 6mm in diameter) in any of the VOA vials?
☐ Yes	☐ No	☑ NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
☐ Yes	☐ No	☑ NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
☐ Yes	☐ No	☑ NA	19. Were all applicable NH_3/TKN/cyanide/phenol/625.1/608.3 (< 0.5mg/L) samples free of residual chlorine?
☐ Yes	☐ No	☑ NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc…) correctly transcribed from the COC into the comment section in LIMS?
☑ Yes	☐ No		21. Was the quote number listed on the container label? If yes, Quote # 25497

Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) NA were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H2SO4, HNO3, HCl, NaOH using SR # NA.
Time of preservation NA. If more than one preservative is needed, please note in the comments below.

Sample(s) NA were received with bubbles >6 mm in diameter.

Samples(s) NA were received with TRC > 0.5 mg/L (If #19 is *no*) and were adjusted accordingly in sample receiving with sodium thiosulfate ($Na_2S_2O_3$) with Shealy ID: NA.

SR barcode labels applied by: JRG2/CBP Date: 12/14/2021

Comments:

Report of Analysis

ATC Group Services
46555 Humboldt Drive, Suite 100
Novi, MI 48377
Attention: Ryann Scott

Project Name: Atlas PFAS_Detroit Axle

Project Number: NPDAX19001

Lot Number:**XA25048**

Date Completed:01/29/2022

01/31/2022 9:06 AM
Approved and released by:
Project Manager II: **Edward Barnett**

Case Narrative
ATC Group Services
Lot Number: XA25048

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report. Where sampling is conducted by the client, results relate to the accuracy of the information provided, and as the samples are received.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved The NELAC Institute (TNI) standards, the Pace Analytical Services, LLC ("Pace") Laboratory Quality Manual, standard operating procedures (SOPs), and Pace policies. Any exceptions to the TNI standards, the Laboratory Quality Manual, SOPs or policies are qualified on the results page or discussed below.

Pace is a TNI accredited laboratory; however, the following analyses are currently not listed on our TNI scope of accreditation: Drinking Water: VOC (excluding BTEX, MTBE, Naphthalene, & 1,2-dichloroethane) EPA 524.2, E. coli and Total coliforms SM 9223 B-2004, Solid Chemical Material: TOC Walkley-Black, Biological Tissue: All, Non-Potable Water: SGT-HEM EPA 1664B, Silica EPA 200.7, Boron, Calcium, Silicon, Strontium EPA 200.8, Bicarbonate, Carbonate, and Hydroxide Alkalinity SM 2320 B-2011, SM 9221 C E-2006 & SM 9222D-2006, Strontium SW-846 6010D, VOC SM 6200 B-2011, Fecal Coliform Colilert-18.

If you have any questions regarding this report, please contact the Pace Project Manager listed on the cover page.

PFAS

The continuing calibration verification (CCV) associated with samples XA25048-001, XA25048-002, XA25048-003, XA25048-004 and XA25048-005 for analyte 6:2FTS EIS recovered above the upper control limit. The associated target analyte passed; therefore, the data has been reported.

Surrogate recovery for the following samples was outside the upper control limit: XA25048-001, XA25048-002, XA25048-003 and XA25048-004. The samples did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the Pace Quality Assurance Management Plan (QAMP), applicable standard operating procedures (SOPs), the 2003 NELAC standard, and Pace policies. Additionally, the DoD QSM version 5.3 has been followed for these samples, and specifically Table B-15 was followed for all PFAS samples. Any exceptions to the QAMP, SOPs, NELAC standards, the DoD QSM, or policies are qualified on the results page or discussed below.

All QC associated with these samples was in compliance with DOD QSM 5.3 table B-15 and our PFAS SOP.

Correction factors (CF) are used to calculate the original sample concentration. The CF is the inverse of the concentration factor (sample volume / extract final volume) times the dilution factor (DF). For undiluted analysis. For undiluted analysis, the extract is prepared for injection by adding 182 uL of sample extract + 8 uL of reagent water + 10 uL of internal standard solution to a polypropylene autosampler vial. An extra correction factor of 0.91 (182 uL / 200 uL = 0.91) applies. The CF is calculated as follows:

CF = DF * FV / Vo

FV is volume of extract (mL)
Vo is initial sample volume (mL)
DF is dilution factor. For undiluted analysis, DF = 1/0.91.

Sample concentration for aqueous samples:
Concentration (ng/L) = Cs*CF,

$$C_s = \frac{\left(\frac{(A_s x C_{is})}{A_{is}}\right) - B}{M1}$$

Where

C_s is on column concentration of target analyte in the sample (ng/L)
C_{is} is concentration of internal standard in the sample (ng/L)
A_s is peak response of target analyte in the sample
A_{is} is peak response of internal standard in the sample
M1 is the average RF from ICAL or the slope from linear regression ICAL
B is the y-intercept from the ICAL

Sample Summary
ATC Group Services
Lot Number: XA25048

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-104	Aqueous	01/20/2022 1118	01/25/2022
002	MW-120	Aqueous	01/20/2022 1336	01/25/2022
003	DUP-1	Aqueous	01/20/2022	01/25/2022
004	Trip Blank	Aqueous	01/20/2022	01/25/2022
005	Field Blank	Aqueous	01/20/2022 1000	01/25/2022

(5 samples)

Detection Summary
ATC Group Services
Lot Number: XA25048

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	MW-104	Aqueous	PFBS	PFAS by ID	6.8		ng/L	5
001	MW-104	Aqueous	PFPeS	PFAS by ID	0.85	J	ng/L	5
001	MW-104	Aqueous	PFHxS	PFAS by ID	12		ng/L	5
001	MW-104	Aqueous	PFBA	PFAS by ID	12		ng/L	5
001	MW-104	Aqueous	PFHpA	PFAS by ID	5.1		ng/L	5
001	MW-104	Aqueous	PFHxA	PFAS by ID	4.3		ng/L	5
001	MW-104	Aqueous	PFOA	PFAS by ID	12		ng/L	5
001	MW-104	Aqueous	PFPeA	PFAS by ID	3.5		ng/L	5
001	MW-104	Aqueous	PFOS	PFAS by ID	3.7		ng/L	5
002	MW-120	Aqueous	PFBS	PFAS by ID	1.9	J	ng/L	7
002	MW-120	Aqueous	PFPeS	PFAS by ID	0.70	J	ng/L	7
002	MW-120	Aqueous	PFHxS	PFAS by ID	1.7	J	ng/L	7
002	MW-120	Aqueous	PFBA	PFAS by ID	8.5		ng/L	7
002	MW-120	Aqueous	PFHpA	PFAS by ID	0.83	J	ng/L	7
002	MW-120	Aqueous	PFHxA	PFAS by ID	1.2	J	ng/L	7
002	MW-120	Aqueous	PFOA	PFAS by ID	18		ng/L	7
003	DUP-1	Aqueous	PFBS	PFAS by ID	6.7		ng/L	9
003	DUP-1	Aqueous	PFPeS	PFAS by ID	1.3	J	ng/L	9
003	DUP-1	Aqueous	PFHxS	PFAS by ID	11		ng/L	9
003	DUP-1	Aqueous	PFBA	PFAS by ID	11		ng/L	9
003	DUP-1	Aqueous	PFHpA	PFAS by ID	4.9		ng/L	9
003	DUP-1	Aqueous	PFHxA	PFAS by ID	4.2		ng/L	9
003	DUP-1	Aqueous	PFOA	PFAS by ID	11		ng/L	9
003	DUP-1	Aqueous	PFPeA	PFAS by ID	3.6		ng/L	9
003	DUP-1	Aqueous	PFOS	PFAS by ID	3.1	J	ng/L	9

(25 detections)

PFAS by LC/MS/MS

Client: **ATC Group Services** Laboratory ID: **XA25048-001**

Description: **MW-104** Matrix: **Aqueous**

Date Sampled: **01/20/2022 1118**

Date Received: **01/25/2022**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	01/28/2022 2000	MMM	01/27/2022 1308	29783

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.8	0.41	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		6.8	0.56	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		6.8	1.4	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	Q	6.8	0.74	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		6.8	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		6.8	0.41	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		6.8	0.63	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.8	0.79	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	**375-73-5**	**PFAS by ID SOP**	**6.8**		**3.4**	**0.35**	**ng/L**	**1**
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.4	0.66	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.4	0.42	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.4	0.60	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.4	0.52	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	**2706-91-4**	**PFAS by ID SOP**	**0.85**	**J**	**3.4**	**0.50**	**ng/L**	**1**
Perfluorohexanesulfonic acid (PFHxS)	**355-46-4**	**PFAS by ID SOP**	**12**		**3.4**	**0.47**	**ng/L**	**1**
Perfluoro-n-butanoic acid (PFBA)	**375-22-4**	**PFAS by ID SOP**	**12**		**3.4**	**0.51**	**ng/L**	**1**
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.4	0.44	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.4	0.40	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	**375-85-9**	**PFAS by ID SOP**	**5.1**		**3.4**	**0.38**	**ng/L**	**1**
Perfluoro-n-hexanoic acid (PFHxA)	**307-24-4**	**PFAS by ID SOP**	**4.3**		**3.4**	**0.58**	**ng/L**	**1**
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.4	0.39	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	**335-67-1**	**PFAS by ID SOP**	**12**		**3.4**	**0.70**	**ng/L**	**1**
Perfluoro-n-pentanoic acid (PFPeA)	**2706-90-3**	**PFAS by ID SOP**	**3.5**		**3.4**	**0.46**	**ng/L**	**1**
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.4	0.51	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.4	0.45	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.4	0.53	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	**1763-23-1**	**PFAS by ID SOP**	**3.7**		**3.4**	**1.7**	**ng/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS	N	170	25-150
13C2_6:2FTS		117	25-150
13C2_8:2FTS		99	25-150
13C2_PFDoA		87	25-150
13C2_PFTeDA		90	25-150
13C3_PFBS		100	25-150
13C3_PFHxS		103	25-150
13C3-HFPO-DA		99	25-150
13C4_PFBA		72	25-150
13C4_PFHpA		100	25-150
13C5_PFHxA		98	25-150
13C5_PFPeA		92	25-150
13C6_PFDA		98	25-150
13C7_PFUdA		97	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: **ATC Group Services**
Laboratory ID: **XA25048-001**
Description: **MW-104**
Matrix: **Aqueous**
Date Sampled: **01/20/2022 1118**
Date Received: **01/25/2022**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C8_PFOA		99	25-150
13C8_PFOS		105	25-150
13C8_PFOSA		101	10-150
13C9_PFNA		102	25-150
d5-EtFOSAA		104	25-150
d3-MeFOSAA		108	25-150

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL
Q = Surrogate failure
L = LCS/LCSD failure
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **ATC Group Services** Laboratory ID: **XA25048-002**

Description: **MW-120** Matrix: **Aqueous**

Date Sampled: **01/20/2022 1336**

Date Received: **01/25/2022**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	01/28/2022 2011	MMM	01/27/2022 1308	29783

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		6.8	0.41	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		6.8	0.57	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		6.8	1.4	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		6.8	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	Q	6.8	0.75	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		6.8	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		6.8	0.41	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		6.8	0.64	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		6.8	0.80	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	**375-73-5**	**PFAS by ID SOP**	**1.9**	**J**	**3.4**	**0.35**	**ng/L**	**1**
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.4	0.66	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.4	0.43	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.4	0.61	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.4	0.52	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	**2706-91-4**	**PFAS by ID SOP**	**0.70**	**J**	**3.4**	**0.51**	**ng/L**	**1**
Perfluorohexanesulfonic acid (PFHxS)	**355-46-4**	**PFAS by ID SOP**	**1.7**	**J**	**3.4**	**0.47**	**ng/L**	**1**
Perfluoro-n-butanoic acid (PFBA)	**375-22-4**	**PFAS by ID SOP**	**8.5**		**3.4**	**0.51**	**ng/L**	**1**
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.4	0.45	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.4	0.40	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	**375-85-9**	**PFAS by ID SOP**	**0.83**	**J**	**3.4**	**0.38**	**ng/L**	**1**
Perfluoro-n-hexanoic acid (PFHxA)	**307-24-4**	**PFAS by ID SOP**	**1.2**	**J**	**3.4**	**0.59**	**ng/L**	**1**
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.4	0.39	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	**335-67-1**	**PFAS by ID SOP**	**18**		**3.4**	**0.71**	**ng/L**	**1**
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.4	0.46	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.4	0.51	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.4	0.45	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.4	0.53	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		3.4	1.7	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS	N	190	25-150
13C2_6:2FTS		123	25-150
13C2_8:2FTS		105	25-150
13C2_PFDoA		92	25-150
13C2_PFTeDA		89	25-150
13C3_PFBS		106	25-150
13C3_PFHxS		113	25-150
13C3-HFPO-DA		100	25-150
13C4_PFBA		70	25-150
13C4_PFHpA		109	25-150
13C5_PFHxA		100	25-150
13C5_PFPeA		99	25-150
13C6_PFDA		105	25-150
13C7_PFUdA		102	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **ATC Group Services**
Laboratory ID: **XA25048-002**
Description: **MW-120**
Matrix: **Aqueous**
Date Sampled: **01/20/2022 1336**
Date Received: **01/25/2022**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C8_PFOA		106	25-150
13C8_PFOS		105	25-150
13C8_PFOSA		112	10-150
13C9_PFNA		115	25-150
d5-EtFOSAA		106	25-150
d3-MeFOSAA		113	25-150

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL
Q = Surrogate failure
L = LCS/LCSD failure
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **ATC Group Services** Laboratory ID: **XA25048-003**

Description: **DUP-1** Matrix: **Aqueous**

Date Sampled: **01/20/2022**

Date Received: **01/25/2022**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	01/28/2022 2021	MMM	01/27/2022 1308	29783

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.2	0.44	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.2	0.60	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.2	1.4	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.2	1.8	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND	Q	7.2	0.79	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.2	1.9	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.2	0.44	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.2	0.68	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.2	0.84	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	**375-73-5**	**PFAS by ID SOP**	**6.7**		**3.6**	**0.37**	**ng/L**	**1**
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.6	0.70	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.6	0.45	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.6	0.64	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.6	0.55	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	**2706-91-4**	**PFAS by ID SOP**	**1.3**	**J**	**3.6**	**0.54**	**ng/L**	**1**
Perfluorohexanesulfonic acid (PFHxS)	**355-46-4**	**PFAS by ID SOP**	**11**		**3.6**	**0.50**	**ng/L**	**1**
Perfluoro-n-butanoic acid (PFBA)	**375-22-4**	**PFAS by ID SOP**	**11**		**3.6**	**0.54**	**ng/L**	**1**
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.6	0.47	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.6	0.43	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	**375-85-9**	**PFAS by ID SOP**	**4.9**		**3.6**	**0.40**	**ng/L**	**1**
Perfluoro-n-hexanoic acid (PFHxA)	**307-24-4**	**PFAS by ID SOP**	**4.2**		**3.6**	**0.62**	**ng/L**	**1**
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.6	0.42	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	**335-67-1**	**PFAS by ID SOP**	**11**		**3.6**	**0.75**	**ng/L**	**1**
Perfluoro-n-pentanoic acid (PFPeA)	**2706-90-3**	**PFAS by ID SOP**	**3.6**		**3.6**	**0.49**	**ng/L**	**1**
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.6	0.54	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.6	0.48	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.6	0.57	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	**1763-23-1**	**PFAS by ID SOP**	**3.1**	**J**	**3.6**	**1.8**	**ng/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS	N	174	25-150
13C2_6:2FTS		121	25-150
13C2_8:2FTS		106	25-150
13C2_PFDoA		87	25-150
13C2_PFTeDA		97	25-150
13C3_PFBS		105	25-150
13C3_PFHxS		101	25-150
13C3-HFPO-DA		103	25-150
13C4_PFBA		76	25-150
13C4_PFHpA		101	25-150
13C5_PFHxA		107	25-150
13C5_PFPeA		100	25-150
13C6_PFDA		106	25-150
13C7_PFUdA		102	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **ATC Group Services**
Laboratory ID: **XA25048-003**
Description: **DUP-1**
Matrix: **Aqueous**
Date Sampled: **01/20/2022**
Date Received: **01/25/2022**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C8_PFOA		106	25-150
13C8_PFOS		107	25-150
13C8_PFOSA		110	10-150
13C9_PFNA		111	25-150
d5-EtFOSAA		118	25-150
d3-MeFOSAA		120	25-150

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
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PFAS by LC/MS/MS

Client: **ATC Group Services** Laboratory ID: **XA25048-004**

Description: **Trip Blank** Matrix: **Aqueous**

Date Sampled: **01/20/2022**

Date Received: **01/25/2022**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	01/28/2022 2032	MMM	01/27/2022 1308	29783

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		8.1	0.49	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		8.1	0.67	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		8.1	1.6	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND	Q	8.1	2.0	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		8.1	0.88	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		8.1	2.1	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		8.1	0.49	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		8.1	0.76	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		8.1	0.94	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	ND		4.0	0.42	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		4.0	0.78	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		4.0	0.50	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		4.0	0.72	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		4.0	0.62	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		4.0	0.60	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	ND		4.0	0.56	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	ND		4.0	0.60	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		4.0	0.53	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		4.0	0.48	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		4.0	0.45	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		4.0	0.69	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		4.0	0.47	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		4.0	0.84	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		4.0	0.55	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		4.0	0.60	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		4.0	0.53	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		4.0	0.63	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		4.0	2.0	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		124	25-150
13C2_6:2FTS	N	234	25-150
13C2_8:2FTS		104	25-150
13C2_PFDoA		92	25-150
13C2_PFTeDA		61	25-150
13C3_PFBS		113	25-150
13C3_PFHxS		118	25-150
13C3-HFPO-DA		122	25-150
13C4_PFBA		112	25-150
13C4_PFHpA		108	25-150
13C5_PFHxA		107	25-150
13C5_PFPeA		108	25-150
13C6_PFDA		115	25-150
13C7_PFUdA		97	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **ATC Group Services**
Laboratory ID: **XA25048-004**
Description: **Trip Blank**
Matrix: **Aqueous**
Date Sampled: **01/20/2022**
Date Received: **01/25/2022**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C8_PFOA		123	25-150
13C8_PFOS		109	25-150
13C8_PFOSA		113	10-150
13C9_PFNA		110	25-150
d5-EtFOSAA		116	25-150
d3-MeFOSAA		124	25-150

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL
Q = Surrogate failure
L = LCS/LCSD failure
S = MS/MSD failure

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PFAS by LC/MS/MS

Client: **ATC Group Services** Laboratory ID: **XA25048-005**

Description: **Field Blank** Matrix: **Aqueous**

Date Sampled: **01/20/2022 1000**

Date Received: **01/25/2022**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	SOP SPE	PFAS by ID SOP	1	01/28/2022 2043	MMM	01/27/2022 1308	29783

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	DL	Units	Run
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS)	756426-58-1	PFAS by ID SOP	ND		7.0	0.42	ng/L	1
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3...)	763051-92-9	PFAS by ID SOP	ND		7.0	0.58	ng/L	1
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4	PFAS by ID SOP	ND		7.0	1.4	ng/L	1
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2	PFAS by ID SOP	ND		7.0	1.7	ng/L	1
1H,1H,2H,2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4	PFAS by ID SOP	ND		7.0	0.76	ng/L	1
Hexafluoropropylene oxide dimer acid (GenX)	13252-13-6	PFAS by ID SOP	ND		7.0	1.8	ng/L	1
4,8-dioxa-3H-perfluorononanoic acid (ADONA)	919005-14-4	PFAS by ID SOP	ND		7.0	0.42	ng/L	1
N-ethylperfluoro-1-octanesulfonamidoacetic acid (EtFOSAA)	2991-50-6	PFAS by ID SOP	ND		7.0	0.65	ng/L	1
N-methylperfluoro-1-octanesulfonamidoacetic acid (MeFOSAA)	2355-31-9	PFAS by ID SOP	ND		7.0	0.81	ng/L	1
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5	PFAS by ID SOP	ND		3.5	0.36	ng/L	1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3	PFAS by ID SOP	ND		3.5	0.68	ng/L	1
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8	PFAS by ID SOP	ND		3.5	0.43	ng/L	1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1	PFAS by ID SOP	ND		3.5	0.62	ng/L	1
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6	PFAS by ID SOP	ND		3.5	0.53	ng/L	1
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4	PFAS by ID SOP	ND		3.5	0.52	ng/L	1
Perfluorohexanesulfonic acid (PFHxS)	355-46-4	PFAS by ID SOP	ND		3.5	0.48	ng/L	1
Perfluoro-n-butanoic acid (PFBA)	375-22-4	PFAS by ID SOP	ND		3.5	0.52	ng/L	1
Perfluoro-n-decanoic acid (PFDA)	335-76-2	PFAS by ID SOP	ND		3.5	0.46	ng/L	1
Perfluoro-n-dodecanoic acid (PFDoA)	307-55-1	PFAS by ID SOP	ND		3.5	0.41	ng/L	1
Perfluoro-n-heptanoic acid (PFHpA)	375-85-9	PFAS by ID SOP	ND		3.5	0.39	ng/L	1
Perfluoro-n-hexanoic acid (PFHxA)	307-24-4	PFAS by ID SOP	ND		3.5	0.60	ng/L	1
Perfluoro-n-nonanoic acid (PFNA)	375-95-1	PFAS by ID SOP	ND		3.5	0.40	ng/L	1
Perfluoro-n-octanoic acid (PFOA)	335-67-1	PFAS by ID SOP	ND		3.5	0.72	ng/L	1
Perfluoro-n-pentanoic acid (PFPeA)	2706-90-3	PFAS by ID SOP	ND		3.5	0.47	ng/L	1
Perfluoro-n-tetradecanoic acid (PFTeDA)	376-06-7	PFAS by ID SOP	ND		3.5	0.52	ng/L	1
Perfluoro-n-tridecanoic acid (PFTrDA)	72629-94-8	PFAS by ID SOP	ND		3.5	0.46	ng/L	1
Perfluoro-n-undecanoic acid (PFUdA)	2058-94-8	PFAS by ID SOP	ND		3.5	0.55	ng/L	1
Perfluorooctanesulfonic acid (PFOS)	1763-23-1	PFAS by ID SOP	ND		3.5	1.7	ng/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C2_4:2FTS		119	25-150
13C2_6:2FTS		111	25-150
13C2_8:2FTS		109	25-150
13C2_PFDoA		103	25-150
13C2_PFTeDA		96	25-150
13C3_PFBS		111	25-150
13C3_PFHxS		117	25-150
13C3-HFPO-DA		110	25-150
13C4_PFBA		106	25-150
13C4_PFHpA		106	25-150
13C5_PFHxA		108	25-150
13C5_PFPeA		107	25-150
13C6_PFDA		119	25-150
13C7_PFUdA		107	25-150

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
DL = Detection Limit
Q = Surrogate failure
ND = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
L = LCS/LCSD failure
H = Out of holding time
W = Reported on wet weight basis
S = MS/MSD failure

Pace Analytical Services, LLC *(formerly Shealy Environmental Services, Inc.)*
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

PFAS by LC/MS/MS

Client: **ATC Group Services**
Laboratory ID: **XA25048-005**
Description: **Field Blank**
Matrix: **Aqueous**
Date Sampled: **01/20/2022 1000**
Date Received: **01/25/2022**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
13C8_PFOA		106	25-150
13C8_PFOS		107	25-150
13C8_PFOSA		112	10-150
13C9_PFNA		111	25-150
d5-EtFOSAA		107	25-150
d3-MeFOSAA		128	25-150

LOQ = Limit of Quantitation
ND = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
DL = Detection Limit
J = Estimated result < LOQ and ≥ DL
Q = Surrogate failure
L = LCS/LCSD failure
S = MS/MSD failure

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QC Summary

PFAS by LC/MS/MS - MB

Sample ID: XQ29783-001
Batch: 29783
Analytical Method: PFAS by ID SOP
Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 01/27/2022 1308

Parameter	Result	Q	Dil	LOQ	DL	Units	Analysis Date
9Cl-PF3ONS	ND		1	8.0	0.48	ng/L	01/28/2022 1649
11Cl-PF3OUdS	ND		1	8.0	0.66	ng/L	01/28/2022 1649
8:2 FTS	ND		1	8.0	1.6	ng/L	01/28/2022 1649
6:2 FTS	ND		1	8.0	2.0	ng/L	01/28/2022 1649
4:2 FTS	ND		1	8.0	0.87	ng/L	01/28/2022 1649
GenX	ND		1	8.0	2.1	ng/L	01/28/2022 1649
ADONA	ND		1	8.0	0.48	ng/L	01/28/2022 1649
EtFOSAA	ND		1	8.0	0.75	ng/L	01/28/2022 1649
MeFOSAA	ND		1	8.0	0.93	ng/L	01/28/2022 1649
PFBS	ND		1	4.0	0.41	ng/L	01/28/2022 1649
PFDS	ND		1	4.0	0.78	ng/L	01/28/2022 1649
PFHpS	ND		1	4.0	0.50	ng/L	01/28/2022 1649
PFNS	ND		1	4.0	0.71	ng/L	01/28/2022 1649
PFOSA	ND		1	4.0	0.61	ng/L	01/28/2022 1649
PFPeS	ND		1	4.0	0.59	ng/L	01/28/2022 1649
PFHxS	ND		1	4.0	0.55	ng/L	01/28/2022 1649
PFBA	ND		1	4.0	0.60	ng/L	01/28/2022 1649
PFDA	ND		1	4.0	0.52	ng/L	01/28/2022 1649
PFDoA	ND		1	4.0	0.47	ng/L	01/28/2022 1649
PFHpA	ND		1	4.0	0.45	ng/L	01/28/2022 1649
PFHxA	ND		1	4.0	0.69	ng/L	01/28/2022 1649
PFNA	ND		1	4.0	0.46	ng/L	01/28/2022 1649
PFOA	ND		1	4.0	0.83	ng/L	01/28/2022 1649
PFPeA	ND		1	4.0	0.54	ng/L	01/28/2022 1649
PFTeDA	ND		1	4.0	0.60	ng/L	01/28/2022 1649
PFTrDA	ND		1	4.0	0.53	ng/L	01/28/2022 1649
PFUdA	ND		1	4.0	0.63	ng/L	01/28/2022 1649
PFOS	ND		1	4.0	2.0	ng/L	01/28/2022 1649

Surrogate	Q	% Rec	Acceptance Limit
13C2_4:2FTS		116	25-150
13C2_6:2FTS		100	25-150
13C2_8:2FTS		102	25-150
13C2_PFDoA		94	25-150
13C2_PFTeDA		94	25-150
13C3_PFBS		107	25-150
13C3_PFHxS		106	25-150
13C3-HFPO-DA		120	25-150
13C4_PFBA		101	25-150
13C4_PFHpA		103	25-150
13C5_PFHxA		104	25-150
13C5_PFPeA		95	25-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - MB

Sample ID: XQ29783-001
Batch: 29783
Analytical Method: PFAS by ID SOP

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 01/27/2022 1308

Surrogate	Q	% Rec	Acceptance Limit
13C6_PFDA		100	25-150
13C7_PFUdA		104	25-150
13C8_PFOA		96	25-150
13C8_PFOS		103	25-150
13C8_PFOSA		98	10-150
13C9_PFNA		107	25-150
d5-EtFOSAA		118	25-150
d3-MeFOSAA		123	25-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - LCS

Sample ID: XQ29783-002
Batch: 29783
Analytical Method: PFAS by ID SOP

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 01/27/2022 1308

Parameter	Spike Amount (ng/L)	Result (ng/L)	Q	Dil	% Rec	%Rec Limit	Analysis Date
9Cl-PF3ONS	15	17		1	115	50-150	01/28/2022 1700
11Cl-PF3OUdS	15	15		1	98	50-150	01/28/2022 1700
8:2 FTS	15	16		1	104	50-150	01/28/2022 1700
6:2 FTS	15	15		1	101	50-150	01/28/2022 1700
4:2 FTS	15	16		1	105	50-150	01/28/2022 1700
GenX	32	28		1	87	50-150	01/28/2022 1700
ADONA	15	17		1	112	50-150	01/28/2022 1700
EtFOSAA	16	17		1	104	50-150	01/28/2022 1700
MeFOSAA	16	17		1	105	50-150	01/28/2022 1700
PFBS	14	14		1	101	50-150	01/28/2022 1700
PFDS	15	17		1	108	50-150	01/28/2022 1700
PFHpS	15	16		1	107	50-150	01/28/2022 1700
PFNS	15	16		1	106	50-150	01/28/2022 1700
PFOSA	16	15		1	93	50-150	01/28/2022 1700
PFPeS	15	16		1	104	50-150	01/28/2022 1700
PFHxS	15	16		1	111	50-150	01/28/2022 1700
PFBA	16	17		1	105	50-150	01/28/2022 1700
PFDA	16	16		1	100	50-150	01/28/2022 1700
PFDoA	16	16		1	102	50-150	01/28/2022 1700
PFHpA	16	19		1	116	50-150	01/28/2022 1700
PFHxA	16	16		1	99	50-150	01/28/2022 1700
PFNA	16	17		1	109	50-150	01/28/2022 1700
PFOA	16	16		1	102	50-150	01/28/2022 1700
PFPeA	16	17		1	108	50-150	01/28/2022 1700
PFTeDA	16	18		1	111	50-150	01/28/2022 1700
PFTrDA	16	16		1	100	50-150	01/28/2022 1700
PFUdA	16	15		1	93	50-150	01/28/2022 1700
PFOS	15	16		1	110	50-150	01/28/2022 1700

Surrogate	Q	% Rec	Acceptance Limit
13C2_4:2FTS		117	25-150
13C2_6:2FTS		106	25-150
13C2_8:2FTS		121	25-150
13C2_PFDoA		103	25-150
13C2_PFTeDA		104	25-150
13C3_PFBS		111	25-150
13C3_PFHxS		108	25-150
13C3-HFPO-DA		122	25-150
13C4_PFBA		106	25-150
13C4_PFHpA		108	25-150
13C5_PFHxA		108	25-150
13C5_PFPeA		102	25-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

PFAS by LC/MS/MS - LCS

Sample ID: XQ29783-002
Batch: 29783
Analytical Method: PFAS by ID SOP

Matrix: Aqueous
Prep Method: SOP SPE
Prep Date: 01/27/2022 1308

Surrogate	Q	% Rec	Acceptance Limit
13C6_PFDA		116	25-150
13C7_PFUdA		129	25-150
13C8_PFOA		110	25-150
13C8_PFOS		107	25-150
13C8_PFOSA		113	10-150
13C9_PFNA		115	25-150
d5-EtFOSAA		118	25-150
d3-MeFOSAA		120	25-150

LOQ = Limit of Quantitation
DL = Detection Limit
ND = Not detected at or above the DL
J = Estimated result < LOQ and ≥ DL
* = RSD is out of criteria
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Chain of Custody
and
Miscellaneous Documents

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A — Required Client Information:

Company:	Detroit Axle
Address:	1600 W. 8 Mile Road
	Ferndale, Michigan
Email To:	ryann.scott@aneasites.com
Phone:	248-368-5140 Fax: 248-639-5147
Requested Due Date/TAT:	Standard

Section B — Required Project Information:

Report To:	ryann.scott@arcadis.com
Copy To:	
Purchase Order No.	
Client Project ID:	NPDAX 19001
Container Order Number:	

Section C — Invoice Information:

Attention:	Ryann Scott
Company Name:	Atlas Technical Consultants LLC
Address:	48505 Hombaker Drive, Suite 100, Novi MI 48377
Pace Quote Reference:	
Pace Project Manager:	
Pace Profile #:	

Regulatory Agency: EGLE — State / Location: MI

Requested Analysis Filtered (Y/N): N

XA25048

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / ,-) Sample IDs must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test: N/A	PFAS-MI 28	Residual Chlorine (Y/N)	TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
1	MW-104	WT	G	1/20/2022	1118	1/20/2022	1118											X						
2	MW-120	WT	G	1/20/2022	1334	1/20/2022	1334											X						
3	DUP-1	WT	G	1/20/2022	0000	1/20/2022	0000											X						
4	Trip Blank	WT	G	1/20/22	0000	1/20/22	0000											X						
5	Field Blank	WT	G	1/20/22	1000	1/20/22	1000											X						
6																								
7																								
8																								
9																								
10																								
11																								
12																								

ADDITIONAL COMMENTS

RELINQUISHED BY / AFFILIATION — DATE — TIME — ACCEPTED BY / AFFILIATION — DATE — TIME — SAMPLE CONDITIONS

Fedex — 1/25/22 1440 — Ryann Scott — 1/25/22 1740

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Ryann Scott

SIGNATURE of SAMPLER: Ryann Scott — DATE Signed: 1/24/22

Pace Analytical

Samples Receipt Checklist (SRC) (ME0018C-15)
Issuing Authority: Pace ENV - WCOL

Revised:9/29/2020
Page 1 of 1

Sample Receipt Checklist (SRC)

Client: Pace Cooler Inspected by/date: JRG2 / 01/25/2022 Lot #: XA25048

Means of receipt: ☐ Pace ☐ Client ☐ UPS ☑ FedEx ☐ Other: _____

☐ Yes	☑ No		1. Were custody seals present on the cooler?
☐ Yes	☐ No	☑ NA	2. If custody seals were present, were they intact and unbroken?

pH Strip ID: NA Chlorine Strip ID: NA Tested by: NA

Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: NA

1.8 / 1.8 °C NA / NA °C NA / NA °C NA / NA °C

Method: ☑ Temperature Blank ☐ Against Bottles IR Gun ID: 5 IR Gun Correction Factor: 0 °C

Method of coolant: ☑ Wet Ice ☐ Ice Packs ☐ Dry Ice ☐ None

☐ Yes	☐ No	☑ NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
☑ Yes	☐ No	☐ NA	4. Is the commercial courier's packing slip attached to this form?
☑ Yes	☐ No		5. Were proper custody procedures (relinquished/received) followed?
☑ Yes	☐ No		6. Were sample IDs listed on the COC?
☑ Yes	☐ No		7. Were sample IDs listed on all sample containers?
☑ Yes	☐ No		8. Was collection date & time listed on the COC?
☑ Yes	☐ No		9. Was collection date & time listed on all sample containers?
☑ Yes	☐ No		10. Did all container label information (ID, date, time) agree with the COC?
☑ Yes	☐ No		11. Were tests to be performed listed on the COC?
☑ Yes	☐ No		12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)? _____
☑ Yes	☐ No		13. Was adequate sample volume available?
☐ Yes	☑ No		14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
☐ Yes	☑ No		15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
☐ Yes	☐ No	☑ NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼" or 6mm in diameter) in any of the VOA vials?
☐ Yes	☐ No	☑ NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
☐ Yes	☐ No	☑ NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
☐ Yes	☐ No	☑ NA	19. Were all applicable NH_3/TKN/cyanide/phenol/625.1/608.3 (< 0.5mg/L) samples free of residual chlorine?
☐ Yes	☐ No	☑ NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
☐ Yes	☑ No		21. Was the quote number listed on the container label? If yes, Quote # _____

Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) NA _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H_2SO_4, HNO_3, HCl, NaOH using SR # NA.
Time of preservation NA. If more than one preservative is needed, please note in the comments below.

Sample(s) NA _____ were received with bubbles >6 mm in diameter.

Samples(s) NA _____ were received with TRC > 0.5 mg/L (If #19 is *no*) and were adjusted accordingly in sample receiving with sodium thiosulfate ($Na_2S_2O_3$) with Shealy ID: NA.

SR barcode labels applied by: JRG2 Date: 01/25/2022

Comments: