ADDITIONAL ASSESSMENT AND WELL INSTALLATION REPORT

Oregon Plastic Tubing and Pacific Corrugated Facility

6401 and 6402 South Miller Road, Hubbard, Oregon

ECSI #6521

June 7, 2023

Prepared for:
Prinsco Water Management Solutions
1717 16th Street NE
Willmar, Minnesota 56201

Prepared by:
Stantec Consulting Services Inc.
601 SW 2nd Avenue, Suite 1400
Portland, Oregon 97204

Project Number:
227704604

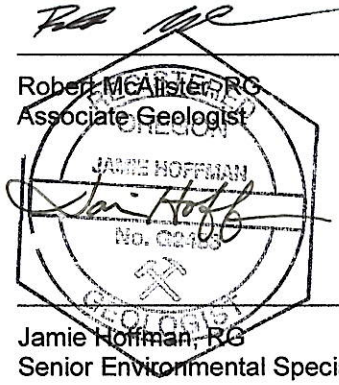
The conclusions in this Additional Assessment and Well Installation Report (Report) are Stantec's professional opinion, as of the time of the Report, and concerning the scope described in the Report. The opinions in the document are based on conditions and information existing at the time the scope of work was conducted and do not take into account any subsequent changes. The Report relates solely to the specific project for which Stantec was retained and the stated purpose for which the Report was prepared. The Report is not to be used or relied on for any variation or extension of the project, or for any other project or purpose, and any unauthorized use or reliance is at the recipient's own risk.

Stantec has assumed all information received from Prinsco Water Management Solutions (the "Client") and third parties in the preparation of the Report to be correct. While Stantec has exercised a customary level of judgment or due diligence in the use of such information, Stantec assumes no responsibility for the consequences of any error or omission contained therein.

This Report is intended solely for use by the Client in accordance with Stantec's contract with the Client. While the Report may be provided to applicable authorities having jurisdiction and others for whom the Client is responsible, Stantec does not warrant the services to any third party. The report may not be relied upon by any other party without the express written consent of Stantec, which may be withheld at Stantec's discretion.

Prepared by:

Robert McAllister, RG
Associate Geologist



Reviewed by:

Jamie Hoffman, RG
Senior Environmental Specialist

Approved by:

Eric Stommes
Senior Associate, Project Manager

Table of Contents

FIGURES

TABLES

APPENDICIES

Acronyms / Abbreviations

amsl	Above Mean Sea Level
AST	Above Ground Storage Tank
ASTM	American Society of Testing and Materials
bgs	Below Ground Surface
COPC	Contaminants of Potential Concern
CSM	Conceptual Site Model
Client	Prinsco Water Management Solutions
DEQ	Department of Environmental Quality
DRO	Diesel Range Organics
ECSI	Environmental Cleanup Site Information
EPA	United States Environmental Protection Agency
ESA	Environmental Site Assessment
GRO	Gasoline Range Organics
OWRD	Oregon Water Resources Department
LUST	Leaking Underground Storage Tank
µg/L	Microgram per Liter
PID	Photoionization Detector
Pace Analytical	Pace Analytical Environmental Laboratory in Mt. Juliet, Tennessee
Property	6401 and 6402 South Miller Road, Hubbard, Clackamas County, Oregon
RBC	Risk-Based Concentration
REC	Recognized Environmental Condition
RRO	Residual Range Organics
SMS	Subsurface Mapping Survey
SPH	Separate Phase Hydrocarbons
Stantec	Stantec Consulting Services Inc.
UST	Underground Storage Tank
VCP	Voluntary Cleanup Program
VOCs	Volatile Organic Compounds

1 Introduction

Stantec Consulting Services Inc. (Stantec) completed additional assessment and well installation at the property located at 6401 and 6402 South Miller Road in Hubbard, Oregon (Property) on behalf of Prinsco Water Management Solutions (the Client). Field activities described in this report were performed in accordance with Stantec's *Workplan for Additional Assessment and Well Installation – Oregon Plastic Tubing and Pacific Corrugated Facility, 6401 and 6402 South Miller Road, Hubbard, Oregon*, dated March 9, 2023. The workplan was approved by the Oregon Department of Environmental Quality (DEQ) project manager, Mr. Kevin Dana, on March 22, 2023.

2 Property Description and History

2.1 Property Description

The 61.31-acre Property is located at 6401 and 6402 South Miller Road, Hubbard, Clackamas County, Oregon. The Oregon Plastic Tubing and Pacific Corrugated Pipe (former Needy Brick and Tile Company) currently operates on the Property. According to available historical information and a Property representative interview (Stantec 2022a), the southeastern portion of the Property was historically developed to manufacture brick and clay tile in the 1890s. By at least 1948, a residence was constructed on the north-central portion with agricultural cropland on the western portion. In approximately 1982, the Property operations changed to plastic pipe manufacturing using extrusion machines. The historical Property residence recently had a fire that destroyed the structure.

Access to the Property is from South Miller Road which bisects the northern and southern portions of the Property. Current Property improvements consist of an approximate 7,500 square foot office and shop building north of Miller Road, and south of Miller Road an approximate 28,000 square foot pipe manufacturing building with a connected approximate 14,000 square foot canopied pipe storage shed on the eastern side of the manufacturing building. In addition, two above ground storage tanks (ASTs) are located northwest of the office/shop building: a 10,000-gallon diesel AST and 6,000-gallon gasoline AST. Both ASTs are constructed with integral secondary containment.

Equipment and vehicle maintenance is completed in the shop portion of the building on the north side of Miller Road. South of Miller Road, the open-air canopied shed is used to store pipe fittings and equipment and the pipe manufacturing building contains three plastic extrusion machines that are used to heat plastic beads that are formed into pipe through the extrusion process.

The northwestern portion of the Property (approximately 19 acres) is in use as a hazelnut orchard.

A Site location map and Site Vicinity Map are included as **Figures 1 and 2**, respectively. Site features and environmental sample collection locations are depicted on the Site Plan (**Figure 3**).

2.2 Physical Setting

Surrounding land use is generally residential and/or agricultural. The closest surface water body to the Property is Rock Creek, located along the eastern Property boundary. The general direction of regional groundwater flow in the area of the Property is presumed to be to the east toward Rock Creek.

The Property slopes from the northwestern portion at an elevation of approximately 160 feet above mean sea level (amsl) to the southeastern portion at an elevation of approximately 115 feet above amsl. Property surface drainage appears to be to the east or southeast towards Rock Creek. Historical development may have included grading or filling portions of the Property to improve the location for construction and drainage.

2.3 Prior Environmental Assessments

2.3.1 MARCH 2022 PHASE I ESA

Stantec completed a Phase I Environmental Site Assessment (ESA) for the Property in March 2022 (Stantec 2022a) and identified the following recognized environmental conditions (RECs) for the Property:

REC #1: The existing ASTs and associated ground surface staining observed during the Phase I ESA site reconnaissance were considered a REC based on the potential for releases owing to over 15 years of AST use;

REC #2: Two decommissioned underground storage tank (UST) records were identified for the Property during the development of the Phase I ESA. Additional information (location, size, product type or decommissioning date) was not available. Based on the lack of closure documentation, these historical UST records were considered a REC; and

REC #3: Two private septic systems are located on the Property, one associated with the office/shop building north of Miller Road, and one associated with the pipe manufacturing building south of Miller Road. Owing to the industrial use of the Property, releases of petroleum products and/or hazardous substances into the septic system(s) could have adversely affected the Property environmental conditions.

2.3.2 APRIL 2022 PHASE II ESA

In April 2022, Stantec completed a Phase II ESA at the Subject Property to investigate the RECs identified above (Stantec 2022c). Phase II sample locations are presented on **Figure 3.**

REC#1 - Active AST area

One soil boring (GP-6) was advanced adjacent to the AST fuel dispensers. The grab groundwater sample collected from this location contained a concentration of ethylbenzene exceeding the DEQ Risk-Based Concentration (RBC) for tapwater ingestion by occupational workers. No other contaminants of potential concern (COPCs) were reported in soil and groundwater samples from this boring.

REC #2 - Former UST Areas Near Office/Shop Building

A geophysical subsurface mapping survey (SMS) was completed surrounding the office/shop building to explore for evidence of abandoned USTs or areas of disturbed soils indicative of removed USTs, and three former UST pits were identified to the south and east of the office/shop building (**Figure 3**).

Two borings were advanced south of the office/shop building (GP-3 and GP-7) and one boring was advanced east of the office/shop (GP-4) in the former UST locations identified during the SMS. Soil and groundwater sample results from these borings indicated concentrations of gasoline-range organics (GRO), diesel-range organics (DRO) and volatile organic compounds (VOCs) in all three of these borings, with the highest concentrations of these CPOCs in samples collected from borings GP-3 and GP-7 south of the building. Several analyte concentrations in soil samples collected from boring GP-7 exceeded the RBC for leaching to groundwater for occupation receptors, while benzene and ethylbenzene in soil samples collected from boring GP-7 exceeded the RBC for vapor intrusion into buildings pathway for occupational receptors. No soil concentrations exceeded RBCs in soil samples collected from borings GP-3 or GP-4.

Groundwater samples collected from borings GP-3, GP-4 and GP-7 indicated several COPCs exceeded the RBC for ingestion from tapwater. Benzene in the sample collected from GP-3 exceeded the vapor intrusion RBC for occupational workers. Moreover, GRO in both GP-3 and GP-7, and benzene in GP-3 were reported exceeding the RBC for groundwater in an excavation.

REC #3 - Septic Fields

Borings GP-1 and GP-5 were advanced in the southern and northern septic fields, respectively. Groundwater sample results from GP-1 indicate no exceedances of RBCs. Concentrations of GRO, benzene, ethylbenzene and naphthalene in the groundwater sample collected from GP-5 exceeded the potentially applicable RBC for tap water ingestion.

2.3.3 JULY 2022 SUPPLEMENTAL PHASE II ESA

Findings of the April 2022 Phase II ESA completed at the Property indicated concentrations of petroleum hydrocarbons and VOCs in soil and groundwater samples exceeded several DEQ RBCs, principally for the tap water ingestion and vapor intrusion into buildings pathways. Accordingly, Stantec completed the July 2022 Supplemental Phase II ESA on behalf of Prinsco to further evaluate these two risk pathways to Property receptors.

Groundwater monitoring well installation and sampling

Groundwater monitoring well MW-1 was installed at the Property in the location where the highest levels of groundwater contamination were identified during the April 2022 Phase II ESA to determine if free product or separate phase hydrocarbons (SPH) were present in the subsurface. No detectable layer of SPH was identified, but elevated concentrations of dissolved-phase GRO, DRO and VOCs were present in the groundwater sample collected from the well (**Table 3**).

Sub-Slab Soil Vapor Sampling

Sub-slab soil vapor sampling points SV-1 and SV-2 were installed beneath the concrete slab of the office/shop building and samples were collected to evaluate vapor intrusion risk to building occupants. None of the Property COPCs were detected at concentrations exceeding applicable vapor intrusion RBCs.

Domestic water well sampling

A domestic water sample was collected from the office/shop building to evaluate ingestion risk to Property occupants. COPCs were not reported above laboratory reporting limits except for GRO and DRO, which were reported below laboratory reporting limits.

2.4 Regulatory Status

Based on the discovery of soil and groundwater contamination in borings GP-3 and GP-7 during the April 2022 Phase II ESA, a petroleum release was reported to the Oregon DEQ on April 28, 2022, and Leaking Underground Storage Tank (LUST) number 03-22-0412 was issued for the Property. After receiving analytical data, Stantec additionally submitted an *Initial (Twenty Day) Report for UST Cleanup Projects* to DEQ on May 23, 2022.

The Property was enrolled in the DEQ Voluntary Cleanup Program (VCP) on July 18, 2022, under DEQ Environmental Cleanup Site Information (ECSI) #6521.

Following submittal of the Supplemental Phase II ESA report, Stantec and Prinsco received correspondence from the DEQ project manager requesting additional investigation to 1) further refine the nature and extent of the dissolved-phase groundwater plume and 2) complete an additional sub-slab soil vapor sampling event to confirm soil vapor contaminant concentrations remain low during different weather conditions than assessed during the July 2022 soil vapor sampling event (DEQ 2023).

3 Conceptual Site Model

A screening-level Conceptual Site Model (CSM) was completed for the Property as part of the April 2022 Phase II ESA. The purpose of the Supplemental Phase II ESA was to further evaluate risk to Property receptors for potentially complete exposure pathways for COPCs identified during the April 2022 Phase II ESA. The land use determination, locality of facility and beneficial water use determination used to develop the CSM is included in the May 2022 *Phase II ESA Report* prepared for the Property (Stantec 2022b).

Based on analytical results from the April 2022 Phase II ESA and July 2022 Supplemental Phase II ESA, concentrations of COPCs detected in samples collected at the Property to date contain exceedances of the following DEQ RBCs (**Figure 4**):

- Dermal contact with soil and groundwater in an excavation for construction workers;
- Dermal contact with groundwater in an excavation for excavation workers;

- Contaminants in soil leaching to groundwater for occupational receptors; and
- Contaminants in groundwater volatilizing to outdoor air for occupational receptors.

Reported concentrations of soil and groundwater samples collected from the former tank basin south of the office/shop building were reported exceeding the vapor intrusion into buildings RBC; however, sub-slab soil vapor samples collected beneath the building did not contain RBC exceedances. Therefore, the vapor intrusion into buildings pathway was removed from the CSM.

4 Additional Assessment and Well Installation Field Activities

4.1 Health and Safety

Prior to any intrusive work at the Property, Stantec contacted the public Utility Notification Center and requested an underground utility locate for the Property.

A Site-Specific Health and Safety Plan, as required by Oregon Occupational Safety and Health Division Safety and Health Act and 40 Code of Federal Regulations 1910.120 was prepared to describe field sampling activity safety protocols for Stantec employees engaged in the project. At the start of each day of field sampling activities, a “tailgate” meeting was held, and safety protocols reviewed.

4.2 Soil Borings

Six soil borings were advanced at the Property on April 20, 2023, in the locations shown on **Figure 3**. Borings GP-8 through GP-12 were advanced along the eastern Property boundary to aid in delineating dissolved-phase COPCs near Rock Creek. An additional boring, MW-4, was advanced west of the office/shop building in a presumed up-gradient position relative to MW-1. All soil boings were advanced to 20 feet below ground surface (bgs).

Drilling services were provided by Steadfast Services Northwest of Vancouver, Washington, an Oregon Water Resources Department (OWRD)-licensed well driller. All borings were advanced using direct-push drilling technology under the direction of a Stantec Oregon-registered geologist.

Lithology encountered during this additional assessment was consistent with previous subsurface investigations completed at the Property. In general, surficial silt was underlain by brown to gray clay which was further underlain by fine-grained sand. Saturated soil conditions observed during drilling generally corresponded to the clay/sand interface between 12 and 16 feet bgs. In boring GP-12, located south of Miller Road, Stantec noted a sand horizon between two and eight feet bgs underlain by silt and clay to the terminal depth of the boring and saturated conditions were not encountered. No clay was encountered in the MW-4 soil boring. Anthropogenic debris (brick and concrete) was observed in all borings as deep as 13 feet bgs in GP-12, indicating fill material present beneath the Property.

No staining, odors, or elevated photoionization detector (PID) response indicative of petroleum contamination was observed during drilling activities. One soil sample was collected from each boring at a

depth of 14 to 15 feet bgs and submitted to Pace Analytical Environmental Laboratory in Mt. Juliet, Tennessee (Pace Analytical) under chain-of-custody protocol for the following analytical program:

- GRO by northwest method NWTPH-Gx;
- DRO and residual-range organics (RRO) by northwest method NWTPH-Dx; and
- VOCs by United States Environmental Protection Agency (EPA) Method 8260D.

Results of laboratory testing is summarized in Section 5.1. Boring logs are provided in **Appendix A**.

4.3 Groundwater Monitoring Well Installation

Following soil boring advancement for soil characterization and sampling, boreholes GP-9 (completed as MW-3), GP-11 (completed as MW-2) and MW-4 were over drilled with six-inch diameter augers to facilitate the installation of groundwater monitoring wells. Total constructed depth of each well was approximately 20 feet bgs.

Each well was constructed of two-inch diameter polyvinyl chloride well casing with the bottom 10-feet of the well screened with 0.020-inch perforations. Clean, graded silica sand was placed in the well annular space surrounding the casing to a depth of approximately eight feet bgs, and hydrated bentonite chips were placed in the annular space to approximately 1 foot bgs. A locking, expandable well plug was placed in the top of the well casing and a traffic-rated well box was installed flush with the existing concrete slab. Well construction details are presented on the boring logs (**Appendix A**).

Four days after well installation, the each newly installed well was developed using a surge block and submersible pump. Approximately seven gallons of groundwater was purged from each well until turbidity decreased and groundwater parameters (pH, temperature, electrical conductivity and oxidation reduction potential) stabilized in accordance with published DEQ guidance (DEQ 1992).

4.4 Wellhead Survey

On April 24, 2023, the Property groundwater monitoring wells (MW-1 through MW-4) were surveyed for horizontal and vertical position by Statewide Land Surveying, Inc of Gresham, Oregon. Statewide Land Surveying, Inc's monitoring well survey map and data summary is included in **Appendix B**. Survey data was used to calculate well and groundwater elevations.

4.5 Groundwater Monitoring Well Sampling

Groundwater monitoring wells MW-1 through MW-4 were purged and sampled by Stantec on April 26, 2023, as summarized on the water sample field data sheet included in **Appendix C**. Prior to initiating well purging and sampling, all monitoring well caps were removed, and static depth-to-water measurements were collected using a well sounder capable of detecting SPH. No detectable layer of SPH was present in any of the wells monitored.

Groundwater elevation data indicated an easterly groundwater flow direction towards Rock Creek at an approximate gradient of 0.0049 feet per foot as depicted on **Figure 3**.

All groundwater samples collected were submitted to the Pace Analytical under chain-of-custody protocol for the following analytical program:

- GRO by northwest method NWTPH-Gx;
- DRO and RRO by northwest method NWTPH-Dx;
- VOCs by EPA Method 8260D; and
- Dissolved lead by EPA Method 6010D.

Groundwater samples collected for dissolved lead analysis were field filtered at the time of collection using a 0.45-micron disposable filter. Results of laboratory testing is summarized in Section 5.2. Stantec low-flow groundwater sampling standard operating procedures are included in **Appendix C**.

4.6 Sub-Slab Soil Vapor Sampling

At the request of DEQ, two additional sub-slab soil vapor samples (SV-1R and SV-2R) were collected by Stantec beneath the floor slab of the office and shop portions of the building, respectively (**Figure 3**) to assess the potential seasonal variability of indoor vapor intrusion of COPCs sourced from historical release(s) at the Property. Each sub-slab sampling location was located within three feet of the previous (July 2022) sub-slab sample location.

At each location, a hammer-drill was used to penetrate the concrete floor slab, and a vapor sampling point was installed into the base course material immediately below the slab. A surface seal surrounding where the vapor tubing penetrated the slab was created with non-VOC non-shrinking hydraulic cement and allowed to dry for at least 30 minutes before collecting a soil vapor sample. Once the surface seal was set, a minimum of two volumes of the sampling apparatus was purged prior to sample collection.

Helium gas was used to check for leaks in the sample train during collection of the sub-slab soil vapor samples. The leak check was performed by placing a shroud enclosure over the sampling probe and maintaining a measured concentration of helium within the shroud. The soil vapor samples were collected in batch-certified 1-liter Summa canisters fitted with a flow controller to ensure that the sample collection rate did not exceed 200 milliliters per minute.

The initial vacuum on the Summa canisters was recorded on the field data sheet prior to sampling (**Appendix D**). The soil vapor sampling points were attached to the Summa canisters with inert, impermeable tubing and the soil vapor samples were collected. The soil vapor samples were submitted to Pace National for analysis of VOCs by EPA Method TO-15 and for helium by the American Society of Testing and Materials (ASTM) International Method D1946. Results of laboratory testing is presented in Section 5.3.

4.7 Decontamination Procedures

All reusable sampling equipment was thoroughly decontaminated by Stantec prior to and between each sample interval to reduce the potential for cross contamination or false positive laboratory data. Decontamination procedures used during the field activities described herein consisted of: 1) thoroughly

washing/scrubbing of equipment with distilled water, 2) washing/scrubbing with a solution of distilled water and laboratory-grade detergent, and 3) rinsing with distilled water.

4.8 Investigative-Derived Waste

All investigative-derived waste was placed in United States Department of Transportation-approved 55-gallon steel open-top drums. The drums were clearly labeled to identify the contents, generation date and source in accordance with applicable state and federal law for the storage and transportation of potentially hazardous materials. One 55-gallon drum of soil and one 55-gallon drum of well purge/decontamination water was generated during the implementation of the April 2023 field activities.

Analytical data collected from the Property will be used to profile the contents of the drum for proper disposal. Once profiling is complete, the drum will be transported to an appropriate landfill for disposal by a certified waste hauler. At the time of issuance of this report, waste disposal was still pending.

5 Laboratory Testing Results

Laboratory analytical reports are provided in **Appendix D**.

5.1 Soil Sample Laboratory Results

Six soil samples were collected and analyzed during this additional assessment. Concentrations of GRO, DRO, benzene, toluene, ethylbenzene, xylenes and naphthalene were reported by Pace Analytical above laboratory reporting detection limits; however, none of the detected concentrations exceed applicable RBCs.

Tabulated results for soil samples collected at the Property to date are presented in **Table 1** and **Table 2**.

5.2 Groundwater Sample Laboratory Results

Four groundwater samples were collected and analyzed during this additional assessment from wells MW-1, MW-2, MW-3, and MW-4. Concentrations of GRO, DRO, RRO, select VOCs, and dissolved lead were reported by Pace Analytical above laboratory reporting detection limits. Tabulated results for groundwater samples collected at the Property to date are presented in **Table 3** and are discussed in the subsections that follow.

5.2.1 PETROLEUM HYDROCARBONS IN GROUNDWATER

GRO was detected above laboratory reporting limits in the groundwater samples collected from wells MW-1 and MW-4 during this additional assessment. The reported concentration of GRO exceeded the groundwater in an excavation RBC for construction and excavation worker receptors of 14,000 micrograms per liter (µg/L) in the sample collected from MW-1 (67,400 µg/L).

DRO was detected above laboratory reporting limits in all (MW-1 through MW-4) groundwater samples collected during this additional assessment and RRO was detected above laboratory reporting limits in groundwater samples collected from wells MW-2, MW-3 and MW-4. The reported concentrations of DRO and RRO did not exceed applicable groundwater RBCs.

5.2.2 VOCS IN GROUNDWATER

Individual VOCs detected above laboratory reporting limits consisted of:

- 1,2,3-Trimethylbenzene (MW-1 only);
- 1,2,4-Trimethylbenzene (MW-1 only);
- 1,3,5-Trimethylbenzene (MW-1 only);
- 1,2-Dibromoethane (MW-1 only);
- 1,2-Dichloroethane (MW-1 and MW-3);
- Benzene (MW-1 and MW-4);
- Toluene (MW-1 only);
- Ethylbenzene (MW-1 only);
- Total Xylenes (MW-1 and MW-4);
- Isopropylbenzene (MW-1 only);
- p-Isopropylbenzene (MW-1 only);
- Naphthalene (MW-1 only);
- n-Propylbenzene (MW-1 only); and
- sec-Butylbenzene (MW-1 only).

Benzene exceeded the groundwater in an excavation RBC for construction and excavation worker receptors of 1,800 µg/L in the sample collected from MW-1 (11,900 µg/L).

Reported concentrations of remaining VOCs did not exceed applicable groundwater RBCs.

5.2.3 DISSOLVED LEAD IN GROUNDWATER

Dissolved lead was detected in groundwater samples collected from wells MW-1 through MW-3 during this additional assessment at concentrations ranging from 4.10 µg/L (MW-3) to 18.50 µg/L (MW-2). Detected dissolved lead concentrations did not exceed applicable DEQ RBCs.

5.3 Sub-Slab Soil Vapor Sample Laboratory Results

Sub-slab soil vapor samples SV-1R and SV-2R revealed laboratory detections of VOCs, but all reported concentrations were below the applicable DEQ RBC for vapor intrusion into buildings for occupational receptors.

No detectable concentrations of helium were reported in samples SV-1R and SV-2R indicating no significant ambient air dilution occurred during sample collection.

Tabulated results of the soil vapor samples collected at the Property are presented in **Table 5**.

6 Conclusions

Additional assessment activities completed at the Property in April 2023 consisted of the following:

- Advancement of six soil borings for soil classification and sample collection;
- Completion of three of the six soil borings as permanent groundwater monitoring wells MW-2 through MW-4;
- Development of newly installed monitoring wells MW-2 through MW-4;
- Professional survey of Property monitoring wells (MW-1 through MW-4) for horizontal and vertical position;
- Groundwater sample collection from monitoring wells MW-1 through MW-4; and
- Collection of sub-slab soil vapor samples SV-1R and SV-2R from locations previously sampled during the July 2022 supplemental Phase II ESA.

Soil Sampling and Analysis

No exceedances of applicable RBCs were reported in soil samples collected during this assessment.

Groundwater Monitoring Well Installation, Sampling and Analysis

The groundwater sample collected from the suspected source area (MW-1) contained concentrations of GRO and benzene exceeding the groundwater in an excavation RBC for construction and excavation worker receptors.

Groundwater monitoring wells MW-2 and MW-3 were installed along the eastern Property boundary to evaluate the extent of dissolved-phase concentrations of COPCs down-gradient from the presumed source area (MW-1) towards Rock Creek. Reported concentrations of GRO, DRO and dissolved lead were below applicable RBCs.

Groundwater monitoring well MW-4 was installed in an up-gradient position relative to the suspected source area to evaluate the nature and extent of dissolved-phase impacts up-gradient from the suspected source area towards the Property supply well location shown on **Figure 2**. Low-level concentrations of petroleum hydrocarbons and VOCs were reported below applicable RBCs and may be a relic of fill material in this area.

Sub-Slab Soil Vapor Sampling and Analysis

Sub-slab soil vapor sampling points SV-1R and SV-2R were installed beneath the concrete slab of the office/shop building and samples were collected to evaluate vapor intrusion risk to building occupants. None of the Property COPCs were detected at concentrations exceeding applicable vapor intrusion RBCs.

7 Recommendations

Stantec recommends this report be submitted to the Oregon DEQ and request a conditional No Further Action determination for the Property from the Oregon DEQ.

8 Limitations

This report documents work that was performed in accordance with generally accepted professional standards at the time and location in which the services were provided. No other representations, warranties or guarantees are made concerning the accuracy or completeness of the data or conclusions contained within this report, including no assurance that this work has uncovered all potential liabilities associated with the identified property.

This report provides an evaluation of selected environmental conditions associated with the identified portion of the property that was assessed at the time the work was conducted and is based on information obtained by and/or provided to Stantec at that time. There are no assurances regarding the accuracy and completeness of this information. All information received from the client or third parties in the preparation of this report has been assumed by Stantec to be correct. Stantec assumes no responsibility for any deficiency or inaccuracy in information received from others.

The opinions in this report can only be relied upon as they relate to the condition of the portion of the identified property that was assessed at the time the work was conducted. Activities at the property subsequent to Stantec's assessment may have significantly altered the property's condition. Stantec cannot comment on other areas of the property that were not assessed.

Conclusions made within this report consist of Stantec's professional opinion as of the time of the writing of this report and are based solely on the scope of work described in the report, the limited data available and the results of the work. They are not a certification of the property's environmental condition. This report should not be construed as legal advice.

This report has been prepared for the exclusive use of the client identified herein and any use by any third party is prohibited. Stantec assumes no responsibility for losses, damages, liabilities or claims, howsoever arising, from third party use of this report.

9 References

Clackamas County Planning and Zoning Department Website: https://www.clackamas.us/planning#maps. Accessed May 18, 2022.

Oregon DEQ 1992. Groundwater Monitoring Well Drilling, Construction, and Decommissioning DEQ Guidance Document. August 24, 1992.

Oregon DEQ 2010. Human Health Risk Assessment Guidance. October 2010.

Oregon DEQ 2018. Risk-Based Decision Making for the Remediation of Contaminated Sites. Table of generic Risk-Based Concentrations. Updated May 2018.

Oregon DEQ 2023. Further Action Required for Pacific Corrugated Facility in Hubbard, ECSI #6521. March 1, 2023.

Oregon Water Resources Department On-Line Well Report Query: https://apps.wrd.state.or.us/apps/gw/well_log/. Accessed May 18, 2022.

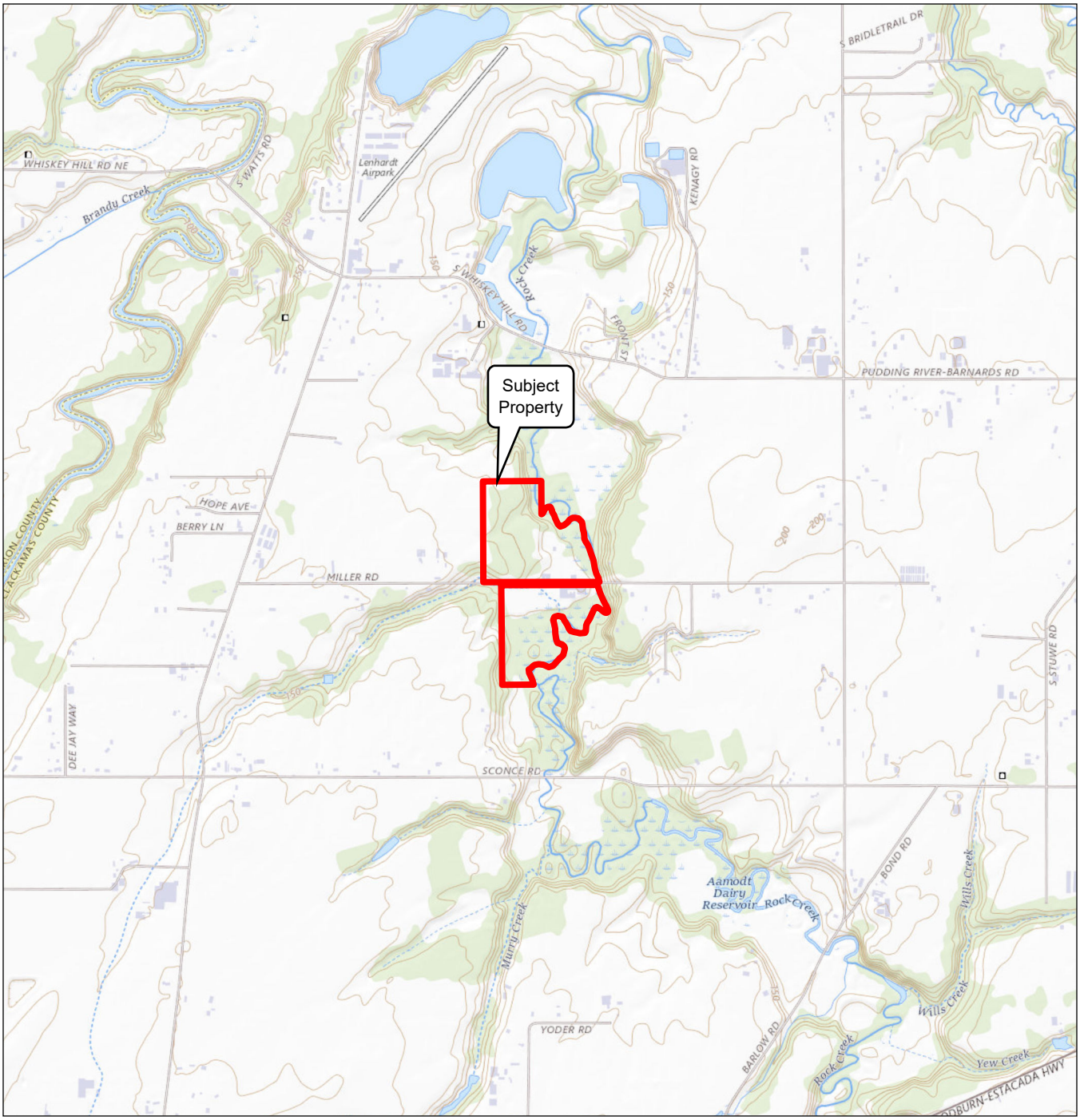
Stantec 2022a. Phase I Environmental Site Assessment, Oregon Plastic Tubing and Pacific Corrugated Facility, 6401 South Miller Road, Hubbard, Oregon. March 7, 2022.

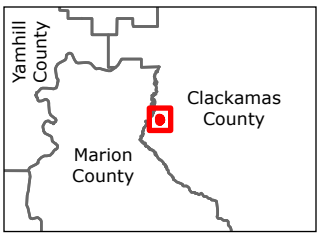
Stantec 2022b. Phase II Environmental Site Assessment Report, Oregon Plastic Tubing and Pacific Corrugated Facility, 6401 and 6402 South Miller Road, Hubbard, Oregon. May 24, 2022.

Stantec 2022c. Supplemental Phase II Environmental Site Assessment Report, Oregon Plastic Tubing and Pacific Corrugated Facility, 6401 and 6402 South Miller Road, Hubbard, Oregon. September 17, 2022.

Stantec 2023. Workplan for Additional Assessment and Well Installation, Oregon Plastic Tubing and Pacific Corrugated Facility, 6401 and 6402 South Miller Road, Hubbard, Oregon. March 9, 2023.

FIGURES





Legend

Subject Property

0 1,000 2,000 Feet

(At original document size of 8.5x11)
1:24,000

N

Stantec

Notes
1. Coordinate System: NAD 1983 UTM Zone 10N
2. Data Sources: USGS, Clackamas County Parcels
3. Background: USGS 7.5 Minute Quadrangle

Project Location
6401 and 6402 South Miller Road, Hubbard, OR

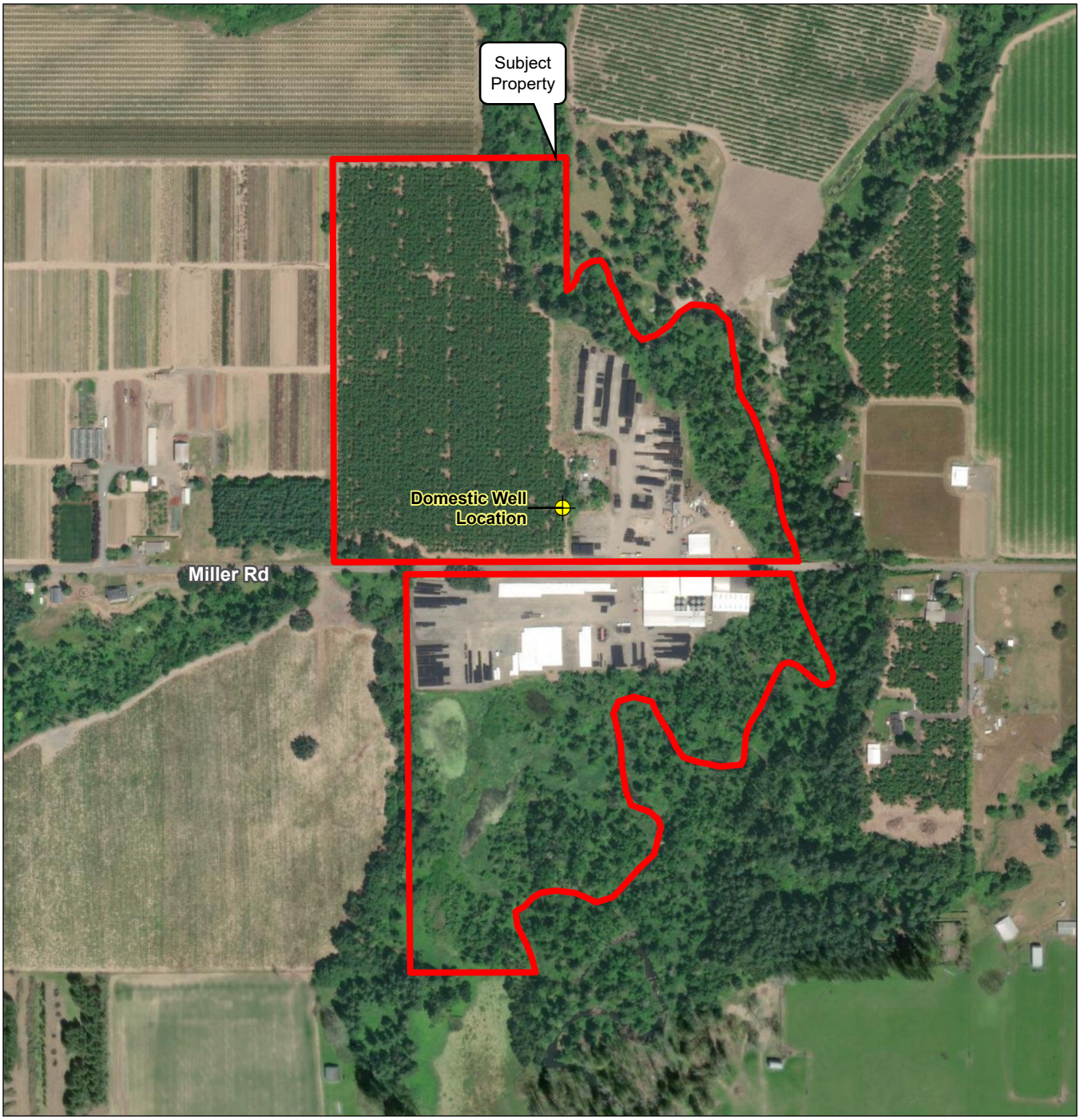
Prepared by BS on 2023-06-02
TR by RWM on 2020-05-23
IR by ES on 2020-05-23

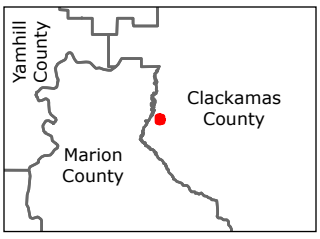
Client/Project 227704604
Oregon Plastic Tubing and Pacific Corrugated Company Additional Assessment Report

Figure No.
1

Title
Site Location Map

V:\227\active\227704604\03_data\gis_cad\gis\pro\Phase1\Phase1.aprx Revised: 2023-06-02 By: bschafermeyer





Legend

- Domestic Well Location
- Subject Property

0 250 500 Feet

(At original document size of 8.5x11)
1:6,000

N

Notes

1. Coordinate System: NAD 1983 UTM Zone 10N
2. Data Sources: USGS, Clackamas County Parcels
3. Background: USGS 7.5 Minute Quadrangle

Stantec

Project Location
6401 and 6402 South Miller Road,
Hubbard, OR

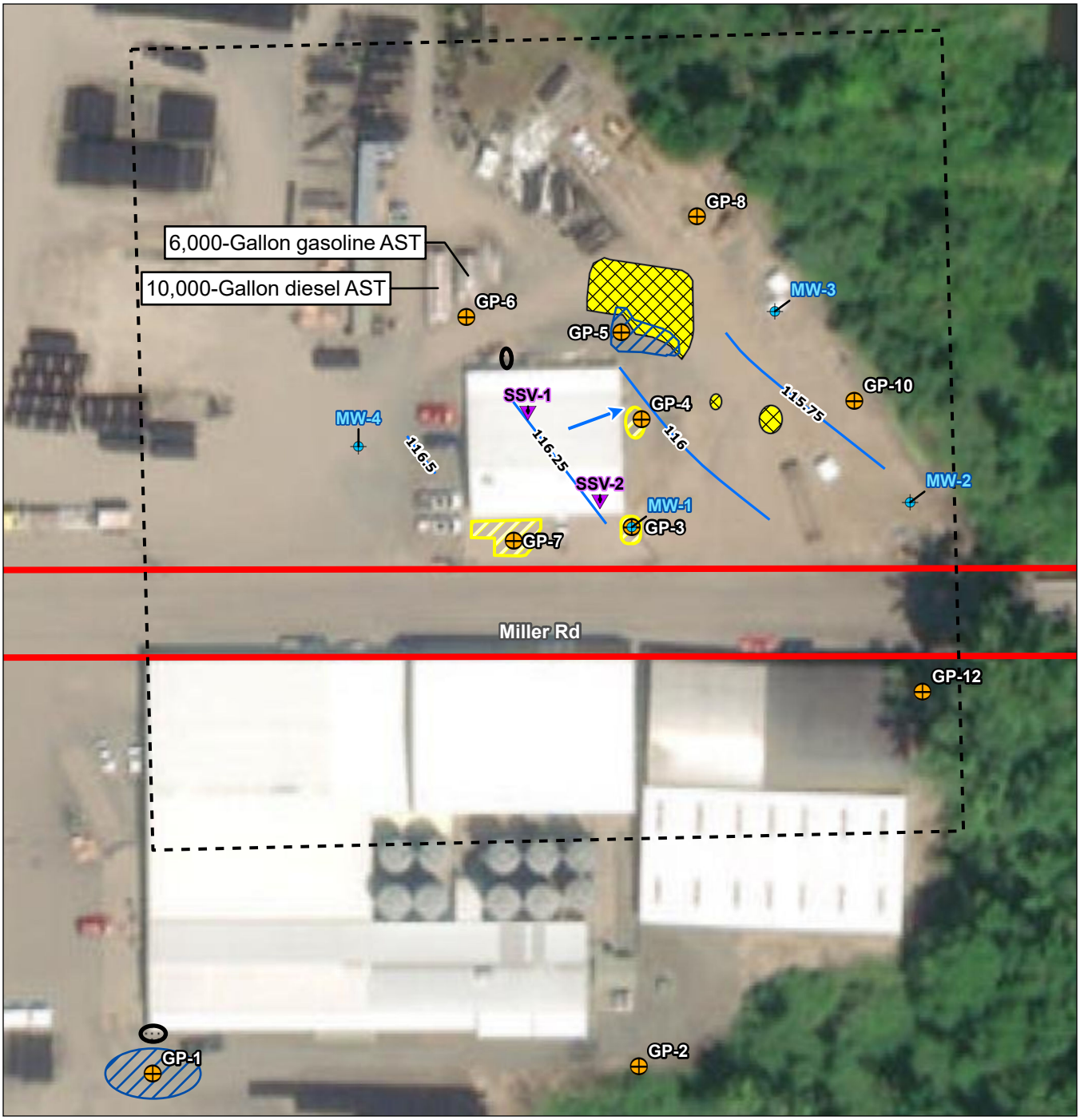
Prepared by BS on 2023-06-02
TR by RWM on 2020-05-23
IR by ES on 2020-05-23

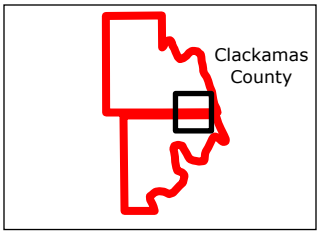
Client/Project 227704604
Oregon Plastic Tubing and
Pacific Corrugated Company
Additional Assessment Report

Figure No.
2

Title
Site Detail Map

V:\227\active\227704604\03_data\gis_cad\gis\pro\Phase\Phase II.aprx Revised: 2023-06-02 By: bschafermeyer





Notes
1. Coordinate System: NAD 1983 UTM Zone 10N
2. Data Sources: USGS, Clackamas County Parcels
3. Background: ESRI World Imagery

Legend
- Subject Property
- Backfilled Excavations
  - Ferric
  - Non-Ferric
- Locality of Facility
- Drain Field
- Septic Tank
- Groundwater Flow
- Groundwater Contour (ft)
- Groundwater Monitoring Well Locations
- Soil Vapor Sample Locations
- Borehole Locations

0 35 70 Feet
(At original document size of 8.5x11)
1:840

N

Stantec

Project Location
6401 and 6402 South Miller Road,
Hubbard, OR

Prepared by BS on 2023-06-06
TR by RWM on 2020-05-23
IR by ES on 2020-05-23

Client/Project 227704604
Oregon Plastic Tubing and
Pacific Corrugated Company
Additional Assessment Report

Figure No.
3

Title
Site Plan

V:\227\active\227704604\03_data\gis_cad\gis\pro\Phase1\Phase1.aprx Revised: 2023-06-06 By: bschafermeyer

Figure 4
Conceptual Site Model

Oregon Plastic Tubing and Pacific Corrugated Facility
6401 and 6402 South Miller Road, Hubbard, Oregon

Potential Receptor	Potentially Complete Current and Future Exposure Pathways					
	Soil - Direct Contact	Soil - Leaching to Groundwater	Soil/Groundwater - Volatilization to Outdoor Air	Vapor Intrusion	Tapwater Ingestion	Groundwater in Excavation
Residential	Not complete	Not complete	Not complete	Not complete	Not complete	Not complete
Urban Residential	Not complete	Not complete	Not complete	Not complete	Not complete	Not complete
Occupational Workers	Complete	Complete	Complete[1]	Complete[2]	Complete*	Not applicable
Construction Workers	Complete	Not applicable	Not applicable	Not applicable	Not applicable	Complete
Excavation Workers	Complete	Not applicable	Not applicable	Not applicable	Not applicable	Complete

Notes:

No current or reasonable future residential and urban residential use of the Property

Current and likely future land use: Mixed-use Commercial/Industrial

*Tapwater is sourced from the well located on the property.

[1] = Groundwater only

2 = Soil and groundwater only in vicinity of former tank pit, sub-slab soil vapor concentrations beneath office/shop building do not exceed applicable RBC

Green Shading = Pathway/receptor not complete or not applicable

Yellow Shading = Pathway/receptor considered complete, but detected concentrations reported below RBC

Red Shading = Pathway/receptor considered complete, and detected concentrations reported above RBC

TABLES

TABLE 1
Soil Sample Analytical Results - Petroleum Hydrocarbons and Volatile Organic Compounds
Oregon Plastic Tubing and Pacific Corrugated Facility
6401 and 6402 South Miller Road, Hubbard, Oregon

Sample ID	Date Sampled	NWTPH-Gx (Gasoline)	NWTPH-Dx (Diesel)	NWTPH-Dx (Motor Oil)	Acetone	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Benzene	Toluene	Ethylbenzene	Total Xylenes	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenene	n-Propylbenzene	p-Isopropyltoluene	Isopropylbenzene	4-Methyl- 2-pentanone (MIBK)	Naphthalene
GP-3-7'-8' (Completed as MW-1)	4/27/2022	**2.97 J**	**2.26 J**	4.07 U	**0.167**	**0.018**	**0.0578**	**0.0172**	**0.0250**	**0.00642 J**	**0.0125**	**0.159**	0.00901 U	0.00494 U	0.00335 U	**0.00530 J**	0.00437 U	**0.00285 J**	0.00391 U	0.00837 U
GP-4-0.5'-1.5'	4/27/2022	1.66 U	**166**	**856**	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GP-4-9'-10'	4/27/2022	1.56 U	1.67 U	4.19 U	**0.0828 J**	0.00291 U	0.00291 U	0.00368 U	**0.00101 J**	0.00239 U	0.00136 U	0.00162 U	0.00966 U	0.00530 U	**0.00359**	0.00175 U	0.00469 U	0.000782 U	0.00419 U	0.00898 U
GP-6-0.5'-1.5'	4/27/2022	1.49 U	**1.81 J**	4.09 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
GP-6-9'-10'	4/27/2022	1.72 U	1.74 U	4.35 U	0.0741 U	0.00321 U	0.00321 U	0.00406 U	0.000948 U	0.00264 U	0.00150 U	0.00179 U	0.0107 U	0.00585 U	0.00396 U	0.00193 U	0.00518 U	0.000863 U	0.00463 U	0.00990 U
GP-7-8'-9'	4/27/2022	**9,930**	**1,370**	21.7 U	0.706 U	**44.9**	**241**	**80.9**	**4.54**	**38.7**	**46.9**	**154**	**28.5**	**10.9**	0.0378 U	**48.5**	**15.6**	**15.6**	**20.2**	**34.5**
GP-7-10'-11'	4/27/2022	**1,740**	**41.3**	4.48 U	--	--	--	--	--	--	--	--	--	--		--	--	--	--	--
GP-7-14'-15'	4/27/2022	**3,760**	**374**	**7.05 J**	1.54 U	**31.9**	**126**	**32.7**	**35.9**	**306**	**91.1**	**435**	**20.9**	**5.51**	**0.325**	**23.6**	**2.95**	**14.7**	**4.66**	**42.2**
GP-8-14'-15'	4/20/2023	**1.68 J**	1.82 U	4.55 U	0.0647 U	0.00280 U	0.00280 U	0.00354 U	0.000827 U	**0.0114**	0.00131 U	**0.00402 J**	0.00930 U	0.00510 U	0.00345 U	0.00168 U	0.00452 U	0.000753 U	0.00404 U	0.00864 U
GP-9-14'-15' (Completed as MW-3)	4/20/2023	1.25 U	**1.67 J**	4.08 U	0.0539 U	0.00233 U	0.00233 U	0.00295 U	0.000689 U	**0.00680 J**	0.00109 U	**0.00242 J**	0.00775 U	0.00425 U	0.00288 U	0.00140 U	0.00376 U	0.000627 U	0.00337 U	**0.00242 J**
GP-10-14'-15'	4/20/2023	1.36 U	1.69 U	4.24 U	0.0584 U	0.00253 U	0.00253 U	0.00320 U	0.000748 U	**0.0133**	0.00118 U	**0.00375 J**	0.00840 U	0.00461 U	0.00312 U	0.00152 U	0.00408 U	0.000680 U	0.00365 U	0.00781 U
GP-11-14'-15' (Completed as MW-2)	4/20/2023	1.32 U	1.67 U	4.18 U	0.0566 U	0.00245 U	0.00245 U	0.00310 U	**0.00106 J**	**0.0462**	**0.00537**	**0.0261**	0.00815 U	0.00447 U	0.00303 U	0.00147 U	0.00396 U	**0.00172 J**	0.00354 U	0.00757 U
GP-12-14'-15'	4/20/2023	1.33 U	1.70 U	4.26 U	0.0571 U	0.00247 U	0.00247 U	0.00313 U	0.000730 U	**0.0111**	**0.00360 J**	**0.00330 J**	0.00821 U	0.00450 U	0.00305 U	0.00149 U	0.00399 U	0.000664 U	0.00356 U	0.00763 U
MW-4-14'-15'	4/20/2023	1.45 U	**2.77 J**	4.39 U	0.0623 U	0.00270 U	0.00270 U	0.00342 U	0.000798 U	**0.00938**	0.00126 U	**0.00273 J**	0.00897 U	0.00492 U	0.00333 U	0.00162 U	0.00435 U	0.000726 U	0.00389 U	0.00833 U
Construction Worker Direct Contact RBC		9,700	4,600	NA	NA	NA	2,900	>S	380	>S	1,700	20,000	NA	NA	NA	NA	NA	27,000	NA	580
Occupational Volatilization to Outdoor Air RBC		69,000	>Max	NA	NA	NA	>S	>S	50	>S	160	NA	NA	NA	NA	NA	NA	NA	NA	83
Occupational Leaching to Groundwater RBC		130	>Max	NA	NA	NA	48	53	0.10	490	0.9	NA	NA	NA	NA	NA	NA	NA	NA	0.34

Notes:
All results expressed as milligrams per kilogram
Volatile organic compound results not included in this table were non-detect for all samples analyzed
bold = indicates concentrations detected above method reporting limits
-- = Not analyzed
highlighted yellow = indicates concentration exceeds one or more potentially applicable RBCs
>Max = Substance is deemed not to pose a risk at any concentration
NA = Not Available, no screening value is listed for this analyte.
>S = This soil RBC exceeds the limit of three-phase partitioning. Soil concentrations in excess of Csat indicate that free product might be present.

J = The result is an estimated value
U = Not detected, the associated value is the method detection limit

Clean Fill Screening Values, Oregon DEQ April 2019 revision
RBCs = Oregon DEQ Risk-Based Concentrations, May 2018 revision

TABLE 2
Groundwater Sample Analytical Results - Petroleum Hydrocarbons, Lead and Volatile Organic Compounds
Oregon Plastic Tubing and Pacific Corrugated Facility
6401 and 6402 South Miller Road, Hubbard, Oregon

Sample ID	Date Sampled	Depth to Water (feet BTOC)	Groundwater Elevation (feet amsl)	NWTPH-Gx (Gasoline)	NWTPH-Dx (Diesel)	NWTPH-Dx (Motor Oil)	Lead (Total)	Lead (Dissolved)	1,2,3-Trimethylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	1,2- Dibromoethane (EDB)	1,2- Dichloroethane (EDC)	Di-isopropyl ether	Benzene	Toluene	Ethylbenzene	Xylenes, Total	Isopropylbenzene	p-Isopropyltoluene	Naphthalene	n-Propylbenzene	sec-Butylbenzene	tert-Butylbenzene	Styrene	Tetrachloroethene (PCE)
April 2022 Phase II Environmental Site Assessment																										
GP-1	4/27/2022	--	--	--	--	--	--	--	**0.218 J**	**0.860 J**	**0.575 J**	0.126 U	0.0819 U	0.105 U	0.0941 U	0.278 U	0.137 U	**0.426 J**	0.105 U	**0.408 J**	1.00 U	**0.533 J**	**0.185 J**	0.127 U	0.118 U	0.300 U
GP-2	4/27/2022	--	--	--	--	--	--	--	0.104 U	0.322 U	0.104 U	0.126 U	0.0819 U	0.105 U	0.0941 U	0.278 U	0.137 U	0.174 U	0.105 U	0.120 U	1.00 U	0.0993 U	0.125 U	0.127 U	0.118 U	0.300 U
GP-3	4/27/2022	--	--	**22,800**	**2,130**	**98.1**	--	--	**409**	**1,500**	**360**	**4.70 J**	**16.4 J**	2.63 U	**9,080**	**1,390**	**2,230**	**8,280**	**80.7**	**33.2**	**397**	**230**	3.13 U	3.18 U	2.95 U	7.50 U
GP-4	4/27/2022	--	--	**762**	**420**	**547**	--	--	**0.374 J**	**1.64**	**0.605 J**	0.126 U	**8.45**	**0.354 J**	**168**	**0.944 J**	**3.52**	**2.57 J**	**0.634 J**	0.120 U	1.00 U	**0.694 J**	**0.720 J**	**0.305 J**	0.118 U	0.300 U
GP-5	4/27/2022	--	--	**701**	**330**	**207 J**	--	--	**2.93**	**5.73**	**3.20**	0.126 U	0.0819 U	0.105 U	**164**	**1.90**	**10.2**	**9.63**	**0.837 J**	**0.476 J**	**2.70 J**	**1.35**	**0.425 J**	0.127 U	**0.365 J**	**0.326 J**
GP-6	4/27/2022	--	--	**192**	**108 J**	**106 J**	--	--	**0.253 J**	**11.2**	**4.7**	0.126 U	0.0819 U	0.105 U	**0.244 J**	**0.333 J**	**12.9**	**8.97**	**1.59**	**0.629 J**	1.00 U	**2.78**	**0.571 J**	0.127 U	0.118 U	0.300 U
GP-7	4/27/2022	--	--	**23,300**	**1,350**	83.3 U	--	--	**237**	**913**	**281**	12.6 U	8.19 U	10.5 U	**285**	**1,910**	**584**	**2,740**	**57.0 J**	**62.7 J**	**186 J**	**197**	12.5 U	12.7 U	11.8 U	30.0 U
On-Site Groundwater Monitoring Well Network																										
MW-1 (129.08)	7/14/2022	15.72	113.36	**56,800**	**1,800**	83.3 U	**9.43**	**2.17**	**--**	**1,560**	**431**	**19.3**	**52.9**	--	**14,600**	**2,240**	**1,960**	**7,470**	**89.8**	--	**456**	**228**	--	--	--	--
	4/26/2023	12.87	116.21	**67,400**	**1,130**	83.3 U	--	**4.63**	**336**	**1,270**	**308**	**8.18 J**	**22.2**	2.10U	**11,900**	**1,720**	**2,310**	**9,650**	**84.3**	**18.3**	**331**	**179**	**8.12 J**	2.54U	2.36U	6.00U
MW-2 (129.08)	4/26/2023	13.30	115.78	158U	**699**	**593**	--	**18.50**	0.104U	0.322U	0.104U	0.126U	0.0819U	0.105U	0.0941U	0.278U	0.137U	0.174U	0.105U	0.120U	0.174U	0.0993U	0.125U	0.127U	0.118U	0.300U
MW-3 (127.14)	4/26/2023	11.51	115.63	159U	**471**	**843**	--	**4.10**	0.104U	0.322U	0.104U	0.126U	**0.476 J**	0.105U	0.0941U	0.278U	0.137U	0.174U	0.105U	0.120U	0.174U	0.0993U	0.125U	0.127U	0.118U	0.300U
MW-4 (128.74)	4/26/2023	12.64	116.61	**96.8 J**	**133 J**	**154**	--	2.99U	0.104U	0.322U	0.104U	0.126U	0.0819U	0.105U	**0.461 J**	0.278U	0.137U	**0.313 J**	0.105U	0.120U	0.174U	0.0993U	0.125U	0.127U	0.118U	0.300U
Property Supply Well Sample Results																										
WW-1	7/14/2022	--	--	**51.6 J**	66.7 U	**84.2 J**	0.849 U	0.849 U	**--**	0.322 U	0.104 U	0.126 U	0.0819 U	--	0.0941 U	0.278 U	0.137 U	0.174 U	0.105 U	--	1.00 U	0.0993 U	--	--	--	--
Occupational Volatilization to Outdoor Air RBC				>S	>S	NA	NV	NV	NA	>S	>S	790	9,000	NA	14,000	>S	43,000	>S	>S	NA	16,000	NA	NA	NA	>S	>S
Construction and Excavation Worker Groundwater in Excavation RBC				14,000	>S	NA	>S	>S	NA	6,300	7,500	27	630	NA	1,800	220,000	4,500	23,000	51,000	NA	500	NA	NA	NA	170,000	5.6

Notes:
All results expressed as micrograms per liter
Volatile organic compound results not included in this table were non-detect for all samples analyzed
bold = indicates concentrations detected above method reporting limits
(###.##) = top of well casing elevation in feet above mean sea level
BTOC = below top of casing
amsl = above mean sea level
-- = Not analyzed
highlighted yellow = indicates concentration exceeds one or more potentially applicable RBCs
>S = This RBC exceeds the solubility limit, and does not pose an unacceptable risk provided free product is not present
-- = not applicable/sample not analyzed
NA = Not Available, no RBC screening value is listed for this analyte
NV = Chemical considered non-volatile
Monitoring well MW-1 installed June 27, 2022 adjacent to location of April 2022 soil boring GP-3

J = The result is an estimated value
U = Not detected, the associated value is the method detection limit

RBCs = Oregon DEQ Risk-Based Concentrations, May 2018 revision.

Table 3
Sub-Slab Soil Vapor Sample Analytical Results - Helium and Volatile Organic Compounds
Oregon Plastic Tubing and Pacific Corrugated Facility
6401 and 6402 South Miller Road, Hubbard, Oregon

Sample ID	Date Sampled	Helium	TPH Low Fraction	Acetone	Benzene	1,3-Butadine	Choroform	Carbon disulfide	Chloro-methane	Cyclo- hexane	Ethanol	Ethylbenzene	4-Ethyltoluene	Trichloro-fluoromethane	Dichloro-difluoro-methane	Heptane
SV-1	7/14/2022	3.45%	826 U	**13.8**	0.639 U	4.43 U	**1.79**	0.622 U	**0.432**	0.689 U	**19.4**	**2.06**	0.982 U	**1.29**	**2.27**	0.818 U
SV-1 R	4/21/2023	0.100 % (U)	--	**99.1**	**1.46**	4.43 U	0.973 U	**1.34**	**1.27**	0.689 U	**67.1**	**2.21**	0.982 U	**1.28**	**2.57**	**16.5**
SV-2	7/14/2022	0.61%	**1,430**	**141**	**2.63**	4.43 U	**1.71**	0.622 U	**0.529**	**2.61**	**40.3**	**2.62**	**1.06**	**1.74**	**2.38**	**2.46**
SV-2 R	4/21/2023	0.100 % (U)	**--**	**703**	**22.4**	**14.1**	0.973 U	0.622 U	**4.48**	0.689 U	**78.6**	**5.73**	**4.26**	1.12 U	**2.49**	**7.73**
Occupational Vapor Intrusion into Buildings RBC		NA	1,700,000	NA	1,600	NA	530	NA	390,000	NA	NA	4,900	NA	3,100,000	NA	NA

Continued results

Sample ID	Date Sampled	n-Hexane	2-Butanone	Methylene Chloride	Methyl Butyl Ketone	4-Methyl-2-pentanone	2-Propanol	Propene	Styrene	Tetrachloro-ethylene (PCE)	Tetra-hydrofuran	Toluene	Trichloro-ethylene (TCE)	1,2,4-Tri-methyl-benzene	1,3,5-Tri-methyl-benzene	Xylenes
SV-1	7/14/2022	2.22 U	**6.99**	**1.16**	5.11 U	5.12 U	**182**	2.15 U	**2.95**	1.36 U	**1.04**	**6.14**	1.07 U	**1.83**	0.982 U	**7.56**
SV-1 R	4/21/2023	2.22 U	**8.46**	**4.24**	5.11 U	5.12 U	**117**	2.15 U	**2.49**	**4.09**	0.590 U	**9.19**	1.07 U	**3.21**	**1.05**	**8.60**
SV-2	7/14/2022	**5.11**	**37.7**	**2.33**	5.11 U	5.12 U	**15.0**	2.15 U	**3.11**	**944**	0.590 U	**5.35**	1.07 U	**1.64**	0.982 U	**8.45**
SV-2 R	4/21/2023	**8.11**	**106**	**2.61**	**11.9**	**11.1**	**40.3**	**77.0**	**4.51**	**213**	0.590 U	**30.2**	1.07 U	**4.10**	**1.33**	**19.1**
Occupational Vapor Intrusion into Buildings RBC		NA	NA	1,200,000	NA	NA	NA	NA	4,400,00	47,000	NA	21,900,000	2,900	260,000	260,000	440,000

bold = indicates concentrations detected above method reporting limits
NA = Not Available, no screening value is listed for this analyte
U = Not detected, the associated value is the method reporting limit
RBCs = Oregon DEQ Risk-Based Concentrations, May 2018 revision

APPENDIX A

BORING LOGS

PROJECT: **Oregon Plastic Tubing Facility**
LOCATION: **6401 and 6402 S. Miller Road, Hubbard, OR**
PROJECT NUMBER: **227704604**

WELL / PROBEHOLE / BOREHOLE NO: **GP-8**
PAGE 1 OF 1

Stantec

DRILLING: STARTED **4/20/23** COMPLETED: **4/20/23**

DRILLING COMPANY: **Steadfast Services Northwest**
DRILLING EQUIPMENT: **Geoprobe 7720 DT**
DRILLING METHOD: **Direct Push**
SAMPLING EQUIPMENT: **Acetate Liner**

NORTHING (ft):
EASTING (ft):
GROUND ELEV (ft):
TOC ELEV (ft):
INITIAL DTW (ft): **16**
BOREHOLE DEPTH (ft): **20**
STATIC DTW (ft): **Not Encountered**
WELL DEPTH (ft):
WELL CASING DIA. (in): **--**
BOREHOLE DIA.(in): **3.0**
LOGGED BY: **RM**
CHECKED BY: **DH**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
		ML	**SILT** ; ML; brown; low plasticity; firm; moist; some angular road base gravel						
		CL	**CLAY** ; CL; reddish brown; low-medium plasticity; firm; moist; some small to medium rounded gravel			5			
5								0.0	5
			Gray			5			
			Asphalt debris 8.5-9.5						
10		CL	**CLAY** ; CL; dark grayish brown; low plasticity; stiff to very stiff; moist					0.0	10
			Black			5			
			Light gray; medium plasticity		GP-8-14'-15' @ 1250			0.0	
15									15
			CLAY WITH SOME SAND ; saturated			5			
		SP	**SAND** ; SP; dark gray; fine-grained; medium dense; saturated; trace medium subangular gravels					0.0	
20			Borehole terminated at 20 feet.						20

GEO FORM 304 HUBBARD_OREGON_PHASE_II_ESA.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 5/31/23

PROJECT: **Oregon Plastic Tubing Facility**
LOCATION: **6401 and 6402 S. Miller Road, Hubbard, OR**
PROJECT NUMBER: **227704604**

WELL / PROBEHOLE / BOREHOLE NO: **GP-9 (MW-3)**
PAGE 1 OF 1

Stantec

DRILLING: STARTED **4/20/23** COMPLETED: **4/20/23**

DRILLING COMPANY: **Steadfast Services Northwest**
DRILLING EQUIPMENT: **Geoprobe 7720 DT**
DRILLING METHOD: **Direct Push**
SAMPLING EQUIPMENT: **Acetate Liner**

NORTHING (ft): **554507.56** EASTING (ft): **7625533.98**
GROUND ELEV (ft): **127.33** TOC ELEV (ft): **127.14**
INITIAL DTW (ft): **16** BOREHOLE DEPTH (ft): **20**
STATIC DTW (ft): **13.3** WELL DEPTH (ft):
WELL CASING DIA. (in): **2** BOREHOLE DIA.(in): **6.0**
LOGGED BY: **RM** CHECKED BY: **DH**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Well Construction
0		ML	**SILT** ; ML; brown; low plasticity; firm; moist; some angular road base gravel; some concrete debris							Concrete
			Some brick debris			5				
			Dark gray							Hydrated bentonite chips
5			Some small rounded gravels					0.0	5	2-inch dia. PVC well casing
						5				
		CL	**CLAY** ; CL; dark gray; medium plasticity; firm to stiff; moist; some small rounded gravels							
10								0.0	10	
		SP	**SAND** ; SP; grayish brown; fine-grained; medium dense; moist; non-cohesive			5				Silica sand filter pack
			Brown; dense		GP-9-14'-15' @ 1150			0.0		
15									15	Well screen
			Saturated			5				
			Some small to medium rounded gravels					0.0		
20			Borehole terminated at 20 feet.						20	

GEO FORM 304 HUBBARD_OREGON_PHASE_II_ESA.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 5/31/23

PROJECT: **Oregon Plastic Tubing Facility**
LOCATION: **6401 and 6402 S. Miller Road, Hubbard, OR**
PROJECT NUMBER: **227704604**

WELL / PROBEHOLE / BOREHOLE NO: **GP-10**
PAGE 1 OF 1

Stantec

DRILLING: STARTED **4/20/23** COMPLETED: **4/20/23**

DRILLING COMPANY: **Steadfast Services Northwest**
DRILLING EQUIPMENT: **Geoprobe 7720 DT**
DRILLING METHOD: **Direct Push**
SAMPLING EQUIPMENT: **Acetate Liner**

NORTHING (ft):
EASTING (ft):
GROUND ELEV (ft):
TOC ELEV (ft):
INITIAL DTW (ft): **16**
BOREHOLE DEPTH (ft): **20**
STATIC DTW (ft): **Not Encountered**
WELL DEPTH (ft):
WELL CASING DIA. (in): **--**
BOREHOLE DIA.(in): **3.0**
LOGGED BY: **RM**
CHECKED BY: **DH**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
		ML	**SILT** ; ML; brown; low plasticity; firm; moist; some angular road base gravel						
			Dark brown; trace brick debris			5			
			Concrete debris						
5								0.0	5
			Some small rounded gravels; no concrete/brick debris						
		CL	**CLAY** ; CL; dark gray; medium plasticity; firm; moist; some small rounded gravels			5			
10								0.0	10
			Stiff						
			Greenish black; very stiff			5			
					GP-10-14'-15' @ 1115			0.0	
15									15
			Saturated						▽
		SP	**SAND** ; SP; grayish brown; fine-grained; medium dense; saturated; some small rounded gravels; non-cohesive			5			
			Black					0.0	
20									20
			Borehole terminated at 20 feet.						

GEO FORM 304 HUBBARD_OREGON_PHASE_II_ESA.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 5/31/23

PROJECT: **Oregon Plastic Tubing Facility**
LOCATION: **6401 and 6402 S. Miller Road, Hubbard, OR**
PROJECT NUMBER: **227704604**

WELL / PROBEHOLE / BOREHOLE NO:
PAGE 1 OF 1 **GP-11 (MW-2)**

Stantec

DRILLING: STARTED **4/20/23** COMPLETED: **4/20/23**

DRILLING COMPANY: **Steadfast Services Northwest**
DRILLING EQUIPMENT: **Geoprobe 7720 DT**
DRILLING METHOD: **Direct Push**
SAMPLING EQUIPMENT: **Acetate Liner**

NORTHING (ft): **554421.19** EASTING (ft): **7625586.37**
GROUND ELEV (ft): **129.19** TOC ELEV (ft): **129.08**
INITIAL DTW (ft): **16** BOREHOLE DEPTH (ft): **20**
STATIC DTW (ft): **12** WELL DEPTH (ft):
WELL CASING DIA. (in): **2** BOREHOLE DIA.(in): **6.0**
LOGGED BY: **RM** CHECKED BY: **DH**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)	Well Construction
		ML	**SILT** ; ML; brown; low plasticity; firm; moist; some angular road base gravel							Concrete
		GP	**POORLY GRADED GRAVEL** ; GP; 6-inch lense of small to medium subrounded gravels; brown silt matrix							
		ML	**SILT** ; ML; brown; low plasticity; firm; moist			5				Hydrated bentonite chips
			Iron oxide staining							
5		CL	**CLAY** ; CL; dark gray; medium plasticity; firm; moist; trace brick debris					0.0	5	2-inch dia. PVC well casing
			No brick debris			5				
10			Greenish black					0.0	10	
		SP	**SAND** ; SP; grayish brown; fine-grained; medium dense; moist; non-cohesive			5				Silica sand filter pack
			Brown		GP-11-14'-15' @ 950			0.0		
15			Saturated						15	Well screen
			Grayish brown			5		0.0		
20			Borehole terminated at 20 feet.						20	

GEO FORM 304 HUBBARD_OREGON_PHASE_II_ESA.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 5/31/23

PROJECT: **Oregon Plastic Tubing Facility**
LOCATION: **6401 and 6402 S. Miller Road, Hubbard, OR**
PROJECT NUMBER: **227704604**

WELL / PROBEHOLE / BOREHOLE NO: **GP-12**
PAGE 1 OF 1

Stantec

DRILLING: STARTED **4/20/23** COMPLETED: **4/20/23**

DRILLING COMPANY: **Steadfast Services Northwest**
DRILLING EQUIPMENT: **Geoprobe 7720 DT**
DRILLING METHOD: **Direct Push**
SAMPLING EQUIPMENT: **Acetate Liner**

NORTHING (ft):
EASTING (ft):
GROUND ELEV (ft):
TOC ELEV (ft):
INITIAL DTW (ft): **Not Encountered**
BOREHOLE DEPTH (ft): **20**
STATIC DTW (ft): **Not Encountered**
WELL DEPTH (ft):
WELL CASING DIA. (in): **--**
BOREHOLE DIA.(in): **3.0**
LOGGED BY: **RM**
CHECKED BY: **DH**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
		ML	**SILT WITH FINE SAND** ; ML; light brown; low plasticity; firm; moist; trace wood debris and roots						
		SP	**SILTY FINE SAND** ; SP; light brown; medium dense; moist; non-cohesive			5			
5								0.0	5
			Iron oxide staining			5			
		ML	**SILT WITH SAND** ; ML; brown; low plasticity; stiff; moist; iron oxide staining						
10								0.0	10
		CL	**CLAY** ; CL; dark grayish brown; medium plasticity; very stiff; moist; some small light gray mottles			5			
			Brick fragment @ 13.25'						
			Dark gray		GP-12-14'-15' @ 910			0.0	
15									15
			Hard			5			
								0.0	
20			Borehole terminated at 20 feet.						20

GEO FORM 304 HUBBARD_OREGON_PHASE_II_ESA.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 5/31/23

PROJECT: **Oregon Plastic Tubing Facility**
LOCATION: **6401 and 6402 S. Miller Road, Hubbard, OR**
PROJECT NUMBER: **227704604**

WELL / PROBEHOLE / BOREHOLE NO: **MW-4**
PAGE 1 OF 1

Stantec

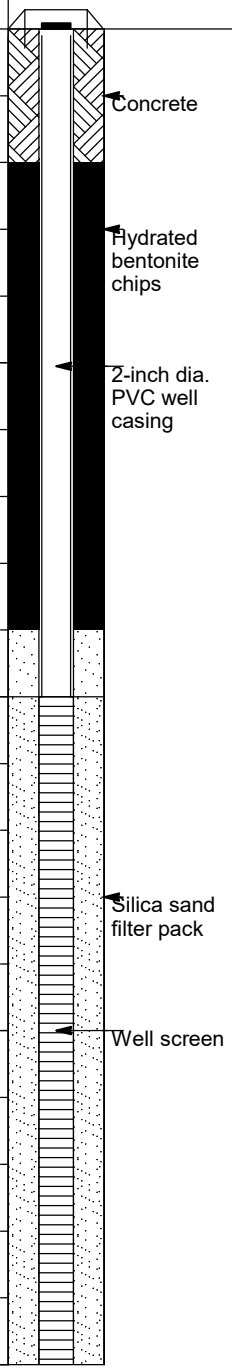
DRILLING: STARTED **4/20/23** COMPLETED: **4/20/23**

DRILLING COMPANY: **Steadfast Services Northwest**
DRILLING EQUIPMENT: **Geoprobe 7720 DT**
DRILLING METHOD: **Direct Push**
SAMPLING EQUIPMENT: **Acetate Liner**

NORTHING (ft): **554458.88** EASTING (ft): **7625352.18**
GROUND ELEV (ft): **129.01** TOC ELEV (ft): **128.74**
INITIAL DTW (ft): **15.5** BOREHOLE DEPTH (ft): **20**
STATIC DTW (ft): **12.5** WELL DEPTH (ft):
WELL CASING DIA. (in): **2** BOREHOLE DIA.(in): **6.0**
LOGGED BY: **RM** CHECKED BY: **DH**

Time & Depth (feet)	Graphic Log	USCS	Description	Sample	Time Sample ID	Measured Recov. (feet)	Blow Count	Headspace PID (units)	Depth (feet)
			Compacted angular road base gravel						
		ML	**SILT** ; ML; brown; low plasticity; firm; moist; trace brick debris						
			Light brown; iron oxide staining			5			
5			**SILT WITH TRACE FINE SAND** ; no staining					0.0	5
			Gray			5			
			SAND ; gray; fine-grained; medium dense; moist; non-cohesive						
10								0.0	10
			Very fine-grained			5			
					MW-4-14'-15' @ 1330			0.0	
15			Saturated						15
						5			
								0.0	
20			Borehole terminated at 20 feet.						20

Well Construction



GEO FORM 304 HUBBARD_OREGON_PHASE_II_ESA.GPJ STANTEC ENVIRO TEMPLATE 010509.GDT 5/31/23

APPENDIX B

SURVEY DATA

MONITORING WELL SURVEY

OREGON PLASTIC TUBING AND PACIFIC CORRUGATED COMPANY

SITUATED IN THE NORTHWEST QUARTER OF SECTION 06 TOWNSHIP 5 SOUTH, RANGE 1 EAST OF THE WILLAMETTE MERIDIAN, COUNTY OF CLACKAMAS, STATE OF OREGON.

FOR

Stantec

N

SCALE: 1" = 30'

0' 30 60'

LEGEND

= MONITORING WELL AS NOTED. (SURVEYED 04-24-2023)

= SITE BENCHMARK AS NOTED.

SITE BENCHMARKS

G1 = NAIL SPIKE ELEVATION OF 129.57 FEET.

G2 = MAG NAIL ELEVATION OF 128.34 FEET.

HORIZONTAL DATUM

NAD83/2011(EPOCH 2010.0000. OREGON STATE PLANE COORDINATE SYSTEM NORTH ZONE 3601, UNITS IN INTERNATIONAL FEET.

VERTICAL DATUM

NORTH AMERICAN VERTICAL DATUM OF 88 (NAVD88) GEOID12B

PARCEL INFORMATION

ADDRESS: 6401 S. MILLER RD
HUBBARD, OR 97032
MAP NO: 51E06
TAX LOT: 00700
PARCEL NO: 01071315

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JULY 18, 1980
DANIEL A. HOEKSTRA
1899

EXPIRES: 06/30/23

STATEWIDE LAND SURVEYING INC.

CLIENT: **STANTEC**		
JOB NO: **2023-069**		SCALE: **1"=30'**
DRAWN: **G.W.E.**	REVIEWED: **D.A.H.**	SHEET: **1 OF 1**
DRAWN DATE: **04-25-2023**		REVIEW DATE: **04-25-2023**
SURVEY DATE: **04-24-2023**		REV: **NA**

43 NW AVA AVE. GRESHAM, OR 97030
O: 503-665-7777 F: 503-665-7988
EMAIL: SURVEY@STATEWIDESURVEYING.COM
WEB: WWW.STATEWIDESURVEYING.COM

STATEWIDE LAND SURVEYING INC.

Oregon Plastic Tubing and Pacific Corrugated Company			Survey Date: 04-24-23
Horizontal Datum	**UTM Zone**	**Vertical Datum**	**Address**
NAD83/2011 Oregon State Plane North Zone 3601, International Feet	10	NAVD88 Geoid12b	6401 S Miller Rd, Hubbard, OR 97032

Monitoring Wells							
Feature	**Northing (Y)**	**Easting (X)**	**Latitude**	**Longitude**	**Surface El.**	**Rim El.**	**PVC El.**
MW-1	554412.75	7625480.64	N45°09'55.8142"	W122°44'09.6568"	129.52	129.50	129.08
MW-2	554421.19	7625586.37	N45°09'55.9263"	W122°44'08.1849"	129.19	129.29	129.08
MW-3	554507.56	7625533.98	N45°09'56.7646"	W122°44'08.9492"	127.33	127.37	127.14
MW-4	554458.88	7625352.18	N45°09'56.2343"	W122°44'11.4670"	129.01	129.02	128.74

Notes

Project elevations were established with the Oregon GPS Network (ORGN). Differential levels were used to collect the well data from the project elevation reference point (benchmark). See provided well exhbit map.

503-665-7777
43 NW Ava Ave, Gresham, OR 97030
SWLS, Inc.
www.statewidesurveying.com
survey@statewidesurveying.com

APPENDIX C

GROUNDWATER MONITORING FIELD DATA SHEETS AND LOW FLOW GROUNDWATER SAMPLING STANDARD OPERATING PROCEDURE

Stantec Consulting Corporation

HYDROLOGIC DATA SHEET

Gauge Date: 4/26/23 **Project Name:** Oregon plastic tubing, Hubbard, OR

Field Staff: Robert McAlister **Project Number:** 227704604

DTP = Depth to Free Product (FP or NAPH) Below TOC
DTW = Depth to Groundwater Below TOC
DTB = Depth to Bottom of Well Casing Below TOC

Flow through cell calibrated Y X N____

Wells checked for product and gauged prior to commencement of bailing or purging the wells Y X N____

WELL OR LOCATION	WELL SCREEN DEPTH	PROPOSED INTAKE RANGE (feet below TOC)	MEASUREMENTS				PURGE? (Y/N)	SHEEN? (Y/N)	SAMPLE? (Y/N)	COMMENTS / PROBE CALIBRATION
			TIME	DTP (feet)	DTW (feet)	DTB (feet)				
MW-1	10-20	~15'	840	ND	12.87	19.42	Y	N	Y	SLIGHT HC ODOR
MW-2	10-20	~15'	837	ND	13.30	19.25	Y	N	Y	
MW-3	10-20	~15'	835	ND	11.51	19.88	Y	N	Y	
MW-4	10-20	~15'	830	ND	12.64	19.87	Y	N	Y	

Stantec

Water Sample Field Data Sheet

Portland Office
601 SW 2nd Avenue, Suite 1400

Project Name: Oregon Plastic Tubing
Project No.: 227704604
Project Manager: Eric Stommes
Lab: Pace Analytical
Field Technician: Bob McAlister
Well ID: MW-1

Date Purged: 4/26/23 Start (2400hr): 1110 End (2400hr): 1140
Date Sampled: 4/26/23 Sample Time (2400hr): 1135
Sample Type: GRAB Low-Flow Used? YES

Casing Diameter: 2" X 3" ____ 4" ____
Casing Volume (Gallons per foot): (0.17) (0.38) (0.67)

Depth to Bottom (ft): 19.42
Depth to Water (ft): 12.87
Water Column Height (ft): 6.55
Actual Purge (gal): ~1/2 GAL

Field Measurements

Flowrate (L/min)	Time (24-Hr)	Temp (°C)	pH (units)	Conductivity (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (ntu)	Water Level (ft/ BTOC)
0.2	1115	14.6	6.69	819	0.49	-52.4	4	13.13
	1120	14.7	6.77	820	0.32	-73.6	6	13.49
	1125	14.8	6.82	824	0.27	-83.7	5	13.53
	1130	14.8	6.81	824	0.26	-81.2	6	13.55

Calculated Variance of Final Three Samples:
Temp: <1% pH: ±0.01 Conductivity: <1% DO: 23% O.R.P.: ±10.1

Acceptable Variance Limits:
Temp: 3% pH: ±0.1 unit Conductivity: 3% DO: 10% O.R.P.: ±10 mV

Depth to Purge Intake During Purge: ~15 **Sample DTW:** 13.55

Quantity of Sample Vessel & Preservative:	Analyses:
3 VOAs (HCl)	NWTPH-Gx
2 VOAs (HCl)	NWTPH-Dx
3 VOAs (HCl)	VOCs
1 Poly bottle (HNO3)	Dissolved lead

Purging Equipment:	Sampling Equipment:
Peristaltic Pump/YSI Pro Plus Multimeter	Peristaltic Pump

Flow Through Cell Disconnected Prior to Sample Collection?: Yes X No ____

Well Pad Condition: EXCELLENT Well Casing Condition: EXCELLENT
Well Vault Condition: EXCELLENT Seal Present?: Y Bolts Present?: 3 OF 3
Well Integrity: EXCELLENT Well Tag: L115886

Notes: SLIGHT HC ODOR

Signature:

Stantec

Water Sample Field Data Sheet

Portland Office
601 SW 2nd Avenue, Suite 1400

Project Name: Oregon Plastic Tubing
Project Manager: Eric Stommes
Field Technician: Bob McAlister

Project No.: 227704604
Lab: Pace Analytical
Well ID: MW-2

Date Purged: 4/26/23
Date Sampled: 4/26/23
Sample Type: GRAB

Start (2400hr): 1030 End (2400hr): 1105
Sample Time (2400hr): 1100
Low-Flow Used? YES

Casing Diameter:
Casing Volume (Gallons per foot): 2" X (0.17) 3" ____ (0.38) 4" ____ (0.67)

Depth to Bottom (ft): 19.25
Depth to Water (ft): 13.30
Water Column Height (ft): 5.95

Actual Purge (gal): ~½ GAL

Field Measurements

Flowrate (L/min)	Time (24-Hr)	Temp (°C)	pH (units)	Conductivity (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (ntu)	Water Level (ft/ BTOC)
0.2	1035	13.5	6.46	708	1.10	9.6	51	13.97
	1040	13.6	6.48	693	0.79	-17.0	61	14.09
	1045	13.8	6.50	704	0.52	-48.6	57	14.11
	1050	13.8	6.51	705	0.52	-49.8	52	14.13
	1055	13.8	6.54	706	0.52	-52.0	50	14.16

Calculated Variance of Final Three Samples:
Temp: Ø% pH: ±0.04 Conductivity: <1% DO: Ø% O.R.P.: ±3.4

Acceptable Variance Limits:
Temp: 3% pH: ±0.1 unit Conductivity: 3% DO: 10% O.R.P.: ±10 mV

Depth to Purge Intake During Purge: ~15 **Sample DTW:** 14.16

Quantity of Sample Vessel & Preservative:	Analyses:
3 VOAs (HCl)	NWTPH-Gx
2 VOAs (HCl)	NWTPH-Dx
3 VOAs (HCl)	VOCs
1 Poly bottle (HNO3)	Dissolved lead
Purging Equipment:	**Sampling Equipment:**
Peristaltic Pump/YSI Pro Plus Multimeter	Peristaltic Pump

Flow Through Cell Disconnected Prior to Sample Collection?: Yes X No ____

Well Pad Condition: EXCELLENT
Well Casing Condition: EXCELLENT
Well Vault Condition: EXCELLENT
Seal Present?: Y Bolts Present?: 3 OF 3
Well Integrity: EXCELLENT
Well Tag: L144075

Notes:

Signature:

Stantec

Water Sample Field Data Sheet

Portland Office
601 SW 2nd Avenue, Suite 1400

Project Name: Oregon Plastic Tubing
Project No.: 227704604
Project Manager: Eric Stommes
Lab: Pace Analytical
Field Technician: Bob McAlister
Well ID: MW-3

Date Purged: 4/26/23 Start (2400hr): ~~945~~ 945 End (2400hr): 1025
Date Sampled: 4/26/23 Sample Time (2400hr): 1020
Sample Type: GRAB Low-Flow Used? YES

Casing Diameter: 2" X 3" ____ 4" ____
Casing Volume (Gallons per foot): (0.17) (0.38) (0.67)

Depth to Bottom (ft): 19.87
Depth to Water (ft): 11.51
Water Column Height (ft): 8.36
Actual Purge (gal): ~ ½ GAL

Field Measurements

Flowrate (L/min)	Time (24-Hr)	Temp (°C)	pH (units)	Conductivity (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (ntu)	Water Level (ft/ BTOC)
0.2	1000	14.2	6.59	972	0.88	-29.2	284	12.13
	1005	14.3	6.66	969	0.57	-101.3	224	12.63
	1010	14.4	6.65	916	0.41	-178.3	107	12.81
	1015	14.4	6.67	915	0.41	-179.1	106	12.87
	1020	14.4	6.69	913	0.40	-181.3	100	12.90

Calculated Variance of Final Three Samples:
Temp: 0% pH: ±0.04 Conductivity: <1% DO: 2.4% O.R.P.: ±3

Acceptable Variance Limits:
Temp: 3% pH: ±0.1 unit Conductivity: 3% DO: 10% O.R.P.: ±10 mV

Depth to Purge Intake During Purge: ~15 **Sample DTW:** 12.90

Quantity of Sample Vessel & Preservative:	Analyses:
3 VOAs (HCl)	NWTPH-Gx
2 VOAs (HCl)	NWTPH-Dx
3 VOAs (HCl)	VOCs
1 Poly bottle (HNO3)	Dissolved lead
Purging Equipment:	**Sampling Equipment:**
Peristaltic Pump/YSI Pro Plus Multimeter	Peristaltic Pump

Flow Through Cell Disconnected Prior to Sample Collection?: Yes X No ____

Well Pad Condition: EXCELLENT Well Casing Condition: EXCELLENT
Well Vault Condition: EXCELLENT Seal Present?: Y Bolts Present?: 3 OF 3
Well Integrity: EXCELLENT Well Tag: L144076

Notes:

Signature

Stantec

Water Sample Field Data Sheet

Portland Office
601 SW 2nd Avenue, Suite 1400

Project Name: Oregon Plastic Tubing
Project Manager: Eric Stommes
Field Technician: Bob McAlister

Project No.: 227704604
Lab: Pace Analytical
Well ID: MW-4

Date Purged: 4/26/23
Date Sampled: 4/26/23
Sample Type: GRAB

Start (2400hr): 900 End (2400hr): 935
Sample Time (2400hr): 930
Low-Flow Used? YES

Casing Diameter: 2" X 3" ____ 4" ____
Casing Volume (Gallons per foot): (0.17) (0.38) (0.67)

Depth to Bottom (ft): 19.87
Depth to Water (ft): 12.64
Water Column Height (ft): 7.23

Actual Purge (gal): ~½ GAL

Field Measurements

Flowrate (L/min)	Time (24-Hr)	Temp (°C)	pH (units)	Conductivity (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (ntu)	Water Level (ft/ BTOC)
0.2	910	15.4	6.59	519	0.99	146.4	39	14.30
	915	15.3	6.56	525	0.75	145.4	45	15.49
	920	15.4	6.57	546	0.67	99.2	40	15.63
	925	15.4	6.57	545	0.67	96.0	37	15.69
	930	15.4	6.57	544	0.67	93.4	37	15.73

Calculated Variance of Final Three Samples:
Temp: Ø % pH: ± Ø Conductivity: <1% DO: Ø% O.R.P.: ± 5.8

Acceptable Variance Limits:
Temp: 3% pH: ±0.1 unit Conductivity: 3% DO: 10% O.R.P.: ±10 mV

Depth to Purge Intake During Purge: ~15' **Sample DTW:** 15.73

Quantity of Sample Vessel & Preservative:	Analyses:
3 VOAs (HCl)	NWTPH-Gx
2 VOAs (HCl)	NWTPH-Dx
3 VOAs (HCl)	VOCs
1 Poly bottle (HNO3)	Dissolved lead
Purging Equipment:	**Sampling Equipment:**
Peristaltic Pump/YSI Pro Plus Multimeter	Peristaltic Pump

Flow Through Cell Disconnected Prior to Sample Collection?: Yes X No ____

Well Pad Condition: EXCELLENT
Well Casing Condition: EXCELLENT
Well Vault Condition: EXCELLENT
Seal Present?: Y Bolts Present?: 3 OF 3
Well Integrity: EXCELLENT
Well Tag: L144077

Notes:

Signature:

STANTEC groundwater monitoring & Low-Flow sampling procedures

Monitoring well purging and sampling will be conducted using EPA approved low-flow sampling techniques as promulgated in *Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples From Monitoring Wells* (EPA Region 1, 1996, revised 2017).

Purging Procedures

A. Using a decontaminated instrument (i.e., tape measure, continuity meter, or interface probe) measure the depth to groundwater in reference to the measuring point at the top of the casing. Measure the total depth of the well to calculate the height and volume of water in the borehole.
B. Based on previously obtained data, if a monitoring well is suspected of containing liquid-phase hydrocarbon (LPH) concentrations, lower a transparent bailer into the well to evaluate the presence of an LPH sheen on the water table.
C. Decontaminate the purge pump and/or PVC bailers by scrubbing in Alconox detergent solution, followed by a tap water rinse and then a deionized water rinse.
D. Purge, by low-flow pumping (less than 0.5 liters per minute) for approximately five minutes. If low-flow purging is not possible and bailing is used to purge the well, then a minimum of three well volumes will be removed. If the well goes dry, the procedure listed in step E2 (below) should be followed. Parameters should be measured after each ½-casing volume is removed.
E. Conduct field measurements (i.e., pH, specific conductivity, temperature, and oxidation-reduction potential) note clarity, color, turbidity, and odor of purge water, and measure depth to groundwater.
    1. If the well has not been purged dry, continue to pump and conduct field measurements (including depth to water) again every five minutes during purging.
        a. If the first through third series of measurements vary by less than 10 percent, the well has been adequately purged. Allow the well to recover to 80 percent of its static condition and begin the sampling procedure.
        b. If the measurements vary by 10 percent or greater, repeat Step E1 above.
        c. If a minimum of three parameters cannot be measured during purging, remove three well volumes prior to sampling.
    2. If the well has been purged dry, measure the water level and allow the well to recharge to 80 percent, or for two hours, whichever occurs first. Calculate the percent recovery and begin the sampling procedure.

Sampling Procedures

- Use the pump to collect the groundwater sample.
- Transfer the groundwater sample into the appropriate container(s). Where applicable, some containers are completely filled to achieve zero headspace. Label the samples according to location and date of collection.
- Enter the samples into Chain-of-Custody and preserve on ice until delivery to the analytical laboratory. Complete the Well Development or Purging/Sampling Log to be stored in the project file.

When requested by the client, collect a bailer rinsate blank of deionized water to check decontamination procedure. In addition, trip blanks prepared by the laboratory and kept with the samples may be included to check for cross contamination of samples within the cooler.

APPENDIX D

SUB-SLAB SOIL VAPOR SAMPLE COLLECTION FIELD DATA SHEETS

Stantec Consulting

SOIL VAPOR SAMPLING FIELD DATA SHEET

PROJECT NAME: **Oregon Plastic Tubing** CLIENT: **Prinsco** DATE: 4/21/23

LOCATION: 6401 and 6402 South Miller Road, Hubbard, Oregon SAMPLE I.D.: SSV-1R

SAMPLER NAME: Robert McAlister PROJECT #: 227704604

SHUT-IN TEST: (1 inH2O = 0.073 inHg)

APPLY VACUUM TO SAMPLE TRAIN BY DRAWING 60 ML WITH SYRINGE	PASS/FAIL
	PASS

PURGE: Purge method = ☒ Syringe ☐ Pump

FLOW RATE: _____

	~~PRESSURE (inHg)~~	TIME OF READING
INITIAL READING	START	930
FINAL READING	END	935

VAPOR SAMPLE:

FLOW RATE: 100 mL/MIN

	PRESSURE (inHg)	TIME OF READING
INITIAL READING	-29	940
FINAL READING	-5	945

SITE CONDITIONS (i.e. WEATHER, TRAFFIC):

Air Temp (°C or (°F)) = 47

Relative Humidity (%) = 81

Barometric Pressure (in.Hg) = 30.40

Time vapor point installed = 900

(Wait at least 30 mins after install before sample collection)

5" CONCRETE SLAB

PURGED 400 mL

VAPOR SAMPLING FIELD MEASUREMENTS

START TIME: 940 END TIME: 945

TRACER USED: Helium TRACER METER USED: Dielectric Helium Detector

TEDLAR BAG END PURGE TRACER CONCENTRATION: PID (ppm) = 0.0 Helium (%)= <1%

Time (min)	Shroud Conentration (%)	Time (min)	Shroud Conentration (%)	Time (min)	Shroud Conentration (%)	Time (min)	Shroud Conentration ( )	Time (min)	Shroud Conentration ( )
0.0	22.3	6		17		28		39	
0.5	19.4	7		18		29		40	
1.0	17.7	8		19		30		41	
1.5	16.7	9		20		31		42	
2.0	15.5	10		21		32		43	
2.5	14.6	11		22		33		44	
3.0	13.6	12		23		34		45	
3.5	12.8	13		24		35		46	
4.0	12.1	14		25		36		47	
4.5	11.4	15		26		37		48	
5.0	10.3	16		27		38		49	

ADDITIONAL SITE NOTES:

Canister ID: 021972

Regulator ID: 006319

SIGNATURE: _____

Stantec Consulting

SOIL VAPOR SAMPLING FIELD DATA SHEET

PROJECT NAME: **Oregon Plastic Tubing** CLIENT: **Prinsco** DATE: 4/21/23

LOCATION: 6401 and 6402 South Miller Road, Hubbard, Oregon SAMPLE I.D.: SSV-2R

SAMPLER NAME: Robert McAlister PROJECT #: 227704604

SHUT-IN TEST: (1 inH2O = 0.073 inHg)

APPLY VACUUM TO SAMPLE TRAIN BY DRAWING 60 ML WITH SYRINGE	PASS/FAIL
	PASS

PURGE: Purge method = [X] Syringe [ ] Pump

FLOW RATE: _____

	~~PRESSURE (inHg)~~	TIME OF READING
INITIAL READING	START	1050
FINAL READING	END	1055

VAPOR SAMPLE:

FLOW RATE: _____

	PRESSURE (inHg)	TIME OF READING
INITIAL READING	-30	1100
FINAL READING	-5	1105

SITE CONDITIONS (i.e. WEATHER, TRAFFIC):

Air Temp (°C or (°F)) = 47

Relative Humidity (%) = 81

Barometric Pressure (in.Hg) = 30.04

Time vapor point installed = 910

(Wait at least 30 mins after install before sample collection)

8" CONCRETE SLAB

PURGED 400 mL

VAPOR SAMPLING FIELD MEASUREMENTS

START TIME: 1100 END TIME: 1105

TRACER USED: Helium TRACER METER USED: Dielectric Helium Detector

TEDLAR BAG END PURGE TRACER CONCENTRATION: PID (ppm) = Helium (%)= <1%

Time (min)	Shroud Conentration (%)	Time (min)	Shroud Conentration (%)	Time (min)	Shroud Conentration (%)	Time (min)	Shroud Conentration ( )	Time (min)	Shroud Conentration ( )
0.0	12.5	6		17		28		39	
0.5	16.2	7		18		29		40	
1.0	14.2	8		19		30		41	
1.5	13.6	9		20		31		42	
2.0	11.8	10		21		32		43	
2.5	11.5	11		22		33		44	
3.0	11.0	12		23		34		45	
3.5	10.3	13		24		35		46	
4.0	9.5	14		25		36		47	
4.5	8.2	15		26		37		48	
5.0	6.9	16		27		38		49	

ADDITIONAL SITE NOTES:

Canister ID: 005315

Regulator ID: 010993

SIGNATURE: _____ Page ___ of ___

APPENDIX E

LABORATORY ANALYTICAL REPORTS

ANALYTICAL REPORT

May 10, 2023

Stantec Consulting - Portland, OR

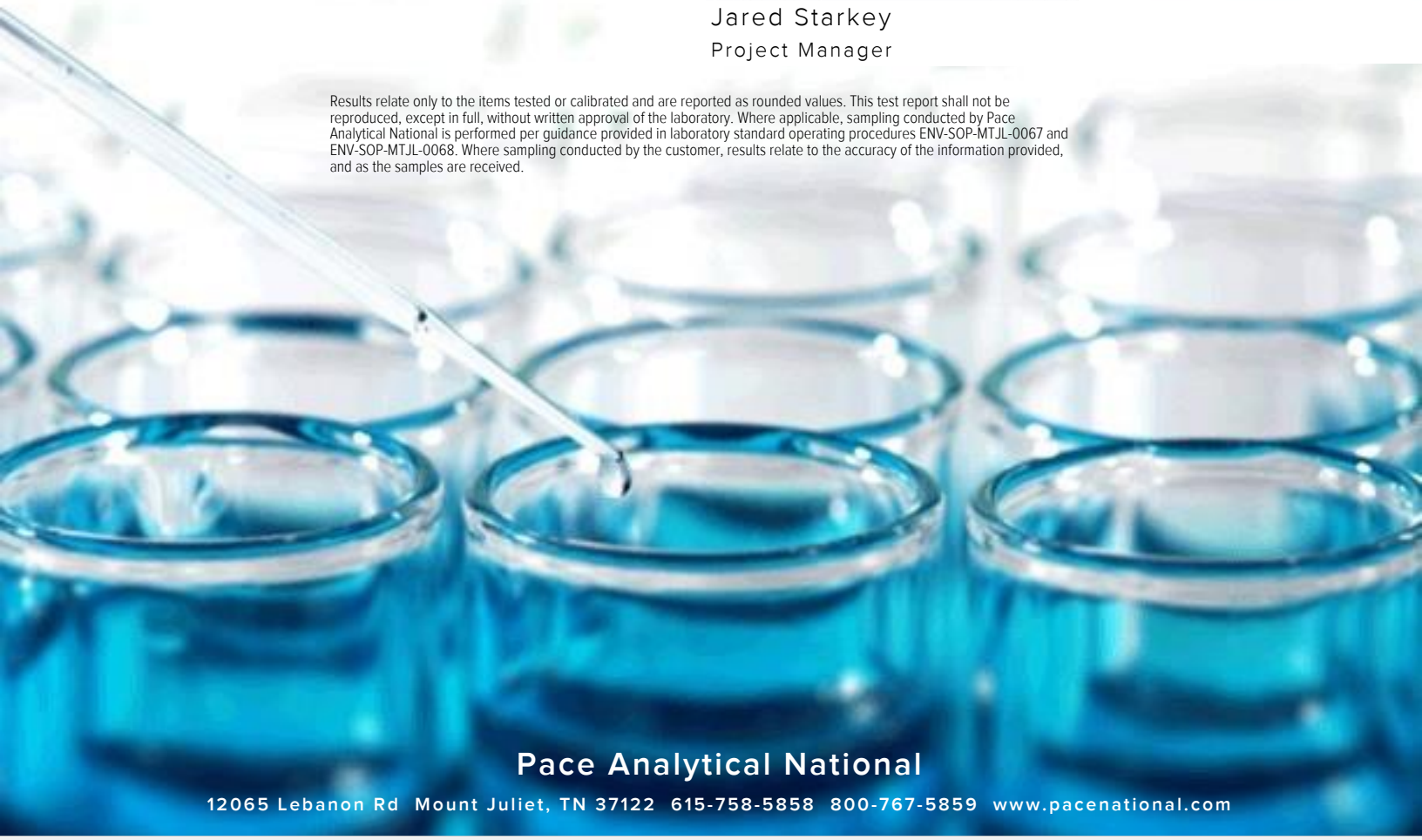
Sample Delivery Group:	L1608905
Samples Received:	04/25/2023
Project Number:	227704604
Description:	Hubbard

Report To: Robert McAlister
601 SW 2nd Ave., Suite 1400
Portland, OR 97204

Entire Report Reviewed By:

Jared Starkey
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.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

SAMPLE SUMMARY

SSV-1R L1608905-01 Air

Collected by: Robert McAlister
Collected date/time: 04/21/23 09:45
Received date/time: 04/25/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2053988	1	05/04/23 14:34	05/04/23 14:34	SDS	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG2051958	1	05/01/23 15:32	05/01/23 15:32	CCM	Mt. Juliet, TN

SSV-2R L1608905-02 Air

Collected by: Robert McAlister
Collected date/time: 04/21/23 11:05
Received date/time: 04/25/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2053988	1	05/04/23 15:12	05/04/23 15:12	SDS	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG2051958	1	05/01/23 15:36	05/01/23 15:36	CCM	Mt. Juliet, TN

CASE NARRATIVE

Unless qualified or notated within the narrative below, all sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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.

Jared Starkey
Project Manager

Volatile Organic Compounds (MS) by Method TO-15

The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).

Batch	Lab Sample ID	Analytes
WG2053988	L1608905-02	Acetone

DETECTION SUMMARY

Volatile Organic Compounds (MS) by Method TO-15

Client ID	Lab Sample ID	Analyte	CAS #	Mol. Wt.	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch
					ppbv	ug/m3	ppbv	ug/m3			
SSV-1R	L1608905-01	Acetone	67-64-1	58.10	1.25	2.97	41.7	99.1		1	WG2053988
SSV-1R	L1608905-01	Benzene	71-43-2	78.10	0.200	0.639	0.457	1.46		1	WG2053988
SSV-1R	L1608905-01	Carbon disulfide	75-15-0	76.10	0.200	0.622	0.432	1.34		1	WG2053988
SSV-1R	L1608905-01	Chloromethane	74-87-3	50.50	0.200	0.413	0.614	1.27		1	WG2053988
SSV-1R	L1608905-01	Ethanol	64-17-5	46.10	2.50	4.71	35.6	67.1		1	WG2053988
SSV-1R	L1608905-01	Ethylbenzene	100-41-4	106	0.200	0.867	0.509	2.21		1	WG2053988
SSV-1R	L1608905-01	Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.227	1.28		1	WG2053988
SSV-1R	L1608905-01	Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.520	2.57		1	WG2053988
SSV-1R	L1608905-01	Heptane	142-82-5	100	0.200	0.818	4.04	16.5		1	WG2053988
SSV-1R	L1608905-01	Methylene Chloride	75-09-2	84.90	0.200	0.694	1.22	4.24		1	WG2053988
SSV-1R	L1608905-01	2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	2.87	8.46		1	WG2053988
SSV-1R	L1608905-01	2-Propanol	67-63-0	60.10	1.25	3.07	47.5	117		1	WG2053988
SSV-1R	L1608905-01	Styrene	100-42-5	104	0.200	0.851	0.586	2.49		1	WG2053988
SSV-1R	L1608905-01	Tetrachloroethylene	127-18-4	166	0.200	1.36	0.602	4.09		1	WG2053988
SSV-1R	L1608905-01	Toluene	108-88-3	92.10	0.500	1.88	2.44	9.19		1	WG2053988
SSV-1R	L1608905-01	1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.655	3.21		1	WG2053988
SSV-1R	L1608905-01	1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.213	1.05		1	WG2053988
SSV-1R	L1608905-01	Xylenes, Total	1330-20-7	106.16	0.600	2.61	1.98	8.60		1	WG2053988
SSV-1R	L1608905-01	m&p-Xylene	1330-20-7	106	0.400	1.73	1.37	5.94		1	WG2053988
SSV-1R	L1608905-01	o-Xylene	95-47-6	106	0.200	0.867	0.607	2.63		1	WG2053988
SSV-2R	L1608905-02	Acetone	67-64-1	58.10	1.25	2.97	296	703	E	1	WG2053988
SSV-2R	L1608905-02	Benzene	71-43-2	78.10	0.200	0.639	7.01	22.4		1	WG2053988
SSV-2R	L1608905-02	1,3-Butadiene	106-99-0	54.10	2.00	4.43	6.39	14.1		1	WG2053988
SSV-2R	L1608905-02	Chloromethane	74-87-3	50.50	0.200	0.413	2.17	4.48		1	WG2053988
SSV-2R	L1608905-02	Ethanol	64-17-5	46.10	2.50	4.71	41.7	78.6		1	WG2053988
SSV-2R	L1608905-02	Ethylbenzene	100-41-4	106	0.200	0.867	1.32	5.72		1	WG2053988
SSV-2R	L1608905-02	4-Ethyltoluene	622-96-8	120	0.200	0.982	0.868	4.26		1	WG2053988
SSV-2R	L1608905-02	Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.503	2.49		1	WG2053988
SSV-2R	L1608905-02	Heptane	142-82-5	100	0.200	0.818	1.89	7.73		1	WG2053988
SSV-2R	L1608905-02	n-Hexane	110-54-3	86.20	0.630	2.22	2.30	8.11		1	WG2053988
SSV-2R	L1608905-02	Methylene Chloride	75-09-2	84.90	0.200	0.694	0.751	2.61		1	WG2053988
SSV-2R	L1608905-02	Methyl Butyl Ketone	591-78-6	100	1.25	5.11	2.90	11.9		1	WG2053988
SSV-2R	L1608905-02	2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	36.1	106		1	WG2053988
SSV-2R	L1608905-02	4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	2.71	11.1		1	WG2053988
SSV-2R	L1608905-02	2-Propanol	67-63-0	60.10	1.25	3.07	16.4	40.3		1	WG2053988
SSV-2R	L1608905-02	Propene	115-07-1	42.10	1.25	2.15	44.7	77.0		1	WG2053988
SSV-2R	L1608905-02	Styrene	100-42-5	104	0.200	0.851	1.06	4.51		1	WG2053988
SSV-2R	L1608905-02	Tetrachloroethylene	127-18-4	166	0.200	1.36	31.3	213		1	WG2053988
SSV-2R	L1608905-02	Toluene	108-88-3	92.10	0.500	1.88	8.01	30.2		1	WG2053988
SSV-2R	L1608905-02	1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.836	4.10		1	WG2053988
SSV-2R	L1608905-02	1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.270	1.33		1	WG2053988
SSV-2R	L1608905-02	Xylenes, Total	1330-20-7	106.16	0.600	2.61	4.39	19.1		1	WG2053988
SSV-2R	L1608905-02	m&p-Xylene	1330-20-7	106	0.400	1.73	3.06	13.3		1	WG2053988
SSV-2R	L1608905-02	o-Xylene	95-47-6	106	0.200	0.867	1.33	5.77		1	WG2053988

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	41.7	99.1		1	WG2053988
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG2053988
Benzene	71-43-2	78.10	0.200	0.639	0.457	1.46		1	WG2053988
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG2053988
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG2053988
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG2053988
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG2053988
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG2053988
Carbon disulfide	75-15-0	76.10	0.200	0.622	0.432	1.34		1	WG2053988
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG2053988
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG2053988
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG2053988
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG2053988
Chloromethane	74-87-3	50.50	0.200	0.413	0.614	1.27		1	WG2053988
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG2053988
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG2053988
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG2053988
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG2053988
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG2053988
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG2053988
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG2053988
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG2053988
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG2053988
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG2053988
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG2053988
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG2053988
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG2053988
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG2053988
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG2053988
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG2053988
Ethanol	64-17-5	46.10	2.50	4.71	35.6	67.1		1	WG2053988
Ethylbenzene	100-41-4	106	0.200	0.867	0.509	2.21		1	WG2053988
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG2053988
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.227	1.28		1	WG2053988
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.520	2.57		1	WG2053988
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG2053988
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG2053988
Heptane	142-82-5	100	0.200	0.818	4.04	16.5		1	WG2053988
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG2053988
n-Hexane	110-54-3	86.20	0.630	2.22	ND	ND		1	WG2053988
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG2053988
Methylene Chloride	75-09-2	84.90	0.200	0.694	1.22	4.24		1	WG2053988
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG2053988
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	2.87	8.46		1	WG2053988
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG2053988
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG2053988
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG2053988
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG2053988
2-Propanol	67-63-0	60.10	1.25	3.07	47.5	117		1	WG2053988
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	WG2053988
Styrene	100-42-5	104	0.200	0.851	0.586	2.49		1	WG2053988
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG2053988
Tetrachloroethylene	127-18-4	166	0.200	1.36	0.602	4.09		1	WG2053988
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG2053988
Toluene	108-88-3	92.10	0.500	1.88	2.44	9.19		1	WG2053988
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG2053988

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	WG2053988
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG2053988
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG2053988
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.655	3.21		1	WG2053988
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.213	1.05		1	WG2053988
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG2053988
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG2053988
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG2053988
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG2053988
Xylenes, Total	1330-20-7	106.16	0.600	2.61	1.98	8.60		1	WG2053988
m&p-Xylene	1330-20-7	106	0.400	1.73	1.37	5.94		1	WG2053988
o-Xylene	95-47-6	106	0.200	0.867	0.607	2.63		1	WG2053988
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*100*				WG2053988

Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	WG2051958

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	296	703	E	1	WG2053988
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG2053988
Benzene	71-43-2	78.10	0.200	0.639	7.01	22.4		1	WG2053988
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG2053988
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG2053988
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG2053988
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG2053988
1,3-Butadiene	106-99-0	54.10	2.00	4.43	6.39	14.1		1	WG2053988
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG2053988
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG2053988
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG2053988
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG2053988
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG2053988
Chloromethane	74-87-3	50.50	0.200	0.413	2.17	4.48		1	WG2053988
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG2053988
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG2053988
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG2053988
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG2053988
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG2053988
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG2053988
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG2053988
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG2053988
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG2053988
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG2053988
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG2053988
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG2053988
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG2053988
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG2053988
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG2053988
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG2053988
Ethanol	64-17-5	46.10	2.50	4.71	41.7	78.6		1	WG2053988
Ethylbenzene	100-41-4	106	0.200	0.867	1.32	5.72		1	WG2053988
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.868	4.26		1	WG2053988
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	ND	ND		1	WG2053988
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.503	2.49		1	WG2053988
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG2053988
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG2053988
Heptane	142-82-5	100	0.200	0.818	1.89	7.73		1	WG2053988
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG2053988
n-Hexane	110-54-3	86.20	0.630	2.22	2.30	8.11		1	WG2053988
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG2053988
Methylene Chloride	75-09-2	84.90	0.200	0.694	0.751	2.61		1	WG2053988
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	2.90	11.9		1	WG2053988
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	36.1	106		1	WG2053988
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	2.71	11.1		1	WG2053988
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG2053988
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG2053988
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG2053988
2-Propanol	67-63-0	60.10	1.25	3.07	16.4	40.3		1	WG2053988
Propene	115-07-1	42.10	1.25	2.15	44.7	77.0		1	WG2053988
Styrene	100-42-5	104	0.200	0.851	1.06	4.51		1	WG2053988
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG2053988
Tetrachloroethylene	127-18-4	166	0.200	1.36	31.3	213		1	WG2053988
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG2053988
Toluene	108-88-3	92.10	0.500	1.88	8.01	30.2		1	WG2053988
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG2053988

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	WG2053988
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG2053988
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG2053988
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.836	4.10		1	WG2053988
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.270	1.33		1	WG2053988
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG2053988
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG2053988
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG2053988
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG2053988
Xylenes, Total	1330-20-7	106.16	0.600	2.61	4.39	19.1		1	WG2053988
m&p-Xylene	1330-20-7	106	0.400	1.73	3.06	13.3		1	WG2053988
o-Xylene	95-47-6	106	0.200	0.867	1.33	5.77		1	WG2053988
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*102*				WG2053988

Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	WG2051958

Method Blank (MB)

(MB) R3921401-3 05/04/23 09:58

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
Ethanol	0.359	J	0.265	2.50
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

Method Blank (MB)

(MB) R3921401-3 05/04/23 09:58

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Isopropylbenzene	U		0.0777	0.200
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	0.147	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
Xylenes, Total	U		0.135	0.600
m&p-Xylene	U		0.135	0.400
o-Xylene	U		0.0828	0.200
(S) 1,4-Bromofluorobenzene	*96.0*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3921401-1 05/04/23 08:44 • (LCSD) R3921401-2 05/04/23 09:22

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	3.75	4.10	4.03	109	107	70.0-130			1.72	25
Allyl Chloride	3.75	4.29	4.36	114	116	70.0-130			1.62	25
Benzene	3.75	4.20	4.17	112	111	70.0-130			0.717	25
Benzyl Chloride	3.75	4.16	3.98	111	106	70.0-152			4.42	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3921401-1 05/04/23 08:44 • (LCSD) R3921401-2 05/04/23 09:22

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromodichloromethane	3.75	4.29	4.18	114	111	70.0-130			2.60	25
Bromoform	3.75	4.06	3.96	108	106	70.0-130			2.49	25
Bromomethane	3.75	4.17	3.83	111	102	70.0-130			8.50	25
1,3-Butadiene	3.75	4.25	4.40	113	117	70.0-130			3.47	25
Carbon disulfide	3.75	4.29	4.23	114	113	70.0-130			1.41	25
Carbon tetrachloride	3.75	4.28	4.22	114	113	70.0-130			1.41	25
Chlorobenzene	3.75	4.20	4.05	112	108	70.0-130			3.64	25
Chloroethane	3.75	4.22	3.88	113	103	70.0-130			8.40	25
Chloroform	3.75	4.30	4.21	115	112	70.0-130			2.12	25
Chloromethane	3.75	4.67	4.64	125	124	70.0-130			0.644	25
2-Chlorotoluene	3.75	4.10	4.00	109	107	70.0-130			2.47	25
Cyclohexane	3.75	4.06	4.06	108	108	70.0-130			0.000	25
Dibromochloromethane	3.75	4.23	4.11	113	110	70.0-130			2.88	25
1,2-Dibromoethane	3.75	4.19	4.06	112	108	70.0-130			3.15	25
1,2-Dichlorobenzene	3.75	4.14	3.96	110	106	70.0-130			4.44	25
1,3-Dichlorobenzene	3.75	4.28	4.07	114	109	70.0-130			5.03	25
1,4-Dichlorobenzene	3.75	4.38	4.19	117	112	70.0-130			4.43	25
1,2-Dichloroethane	3.75	4.37	4.37	117	117	70.0-130			0.000	25
1,1-Dichloroethane	3.75	4.34	4.29	116	114	70.0-130			1.16	25
1,1-Dichloroethene	3.75	4.23	4.28	113	114	70.0-130			1.18	25
cis-1,2-Dichloroethene	3.75	3.82	3.78	102	101	70.0-130			1.05	25
trans-1,2-Dichloroethene	3.75	4.37	4.37	117	117	70.0-130			0.000	25
1,2-Dichloropropane	3.75	4.44	4.34	118	116	70.0-130			2.28	25
cis-1,3-Dichloropropene	3.75	4.11	4.07	110	109	70.0-130			0.978	25
trans-1,3-Dichloropropene	3.75	4.24	4.08	113	109	70.0-130			3.85	25
1,4-Dioxane	3.75	4.13	4.01	110	107	70.0-140			2.95	25
Ethanol	3.75	4.05	3.94	108	105	55.0-148			2.75	25
Ethylbenzene	3.75	4.30	4.16	115	111	70.0-130			3.31	25
4-Ethyltoluene	3.75	4.28	4.08	114	109	70.0-130			4.78	25
Trichlorofluoromethane	3.75	4.16	4.07	111	109	70.0-130			2.19	25
Dichlorodifluoromethane	3.75	4.51	4.48	120	119	64.0-139			0.667	25
1,1,2-Trichlorotrifluoroethane	3.75	4.16	4.11	111	110	70.0-130			1.21	25
1,2-Dichlorotetrafluoroethane	3.75	4.53	4.46	121	119	70.0-130			1.56	25
Heptane	3.75	4.48	4.40	119	117	70.0-130			1.80	25
Hexachloro-1,3-butadiene	3.75	4.34	4.09	116	109	70.0-151			5.93	25
n-Hexane	3.75	4.27	4.20	114	112	70.0-130			1.65	25
Isopropylbenzene	3.75	4.19	4.07	112	109	70.0-130			2.91	25
Methylene Chloride	3.75	4.37	4.34	117	116	70.0-130			0.689	25
Methyl Butyl Ketone	3.75	4.57	4.36	122	116	70.0-149			4.70	25
Methyl Ethyl Ketone	3.75	4.05	4.05	108	108	70.0-130			0.000	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3921401-1 05/04/23 08:44 • (LCSD) R3921401-2 05/04/23 09:22

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Methyl-2-pentanone (MIBK)	3.75	4.53	4.37	121	117	70.0-139			3.60	25
Methyl Methacrylate	3.75	4.07	3.90	109	104	70.0-130			4.27	25
MTBE	3.75	4.09	4.04	109	108	70.0-130			1.23	25
Naphthalene	3.75	4.41	4.18	118	111	70.0-159			5.36	25
2-Propanol	3.75	4.07	4.02	109	107	70.0-139			1.24	25
Propene	3.75	4.54	4.68	121	125	64.0-144			3.04	25
Styrene	3.75	4.35	4.29	116	114	70.0-130			1.39	25
1,1,2,2-Tetrachloroethane	3.75	4.17	4.02	111	107	70.0-130			3.66	25
Tetrachloroethylene	3.75	4.05	3.93	108	105	70.0-130			3.01	25
Tetrahydrofuran	3.75	4.31	4.22	115	113	70.0-137			2.11	25
Toluene	3.75	4.15	4.14	111	110	70.0-130			0.241	25
1,2,4-Trichlorobenzene	3.75	4.17	3.98	111	106	70.0-160			4.66	25
1,1,1-Trichloroethane	3.75	4.20	4.17	112	111	70.0-130			0.717	25
1,1,2-Trichloroethane	3.75	4.24	4.10	113	109	70.0-130			3.36	25
Trichloroethylene	3.75	4.18	4.11	111	110	70.0-130			1.69	25
1,2,4-Trimethylbenzene	3.75	4.24	4.08	113	109	70.0-130			3.85	25
1,3,5-Trimethylbenzene	3.75	4.24	4.04	113	108	70.0-130			4.83	25
2,2,4-Trimethylpentane	3.75	4.28	4.24	114	113	70.0-130			0.939	25
Vinyl chloride	3.75	4.47	4.44	119	118	70.0-130			0.673	25
Vinyl Bromide	3.75	4.20	3.88	112	103	70.0-130			7.92	25
Vinyl acetate	3.75	4.19	4.16	112	111	70.0-130			0.719	25
Xylenes, Total	11.3	12.7	12.6	112	112	70.0-130			0.791	25
m&p-Xylene	7.50	8.61	8.52	115	114	70.0-130			1.05	25
o-Xylene	3.75	4.12	4.09	110	109	70.0-130			0.731	25
(S) 1,4-Bromofluorobenzene				*103*	*101*	*60.0-140*				

Method Blank (MB)

(MB) R3919618-3 05/01/23 15:28

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) R3919618-1 05/01/23 15:21 • (LCSD) R3919618-2 05/01/23 15:25

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	%	%	%	%	%	%			%	%
Helium	2.50	2.33	2.23	93.2	89.2	70.0-130			4.39	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
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.

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:
Stantec Consulting - Portland, OR

601 SW 2nd Ave., Suite 1400
Portland, OR 97204

Billing Information:
Accounts Payable
601 SW 2nd Ave., Suite 1400
Portland, OR 97204

Report To:
Robert McAlister

Email To:
robert.mcalister@stantec.com

Project Description: ~~Warren Distribution~~ RM HUBBARD

City/State Collected: HUBBARD, OR

Please Circle: (PT) MT CT ET

Phone: 714-686-4435 ~~503-297-1631~~ RM

Client Project # 227704604

Lab Project # SECORTOR-HUBBARD

Collected by (print): ROBERT MCALISTER

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: STANDARD TAT

Sample ID	Can #	Flow Cont. #	Collection Date	Collection Time	Canister Pressure/Vacuum Initial	Canister Pressure/Vacuum Final	TO-15 Summa	~~HELIUM~~ RM	HELIUM	Rem./Contaminant	Sample # (lab only)
SSV-1R	021972	006319	4/21/23	940 - 945	-29	-5	X		X		-01
SSV-2R	005315	010993	4/21/23	1100 - 1105	-30	-5	X		X		-02

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		

Remarks:

Relinquished by : (Signature)	Date:	Time:
	4/24/23	1300
Relinquished by : (Signature)	Date:	Time:
Relinquished by : (Signature)	Date:	Time:

Samples returned via: __ UPS __ FedEx __ Courier _____

Received by: (Signature): FEDEX — Date: 4/24/23 Time: 1300

Received by: (Signature)

Received for lab by: (Signature) (18) — Date: 4/25/23 Time: 0900

Tracking #

Hold #

Condition: OK (lab use only)

COC Seal Intact: ___ Y ___ N ___ NA

NCF:

Chain of Custody Page 1 of 1

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 # L608905
H070

Acctnum: SECORTOR
Template: T227597
Prelogin: P990979
PM: 546 - Jared Starkey
PB: SW 4/10/23
Shipped Via:

ANALYTICAL REPORT

May 02, 2023

Revised Report

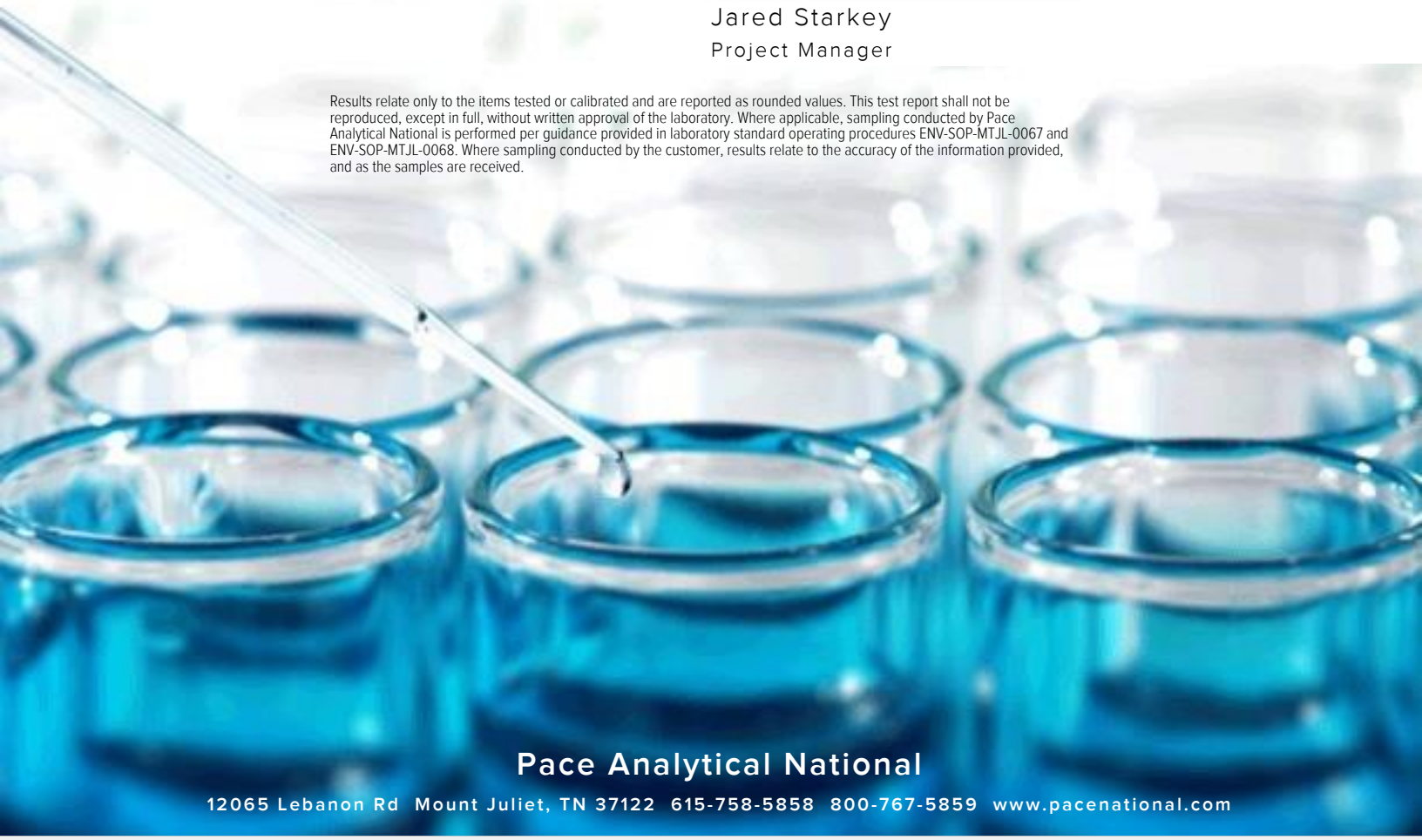
Stantec Consulting - Portland, OR

Sample Delivery Group:	L1609000
Samples Received:	04/25/2023
Project Number:	227704604
Description:	Hubbard Additional Assessment

Report To: Robert McAlister
601 SW 2nd Ave., Suite 1400
Portland, OR 97204

Entire Report Reviewed By:

Jared Starkey
Project Manager



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

GP-8-14'-15' L1609000-01 Solid

Collected by: Robert McAlister | Collected date/time: 04/20/23 12:50 | Received date/time: 04/25/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2049982	1	04/27/23 17:36	04/27/23 17:51	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2051062	25	04/20/23 12:50	04/30/23 06:36	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2050685	1	04/20/23 12:50	04/28/23 17:30	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2051354	1	05/01/23 18:09	05/01/23 23:30	JAS	Mt. Juliet, TN

GP-9-14'-15' L1609000-02 Solid

Collected by: Robert McAlister | Collected date/time: 04/20/23 11:50 | Received date/time: 04/25/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2049982	1	04/27/23 17:36	04/27/23 17:51	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2051062	25	04/20/23 11:50	04/30/23 07:00	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2050685	1	04/20/23 11:50	04/28/23 17:49	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2051354	1	05/01/23 18:09	05/02/23 00:41	JAS	Mt. Juliet, TN

GP-10-14'-15' L1609000-03 Solid

Collected by: Robert McAlister | Collected date/time: 04/20/23 11:15 | Received date/time: 04/25/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2049982	1	04/27/23 17:36	04/27/23 17:51	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2051261	25	04/20/23 11:15	04/29/23 19:42	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2050685	1	04/20/23 11:15	04/28/23 18:08	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2051354	1	05/01/23 18:09	05/01/23 23:43	JAS	Mt. Juliet, TN

GP-11-14'-15' L1609000-04 Solid

Collected by: Robert McAlister | Collected date/time: 04/20/23 09:50 | Received date/time: 04/25/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2049982	1	04/27/23 17:36	04/27/23 17:51	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2051261	25	04/20/23 09:50	04/29/23 20:05	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2050685	1	04/20/23 09:50	04/28/23 18:27	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2052316	1	05/01/23 18:09	05/01/23 22:51	JAS	Mt. Juliet, TN

GP-12-14'-15' L1609000-05 Solid

Collected by: Robert McAlister | Collected date/time: 04/20/23 09:10 | Received date/time: 04/25/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2049982	1	04/27/23 17:36	04/27/23 17:51	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2051261	25	04/20/23 09:10	04/29/23 20:28	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2050685	1	04/20/23 09:10	04/28/23 18:46	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2051354	1	05/01/23 18:09	05/01/23 23:56	JAS	Mt. Juliet, TN

MW-4-14'-15' L1609000-06 Solid

Collected by: Robert McAlister | Collected date/time: 04/20/23 13:30 | Received date/time: 04/25/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2049982	1	04/27/23 17:36	04/27/23 17:51	CMK	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2051261	25	04/20/23 13:30	04/29/23 20:50	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2050685	1	04/20/23 13:30	04/28/23 19:05	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2051354	1	05/01/23 18:09	05/02/23 00:09	JAS	Mt. Juliet, TN

Unless qualified or notated within the narrative below, all sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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.

Jared Starkey
Project Manager

Report Revision History

Level II Report - Version 1: 05/02/23 10:53

Project Comments

Description correction

Volatile Organic Compounds (GC) by Method NWTPHGX

The same analyte is found in the associated blank.

Batch	Analyte	Lab Sample ID
WG2051062	Gasoline Range Organics-NWTPH	L1609000-01

Volatile Organic Compounds (GC/MS) by Method 8260D

The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.

Batch	Lab Sample ID	Analytes
WG2050685	L1609000-01	1,2,3-Trichlorobenzene, 1,2-Dichloroethane and Acetone
WG2050685	L1609000-02	1,2,3-Trichlorobenzene, 1,2-Dichloroethane and Acetone
WG2050685	L1609000-03	1,2,3-Trichlorobenzene, 1,2-Dichloroethane and Acetone
WG2050685	L1609000-04	1,2,3-Trichlorobenzene, 1,2-Dichloroethane and Acetone
WG2050685	L1609000-05	1,2,3-Trichlorobenzene, 1,2-Dichloroethane and Acetone
WG2050685	L1609000-06	1,2,3-Trichlorobenzene, 1,2-Dichloroethane and Acetone

The sample matrix interfered with the ability to make any accurate determination; spike value is high.

Batch	Lab Sample ID	Analytes
WG2050685	(MSD) R3918851-4	Methylene Chloride

DETECTION SUMMARY

Volatile Organic Compounds (GC) by Method NWTPHGX

Client ID	Lab Sample ID	Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
GP-8-14'-15'	L1609000-01	Gasoline Range Organics-NWTPH	1.68	B J	1.50	4.43	25	04/30/2023 06:36	WG2051062

Volatile Organic Compounds (GC/MS) by Method 8260D

Client ID	Lab Sample ID	Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
GP-8-14'-15'	L1609000-01	Toluene	0.0114		0.00230	0.00886	1	04/28/2023 17:30	WG2050685
GP-8-14'-15'	L1609000-01	Xylenes, Total	0.00402	J	0.00156	0.0115	1	04/28/2023 17:30	WG2050685
GP-9-14'-15'	L1609000-02	Toluene	0.00608	J	0.00192	0.00738	1	04/28/2023 17:49	WG2050685
GP-9-14'-15'	L1609000-02	Xylenes, Total	0.00242	J	0.00130	0.00960	1	04/28/2023 17:49	WG2050685
GP-10-14'-15'	L1609000-03	Toluene	0.0133		0.00208	0.00800	1	04/28/2023 18:08	WG2050685
GP-10-14'-15'	L1609000-03	Xylenes, Total	0.00375	J	0.00141	0.0104	1	04/28/2023 18:08	WG2050685
GP-11-14'-15'	L1609000-04	Benzene	0.00106	J	0.000725	0.00155	1	04/28/2023 18:27	WG2050685
GP-11-14'-15'	L1609000-04	Ethylbenzene	0.00537		0.00114	0.00388	1	04/28/2023 18:27	WG2050685
GP-11-14'-15'	L1609000-04	Isopropylbenzene	0.00172	J	0.000659	0.00388	1	04/28/2023 18:27	WG2050685
GP-11-14'-15'	L1609000-04	Toluene	0.0462		0.00202	0.00776	1	04/28/2023 18:27	WG2050685
GP-11-14'-15'	L1609000-04	Xylenes, Total	0.0261		0.00137	0.0101	1	04/28/2023 18:27	WG2050685
GP-12-14'-15'	L1609000-05	Ethylbenzene	0.00360	J	0.00115	0.00391	1	04/28/2023 18:46	WG2050685
GP-12-14'-15'	L1609000-05	Toluene	0.0111		0.00203	0.00782	1	04/28/2023 18:46	WG2050685
GP-12-14'-15'	L1609000-05	Xylenes, Total	0.00330	J	0.00138	0.0102	1	04/28/2023 18:46	WG2050685
MW-4-14'-15'	L1609000-06	Toluene	0.00938		0.00222	0.00854	1	04/28/2023 19:05	WG2050685
MW-4-14'-15'	L1609000-06	Xylenes, Total	0.00273	J	0.00150	0.0111	1	04/28/2023 19:05	WG2050685

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Client ID	Lab Sample ID	Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
GP-9-14'-15'	L1609000-02	Diesel Range Organics (DRO)	1.67	J	1.63	4.90	1	05/02/2023 00:41	WG2051354
MW-4-14'-15'	L1609000-06	Diesel Range Organics (DRO)	2.77	J	1.75	5.27	1	05/02/2023 00:09	WG2051354

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	73.2		1	04/27/2023 17:51	WG2049982

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	1.68	B J	1.50	4.43	25	04/30/2023 06:36	WG2051062
(S) a,a,a-Trifluorotoluene(FID)	*97.2*			*77.0-120*		*04/30/2023 06:36*	WG2051062

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U	C3	0.0647	0.0886	1	04/28/2023 17:30	WG2050685
Acrylonitrile	U		0.00639	0.0221	1	04/28/2023 17:30	WG2050685
Benzene	U		0.000827	0.00177	1	04/28/2023 17:30	WG2050685
Bromobenzene	U		0.00159	0.0221	1	04/28/2023 17:30	WG2050685
Bromodichloromethane	U		0.00128	0.00443	1	04/28/2023 17:30	WG2050685
Bromoform	U		0.00207	0.0443	1	04/28/2023 17:30	WG2050685
Bromomethane	U		0.00349	0.0221	1	04/28/2023 17:30	WG2050685
n-Butylbenzene	U		0.00930	0.0221	1	04/28/2023 17:30	WG2050685
sec-Butylbenzene	U		0.00510	0.0221	1	04/28/2023 17:30	WG2050685
tert-Butylbenzene	U		0.00345	0.00886	1	04/28/2023 17:30	WG2050685
Carbon tetrachloride	U		0.00159	0.00886	1	04/28/2023 17:30	WG2050685
Chlorobenzene	U		0.000372	0.00443	1	04/28/2023 17:30	WG2050685
Chlorodibromomethane	U		0.00108	0.00443	1	04/28/2023 17:30	WG2050685
Chloroethane	U		0.00301	0.00886	1	04/28/2023 17:30	WG2050685
Chloroform	U		0.00182	0.00443	1	04/28/2023 17:30	WG2050685
Chloromethane	U		0.00771	0.0221	1	04/28/2023 17:30	WG2050685
2-Chlorotoluene	U		0.00153	0.00443	1	04/28/2023 17:30	WG2050685
4-Chlorotoluene	U		0.000797	0.00886	1	04/28/2023 17:30	WG2050685
1,2-Dibromo-3-Chloropropane	U		0.00691	0.0443	1	04/28/2023 17:30	WG2050685
1,2-Dibromoethane	U		0.00115	0.00443	1	04/28/2023 17:30	WG2050685
Dibromomethane	U		0.00133	0.00886	1	04/28/2023 17:30	WG2050685
1,2-Dichlorobenzene	U		0.000753	0.00886	1	04/28/2023 17:30	WG2050685
1,3-Dichlorobenzene	U		0.00106	0.00886	1	04/28/2023 17:30	WG2050685
1,4-Dichlorobenzene	U		0.00124	0.00886	1	04/28/2023 17:30	WG2050685
Dichlorodifluoromethane	U		0.00285	0.00443	1	04/28/2023 17:30	WG2050685
1,1-Dichloroethane	U		0.000870	0.00443	1	04/28/2023 17:30	WG2050685
1,2-Dichloroethane	U	C3	0.00115	0.00443	1	04/28/2023 17:30	WG2050685
1,1-Dichloroethene	U		0.00107	0.00443	1	04/28/2023 17:30	WG2050685
cis-1,2-Dichloroethene	U		0.00130	0.00443	1	04/28/2023 17:30	WG2050685
trans-1,2-Dichloroethene	U		0.00184	0.00886	1	04/28/2023 17:30	WG2050685
1,2-Dichloropropane	U		0.00252	0.00886	1	04/28/2023 17:30	WG2050685
1,1-Dichloropropene	U		0.00143	0.00443	1	04/28/2023 17:30	WG2050685
1,3-Dichloropropane	U		0.000887	0.00886	1	04/28/2023 17:30	WG2050685
cis-1,3-Dichloropropene	U		0.00134	0.00443	1	04/28/2023 17:30	WG2050685
trans-1,3-Dichloropropene	U		0.00202	0.00886	1	04/28/2023 17:30	WG2050685
2,2-Dichloropropane	U		0.00244	0.00443	1	04/28/2023 17:30	WG2050685
Di-isopropyl ether	U		0.000726	0.00177	1	04/28/2023 17:30	WG2050685
Ethylbenzene	U		0.00131	0.00443	1	04/28/2023 17:30	WG2050685
Hexachloro-1,3-butadiene	U		0.0106	0.0443	1	04/28/2023 17:30	WG2050685
Isopropylbenzene	U		0.000753	0.00443	1	04/28/2023 17:30	WG2050685
p-Isopropyltoluene	U		0.00452	0.00886	1	04/28/2023 17:30	WG2050685
2-Butanone (MEK)	U		0.112	0.177	1	04/28/2023 17:30	WG2050685
Methylene Chloride	U		0.0118	0.0443	1	04/28/2023 17:30	WG2050685
4-Methyl-2-pentanone (MIBK)	U		0.00404	0.0443	1	04/28/2023 17:30	WG2050685

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Methyl tert-butyl ether	U		0.000620	0.00177	1	04/28/2023 17:30	WG2050685
Naphthalene	U		0.00864	0.0221	1	04/28/2023 17:30	WG2050685
n-Propylbenzene	U		0.00168	0.00886	1	04/28/2023 17:30	WG2050685
Styrene	U		0.000406	0.0221	1	04/28/2023 17:30	WG2050685
1,1,1,2-Tetrachloroethane	U		0.00168	0.00443	1	04/28/2023 17:30	WG2050685
1,1,2,2-Tetrachloroethane	U		0.00123	0.00443	1	04/28/2023 17:30	WG2050685
1,1,2-Trichlorotrifluoroethane	U		0.00134	0.00443	1	04/28/2023 17:30	WG2050685
Tetrachloroethene	U		0.00159	0.00443	1	04/28/2023 17:30	WG2050685
Toluene	0.0114		0.00230	0.00886	1	04/28/2023 17:30	WG2050685
1,2,3-Trichlorobenzene	U	C3	0.0130	0.0221	1	04/28/2023 17:30	WG2050685
1,2,4-Trichlorobenzene	U		0.00779	0.0221	1	04/28/2023 17:30	WG2050685
1,1,1-Trichloroethane	U		0.00163	0.00443	1	04/28/2023 17:30	WG2050685
1,1,2-Trichloroethane	U		0.00106	0.00443	1	04/28/2023 17:30	WG2050685
Trichloroethene	U		0.00103	0.00177	1	04/28/2023 17:30	WG2050685
Trichlorofluoromethane	U		0.00146	0.00443	1	04/28/2023 17:30	WG2050685
1,2,3-Trichloropropane	U		0.00287	0.0221	1	04/28/2023 17:30	WG2050685
1,2,4-Trimethylbenzene	U		0.00280	0.00886	1	04/28/2023 17:30	WG2050685
1,2,3-Trimethylbenzene	U		0.00280	0.00886	1	04/28/2023 17:30	WG2050685
1,3,5-Trimethylbenzene	U		0.00354	0.00886	1	04/28/2023 17:30	WG2050685
Vinyl chloride	U		0.00205	0.00443	1	04/28/2023 17:30	WG2050685
Xylenes, Total	0.00402	J	0.00156	0.0115	1	04/28/2023 17:30	WG2050685
(S) Toluene-d8	*109*			*75.0-131*		*04/28/2023 17:30*	WG2050685
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*04/28/2023 17:30*	WG2050685
(S) 1,2-Dichloroethane-d4	*86.9*			*70.0-130*		*04/28/2023 17:30*	WG2050685

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U		1.82	5.46	1	05/01/2023 23:30	WG2051354
Residual Range Organics (RRO)	U		4.55	13.7	1	05/01/2023 23:30	WG2051354
(S) o-Terphenyl	*33.9*			*18.0-148*		*05/01/2023 23:30*	WG2051354

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.6		1	04/27/2023 17:51	WG2049982

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		1.25	3.69	25	04/30/2023 07:00	WG2051062
(S) a,a,a-Trifluorotoluene(FID)	*94.1*			*77.0-120*		*04/30/2023 07:00*	WG2051062

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U	C3	0.0539	0.0738	1	04/28/2023 17:49	WG2050685
Acrylonitrile	U		0.00533	0.0185	1	04/28/2023 17:49	WG2050685
Benzene	U		0.000689	0.00148	1	04/28/2023 17:49	WG2050685
Bromobenzene	U		0.00133	0.0185	1	04/28/2023 17:49	WG2050685
Bromodichloromethane	U		0.00107	0.00369	1	04/28/2023 17:49	WG2050685
Bromoform	U		0.00173	0.0369	1	04/28/2023 17:49	WG2050685
Bromomethane	U		0.00291	0.0185	1	04/28/2023 17:49	WG2050685
n-Butylbenzene	U		0.00775	0.0185	1	04/28/2023 17:49	WG2050685
sec-Butylbenzene	U		0.00425	0.0185	1	04/28/2023 17:49	WG2050685
tert-Butylbenzene	U		0.00288	0.00738	1	04/28/2023 17:49	WG2050685
Carbon tetrachloride	U		0.00133	0.00738	1	04/28/2023 17:49	WG2050685
Chlorobenzene	U		0.000310	0.00369	1	04/28/2023 17:49	WG2050685
Chlorodibromomethane	U		0.000903	0.00369	1	04/28/2023 17:49	WG2050685
Chloroethane	U		0.00251	0.00738	1	04/28/2023 17:49	WG2050685
Chloroform	U		0.00152	0.00369	1	04/28/2023 17:49	WG2050685
Chloromethane	U		0.00642	0.0185	1	04/28/2023 17:49	WG2050685
2-Chlorotoluene	U		0.00128	0.00369	1	04/28/2023 17:49	WG2050685
4-Chlorotoluene	U		0.000664	0.00738	1	04/28/2023 17:49	WG2050685
1,2-Dibromo-3-Chloropropane	U		0.00576	0.0369	1	04/28/2023 17:49	WG2050685
1,2-Dibromoethane	U		0.000957	0.00369	1	04/28/2023 17:49	WG2050685
Dibromomethane	U		0.00111	0.00738	1	04/28/2023 17:49	WG2050685
1,2-Dichlorobenzene	U		0.000627	0.00738	1	04/28/2023 17:49	WG2050685
1,3-Dichlorobenzene	U		0.000886	0.00738	1	04/28/2023 17:49	WG2050685
1,4-Dichlorobenzene	U		0.00103	0.00738	1	04/28/2023 17:49	WG2050685
Dichlorodifluoromethane	U		0.00238	0.00369	1	04/28/2023 17:49	WG2050685
1,1-Dichloroethane	U		0.000725	0.00369	1	04/28/2023 17:49	WG2050685
1,2-Dichloroethane	U	C3	0.000958	0.00369	1	04/28/2023 17:49	WG2050685
1,1-Dichloroethene	U		0.000895	0.00369	1	04/28/2023 17:49	WG2050685
cis-1,2-Dichloroethene	U		0.00108	0.00369	1	04/28/2023 17:49	WG2050685
trans-1,2-Dichloroethene	U		0.00154	0.00738	1	04/28/2023 17:49	WG2050685
1,2-Dichloropropane	U		0.00210	0.00738	1	04/28/2023 17:49	WG2050685
1,1-Dichloropropene	U		0.00119	0.00369	1	04/28/2023 17:49	WG2050685
1,3-Dichloropropane	U		0.000740	0.00738	1	04/28/2023 17:49	WG2050685
cis-1,3-Dichloropropene	U		0.00112	0.00369	1	04/28/2023 17:49	WG2050685
trans-1,3-Dichloropropene	U		0.00168	0.00738	1	04/28/2023 17:49	WG2050685
2,2-Dichloropropane	U		0.00204	0.00369	1	04/28/2023 17:49	WG2050685
Di-isopropyl ether	U		0.000605	0.00148	1	04/28/2023 17:49	WG2050685
Ethylbenzene	U		0.00109	0.00369	1	04/28/2023 17:49	WG2050685
Hexachloro-1,3-butadiene	U		0.00886	0.0369	1	04/28/2023 17:49	WG2050685
Isopropylbenzene	U		0.000627	0.00369	1	04/28/2023 17:49	WG2050685
p-Isopropyltoluene	U		0.00376	0.00738	1	04/28/2023 17:49	WG2050685
2-Butanone (MEK)	U		0.0937	0.148	1	04/28/2023 17:49	WG2050685
Methylene Chloride	U		0.00980	0.0369	1	04/28/2023 17:49	WG2050685
4-Methyl-2-pentanone (MIBK)	U		0.00337	0.0369	1	04/28/2023 17:49	WG2050685

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Methyl tert-butyl ether	U		0.000517	0.00148	1	04/28/2023 17:49	WG2050685
Naphthalene	U		0.00720	0.0185	1	04/28/2023 17:49	WG2050685
n-Propylbenzene	U		0.00140	0.00738	1	04/28/2023 17:49	WG2050685
Styrene	U		0.000338	0.0185	1	04/28/2023 17:49	WG2050685
1,1,1,2-Tetrachloroethane	U		0.00140	0.00369	1	04/28/2023 17:49	WG2050685
1,1,2,2-Tetrachloroethane	U		0.00103	0.00369	1	04/28/2023 17:49	WG2050685
1,1,2-Trichlorotrifluoroethane	U		0.00111	0.00369	1	04/28/2023 17:49	WG2050685
Tetrachloroethene	U		0.00132	0.00369	1	04/28/2023 17:49	WG2050685
Toluene	0.00608	J	0.00192	0.00738	1	04/28/2023 17:49	WG2050685
1,2,3-Trichlorobenzene	U	C3	0.0108	0.0185	1	04/28/2023 17:49	WG2050685
1,2,4-Trichlorobenzene	U		0.00650	0.0185	1	04/28/2023 17:49	WG2050685
1,1,1-Trichloroethane	U		0.00136	0.00369	1	04/28/2023 17:49	WG2050685
1,1,2-Trichloroethane	U		0.000881	0.00369	1	04/28/2023 17:49	WG2050685
Trichloroethene	U		0.000862	0.00148	1	04/28/2023 17:49	WG2050685
Trichlorofluoromethane	U		0.00122	0.00369	1	04/28/2023 17:49	WG2050685
1,2,3-Trichloropropane	U		0.00239	0.0185	1	04/28/2023 17:49	WG2050685
1,2,4-Trimethylbenzene	U		0.00233	0.00738	1	04/28/2023 17:49	WG2050685
1,2,3-Trimethylbenzene	U		0.00233	0.00738	1	04/28/2023 17:49	WG2050685
1,3,5-Trimethylbenzene	U		0.00295	0.00738	1	04/28/2023 17:49	WG2050685
Vinyl chloride	U		0.00171	0.00369	1	04/28/2023 17:49	WG2050685
Xylenes, Total	0.00242	J	0.00130	0.00960	1	04/28/2023 17:49	WG2050685
(S) Toluene-d8	*111*			*75.0-131*		*04/28/2023 17:49*	WG2050685
(S) 4-Bromofluorobenzene	*102*			*67.0-138*		*04/28/2023 17:49*	WG2050685
(S) 1,2-Dichloroethane-d4	*85.4*			*70.0-130*		*04/28/2023 17:49*	WG2050685

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	1.67	J	1.63	4.90	1	05/02/2023 00:41	WG2051354
Residual Range Organics (RRO)	U		4.08	12.3	1	05/02/2023 00:41	WG2051354
(S) o-Terphenyl	*53.5*			*18.0-148*		*05/02/2023 00:41*	WG2051354

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	78.6		1	04/27/2023 17:51	WG2049982

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		1.36	4.00	25	04/29/2023 19:42	WG2051261
(S) a,a,a-Trifluorotoluene(FID)	*98.4*			*77.0-120*		*04/29/2023 19:42*	WG2051261

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U	C3	0.0584	0.0800	1	04/28/2023 18:08	WG2050685
Acrylonitrile	U		0.00578	0.0200	1	04/28/2023 18:08	WG2050685
Benzene	U		0.000748	0.00160	1	04/28/2023 18:08	WG2050685
Bromobenzene	U		0.00144	0.0200	1	04/28/2023 18:08	WG2050685
Bromodichloromethane	U		0.00116	0.00400	1	04/28/2023 18:08	WG2050685
Bromoform	U		0.00187	0.0400	1	04/28/2023 18:08	WG2050685
Bromomethane	U		0.00315	0.0200	1	04/28/2023 18:08	WG2050685
n-Butylbenzene	U		0.00840	0.0200	1	04/28/2023 18:08	WG2050685
sec-Butylbenzene	U		0.00461	0.0200	1	04/28/2023 18:08	WG2050685
tert-Butylbenzene	U		0.00312	0.00800	1	04/28/2023 18:08	WG2050685
Carbon tetrachloride	U		0.00144	0.00800	1	04/28/2023 18:08	WG2050685
Chlorobenzene	U		0.000336	0.00400	1	04/28/2023 18:08	WG2050685
Chlorodibromomethane	U		0.000980	0.00400	1	04/28/2023 18:08	WG2050685
Chloroethane	U		0.00272	0.00800	1	04/28/2023 18:08	WG2050685
Chloroform	U		0.00165	0.00400	1	04/28/2023 18:08	WG2050685
Chloromethane	U		0.00696	0.0200	1	04/28/2023 18:08	WG2050685
2-Chlorotoluene	U		0.00138	0.00400	1	04/28/2023 18:08	WG2050685
4-Chlorotoluene	U		0.000720	0.00800	1	04/28/2023 18:08	WG2050685
1,2-Dibromo-3-Chloropropane	U		0.00624	0.0400	1	04/28/2023 18:08	WG2050685
1,2-Dibromoethane	U		0.00104	0.00400	1	04/28/2023 18:08	WG2050685
Dibromomethane	U		0.00120	0.00800	1	04/28/2023 18:08	WG2050685
1,2-Dichlorobenzene	U		0.000680	0.00800	1	04/28/2023 18:08	WG2050685
1,3-Dichlorobenzene	U		0.000960	0.00800	1	04/28/2023 18:08	WG2050685
1,4-Dichlorobenzene	U		0.00112	0.00800	1	04/28/2023 18:08	WG2050685
Dichlorodifluoromethane	U		0.00258	0.00400	1	04/28/2023 18:08	WG2050685
1,1-Dichloroethane	U		0.000786	0.00400	1	04/28/2023 18:08	WG2050685
1,2-Dichloroethane	U	C3	0.00104	0.00400	1	04/28/2023 18:08	WG2050685
1,1-Dichloroethene	U		0.000970	0.00400	1	04/28/2023 18:08	WG2050685
cis-1,2-Dichloroethene	U		0.00117	0.00400	1	04/28/2023 18:08	WG2050685
trans-1,2-Dichloroethene	U		0.00166	0.00800	1	04/28/2023 18:08	WG2050685
1,2-Dichloropropane	U		0.00227	0.00800	1	04/28/2023 18:08	WG2050685
1,1-Dichloropropene	U		0.00129	0.00400	1	04/28/2023 18:08	WG2050685
1,3-Dichloropropane	U		0.000802	0.00800	1	04/28/2023 18:08	WG2050685
cis-1,3-Dichloropropene	U		0.00121	0.00400	1	04/28/2023 18:08	WG2050685
trans-1,3-Dichloropropene	U		0.00182	0.00800	1	04/28/2023 18:08	WG2050685
2,2-Dichloropropane	U		0.00221	0.00400	1	04/28/2023 18:08	WG2050685
Di-isopropyl ether	U		0.000656	0.00160	1	04/28/2023 18:08	WG2050685
Ethylbenzene	U		0.00118	0.00400	1	04/28/2023 18:08	WG2050685
Hexachloro-1,3-butadiene	U		0.00960	0.0400	1	04/28/2023 18:08	WG2050685
Isopropylbenzene	U		0.000680	0.00400	1	04/28/2023 18:08	WG2050685
p-Isopropyltoluene	U		0.00408	0.00800	1	04/28/2023 18:08	WG2050685
2-Butanone (MEK)	U		0.102	0.160	1	04/28/2023 18:08	WG2050685
Methylene Chloride	U		0.0106	0.0400	1	04/28/2023 18:08	WG2050685
4-Methyl-2-pentanone (MIBK)	U		0.00365	0.0400	1	04/28/2023 18:08	WG2050685

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Methyl tert-butyl ether	U		0.000560	0.00160	1	04/28/2023 18:08	WG2050685
Naphthalene	U		0.00781	0.0200	1	04/28/2023 18:08	WG2050685
n-Propylbenzene	U		0.00152	0.00800	1	04/28/2023 18:08	WG2050685
Styrene	U		0.000367	0.0200	1	04/28/2023 18:08	WG2050685
1,1,1,2-Tetrachloroethane	U		0.00152	0.00400	1	04/28/2023 18:08	WG2050685
1,1,2,2-Tetrachloroethane	U		0.00111	0.00400	1	04/28/2023 18:08	WG2050685
1,1,2-Trichlorotrifluoroethane	U		0.00121	0.00400	1	04/28/2023 18:08	WG2050685
Tetrachloroethene	U		0.00143	0.00400	1	04/28/2023 18:08	WG2050685
Toluene	0.0133		0.00208	0.00800	1	04/28/2023 18:08	WG2050685
1,2,3-Trichlorobenzene	U	C3	0.0117	0.0200	1	04/28/2023 18:08	WG2050685
1,2,4-Trichlorobenzene	U		0.00704	0.0200	1	04/28/2023 18:08	WG2050685
1,1,1-Trichloroethane	U		0.00148	0.00400	1	04/28/2023 18:08	WG2050685
1,1,2-Trichloroethane	U		0.000956	0.00400	1	04/28/2023 18:08	WG2050685
Trichloroethene	U		0.000935	0.00160	1	04/28/2023 18:08	WG2050685
Trichlorofluoromethane	U		0.00132	0.00400	1	04/28/2023 18:08	WG2050685
1,2,3-Trichloropropane	U		0.00259	0.0200	1	04/28/2023 18:08	WG2050685
1,2,4-Trimethylbenzene	U		0.00253	0.00800	1	04/28/2023 18:08	WG2050685
1,2,3-Trimethylbenzene	U		0.00253	0.00800	1	04/28/2023 18:08	WG2050685
1,3,5-Trimethylbenzene	U		0.00320	0.00800	1	04/28/2023 18:08	WG2050685
Vinyl chloride	U		0.00186	0.00400	1	04/28/2023 18:08	WG2050685
Xylenes, Total	0.00375	J	0.00141	0.0104	1	04/28/2023 18:08	WG2050685
(S) Toluene-d8	*108*			*75.0-131*		*04/28/2023 18:08*	WG2050685
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*04/28/2023 18:08*	WG2050685
(S) 1,2-Dichloroethane-d4	*90.6*			*70.0-130*		*04/28/2023 18:08*	WG2050685

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U		1.69	5.09	1	05/01/2023 23:43	WG2051354
Residual Range Organics (RRO)	U		4.24	12.7	1	05/01/2023 23:43	WG2051354
(S) o-Terphenyl	*60.9*			*18.0-148*		*05/01/2023 23:43*	WG2051354

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	79.7		1	04/27/2023 17:51	WG2049982

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		1.32	3.88	25	04/29/2023 20:05	WG2051261
(S) a,a,a-Trifluorotoluene(FID)	*99.0*			*77.0-120*		*04/29/2023 20:05*	WG2051261

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U	C3	0.0566	0.0776	1	04/28/2023 18:27	WG2050685
Acrylonitrile	U		0.00560	0.0194	1	04/28/2023 18:27	WG2050685
Benzene	0.00106	J	0.000725	0.00155	1	04/28/2023 18:27	WG2050685
Bromobenzene	U		0.00140	0.0194	1	04/28/2023 18:27	WG2050685
Bromodichloromethane	U		0.00112	0.00388	1	04/28/2023 18:27	WG2050685
Bromoform	U		0.00182	0.0388	1	04/28/2023 18:27	WG2050685
Bromomethane	U		0.00306	0.0194	1	04/28/2023 18:27	WG2050685
n-Butylbenzene	U		0.00815	0.0194	1	04/28/2023 18:27	WG2050685
sec-Butylbenzene	U		0.00447	0.0194	1	04/28/2023 18:27	WG2050685
tert-Butylbenzene	U		0.00303	0.00776	1	04/28/2023 18:27	WG2050685
Carbon tetrachloride	U		0.00139	0.00776	1	04/28/2023 18:27	WG2050685
Chlorobenzene	U		0.000326	0.00388	1	04/28/2023 18:27	WG2050685
Chlorodibromomethane	U		0.000950	0.00388	1	04/28/2023 18:27	WG2050685
Chloroethane	U		0.00264	0.00776	1	04/28/2023 18:27	WG2050685
Chloroform	U		0.00160	0.00388	1	04/28/2023 18:27	WG2050685
Chloromethane	U		0.00675	0.0194	1	04/28/2023 18:27	WG2050685
2-Chlorotoluene	U		0.00134	0.00388	1	04/28/2023 18:27	WG2050685
4-Chlorotoluene	U		0.000698	0.00776	1	04/28/2023 18:27	WG2050685
1,2-Dibromo-3-Chloropropane	U		0.00605	0.0388	1	04/28/2023 18:27	WG2050685
1,2-Dibromoethane	U		0.00101	0.00388	1	04/28/2023 18:27	WG2050685
Dibromomethane	U		0.00116	0.00776	1	04/28/2023 18:27	WG2050685
1,2-Dichlorobenzene	U		0.000659	0.00776	1	04/28/2023 18:27	WG2050685
1,3-Dichlorobenzene	U		0.000931	0.00776	1	04/28/2023 18:27	WG2050685
1,4-Dichlorobenzene	U		0.00109	0.00776	1	04/28/2023 18:27	WG2050685
Dichlorodifluoromethane	U		0.00250	0.00388	1	04/28/2023 18:27	WG2050685
1,1-Dichloroethane	U		0.000762	0.00388	1	04/28/2023 18:27	WG2050685
1,2-Dichloroethane	U	C3	0.00101	0.00388	1	04/28/2023 18:27	WG2050685
1,1-Dichloroethene	U		0.000940	0.00388	1	04/28/2023 18:27	WG2050685
cis-1,2-Dichloroethene	U		0.00114	0.00388	1	04/28/2023 18:27	WG2050685
trans-1,2-Dichloroethene	U		0.00161	0.00776	1	04/28/2023 18:27	WG2050685
1,2-Dichloropropane	U		0.00220	0.00776	1	04/28/2023 18:27	WG2050685
1,1-Dichloropropene	U		0.00126	0.00388	1	04/28/2023 18:27	WG2050685
1,3-Dichloropropane	U		0.000777	0.00776	1	04/28/2023 18:27	WG2050685
cis-1,3-Dichloropropene	U		0.00117	0.00388	1	04/28/2023 18:27	WG2050685
trans-1,3-Dichloropropene	U		0.00177	0.00776	1	04/28/2023 18:27	WG2050685
2,2-Dichloropropane	U		0.00214	0.00388	1	04/28/2023 18:27	WG2050685
Di-isopropyl ether	U		0.000636	0.00155	1	04/28/2023 18:27	WG2050685
Ethylbenzene	0.00537		0.00114	0.00388	1	04/28/2023 18:27	WG2050685
Hexachloro-1,3-butadiene	U		0.00931	0.0388	1	04/28/2023 18:27	WG2050685
Isopropylbenzene	0.00172	J	0.000659	0.00388	1	04/28/2023 18:27	WG2050685
p-Isopropyltoluene	U		0.00396	0.00776	1	04/28/2023 18:27	WG2050685
2-Butanone (MEK)	U		0.0985	0.155	1	04/28/2023 18:27	WG2050685
Methylene Chloride	U		0.0103	0.0388	1	04/28/2023 18:27	WG2050685
4-Methyl-2-pentanone (MIBK)	U		0.00354	0.0388	1	04/28/2023 18:27	WG2050685

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Methyl tert-butyl ether	U		0.000543	0.00155	1	04/28/2023 18:27	WG2050685
Naphthalene	U		0.00757	0.0194	1	04/28/2023 18:27	WG2050685
n-Propylbenzene	U		0.00147	0.00776	1	04/28/2023 18:27	WG2050685
Styrene	U		0.000355	0.0194	1	04/28/2023 18:27	WG2050685
1,1,1,2-Tetrachloroethane	U		0.00147	0.00388	1	04/28/2023 18:27	WG2050685
1,1,2,2-Tetrachloroethane	U		0.00108	0.00388	1	04/28/2023 18:27	WG2050685
1,1,2-Trichlorotrifluoroethane	U		0.00117	0.00388	1	04/28/2023 18:27	WG2050685
Tetrachloroethene	U		0.00139	0.00388	1	04/28/2023 18:27	WG2050685
Toluene	0.0462		0.00202	0.00776	1	04/28/2023 18:27	WG2050685
1,2,3-Trichlorobenzene	U	C3	0.0114	0.0194	1	04/28/2023 18:27	WG2050685
1,2,4-Trichlorobenzene	U		0.00683	0.0194	1	04/28/2023 18:27	WG2050685
1,1,1-Trichloroethane	U		0.00143	0.00388	1	04/28/2023 18:27	WG2050685
1,1,2-Trichloroethane	U		0.000926	0.00388	1	04/28/2023 18:27	WG2050685
Trichloroethene	U		0.000906	0.00155	1	04/28/2023 18:27	WG2050685
Trichlorofluoromethane	U		0.00128	0.00388	1	04/28/2023 18:27	WG2050685
1,2,3-Trichloropropane	U		0.00251	0.0194	1	04/28/2023 18:27	WG2050685
1,2,4-Trimethylbenzene	U		0.00245	0.00776	1	04/28/2023 18:27	WG2050685
1,2,3-Trimethylbenzene	U		0.00245	0.00776	1	04/28/2023 18:27	WG2050685
1,3,5-Trimethylbenzene	U		0.00310	0.00776	1	04/28/2023 18:27	WG2050685
Vinyl chloride	U		0.00180	0.00388	1	04/28/2023 18:27	WG2050685
Xylenes, Total	0.0261		0.00137	0.0101	1	04/28/2023 18:27	WG2050685
(S) Toluene-d8	*108*			*75.0-131*		*04/28/2023 18:27*	WG2050685
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*04/28/2023 18:27*	WG2050685
(S) 1,2-Dichloroethane-d4	*86.4*			*70.0-130*		*04/28/2023 18:27*	WG2050685

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U		1.67	5.02	1	05/01/2023 22:51	WG2052316
Residual Range Organics (RRO)	U		4.18	12.5	1	05/01/2023 22:51	WG2052316
(S) o-Terphenyl	*71.0*			*18.0-148*		*05/01/2023 22:51*	WG2052316

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	78.2		1	04/27/2023 17:51	WG2049982

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		1.33	3.91	25	04/29/2023 20:28	WG2051261
(S) a,a,a-Trifluorotoluene(FID)	*98.3*			*77.0-120*		*04/29/2023 20:28*	WG2051261

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U	C3	0.0571	0.0782	1	04/28/2023 18:46	WG2050685
Acrylonitrile	U		0.00564	0.0195	1	04/28/2023 18:46	WG2050685
Benzene	U		0.000730	0.00156	1	04/28/2023 18:46	WG2050685
Bromobenzene	U		0.00141	0.0195	1	04/28/2023 18:46	WG2050685
Bromodichloromethane	U		0.00113	0.00391	1	04/28/2023 18:46	WG2050685
Bromoform	U		0.00183	0.0391	1	04/28/2023 18:46	WG2050685
Bromomethane	U		0.00308	0.0195	1	04/28/2023 18:46	WG2050685
n-Butylbenzene	U		0.00821	0.0195	1	04/28/2023 18:46	WG2050685
sec-Butylbenzene	U		0.00450	0.0195	1	04/28/2023 18:46	WG2050685
tert-Butylbenzene	U		0.00305	0.00782	1	04/28/2023 18:46	WG2050685
Carbon tetrachloride	U		0.00140	0.00782	1	04/28/2023 18:46	WG2050685
Chlorobenzene	U		0.000328	0.00391	1	04/28/2023 18:46	WG2050685
Chlorodibromomethane	U		0.000957	0.00391	1	04/28/2023 18:46	WG2050685
Chloroethane	U		0.00266	0.00782	1	04/28/2023 18:46	WG2050685
Chloroform	U		0.00161	0.00391	1	04/28/2023 18:46	WG2050685
Chloromethane	U		0.00680	0.0195	1	04/28/2023 18:46	WG2050685
2-Chlorotoluene	U		0.00135	0.00391	1	04/28/2023 18:46	WG2050685
4-Chlorotoluene	U		0.000704	0.00782	1	04/28/2023 18:46	WG2050685
1,2-Dibromo-3-Chloropropane	U		0.00610	0.0391	1	04/28/2023 18:46	WG2050685
1,2-Dibromoethane	U		0.00101	0.00391	1	04/28/2023 18:46	WG2050685
Dibromomethane	U		0.00117	0.00782	1	04/28/2023 18:46	WG2050685
1,2-Dichlorobenzene	U		0.000664	0.00782	1	04/28/2023 18:46	WG2050685
1,3-Dichlorobenzene	U		0.000938	0.00782	1	04/28/2023 18:46	WG2050685
1,4-Dichlorobenzene	U		0.00109	0.00782	1	04/28/2023 18:46	WG2050685
Dichlorodifluoromethane	U		0.00252	0.00391	1	04/28/2023 18:46	WG2050685
1,1-Dichloroethane	U		0.000768	0.00391	1	04/28/2023 18:46	WG2050685
1,2-Dichloroethane	U	C3	0.00101	0.00391	1	04/28/2023 18:46	WG2050685
1,1-Dichloroethene	U		0.000947	0.00391	1	04/28/2023 18:46	WG2050685
cis-1,2-Dichloroethene	U		0.00115	0.00391	1	04/28/2023 18:46	WG2050685
trans-1,2-Dichloroethene	U		0.00163	0.00782	1	04/28/2023 18:46	WG2050685
1,2-Dichloropropane	U		0.00222	0.00782	1	04/28/2023 18:46	WG2050685
1,1-Dichloropropene	U		0.00126	0.00391	1	04/28/2023 18:46	WG2050685
1,3-Dichloropropane	U		0.000783	0.00782	1	04/28/2023 18:46	WG2050685
cis-1,3-Dichloropropene	U		0.00118	0.00391	1	04/28/2023 18:46	WG2050685
trans-1,3-Dichloropropene	U		0.00178	0.00782	1	04/28/2023 18:46	WG2050685
2,2-Dichloropropane	U		0.00216	0.00391	1	04/28/2023 18:46	WG2050685
Di-isopropyl ether	U		0.000641	0.00156	1	04/28/2023 18:46	WG2050685
Ethylbenzene	0.00360	J	0.00115	0.00391	1	04/28/2023 18:46	WG2050685
Hexachloro-1,3-butadiene	U		0.00938	0.0391	1	04/28/2023 18:46	WG2050685
Isopropylbenzene	U		0.000664	0.00391	1	04/28/2023 18:46	WG2050685
p-Isopropyltoluene	U		0.00399	0.00782	1	04/28/2023 18:46	WG2050685
2-Butanone (MEK)	U		0.0993	0.156	1	04/28/2023 18:46	WG2050685
Methylene Chloride	U		0.0104	0.0391	1	04/28/2023 18:46	WG2050685
4-Methyl-2-pentanone (MIBK)	U		0.00356	0.0391	1	04/28/2023 18:46	WG2050685

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Methyl tert-butyl ether	U		0.000547	0.00156	1	04/28/2023 18:46	WG2050685
Naphthalene	U		0.00763	0.0195	1	04/28/2023 18:46	WG2050685
n-Propylbenzene	U		0.00149	0.00782	1	04/28/2023 18:46	WG2050685
Styrene	U		0.000358	0.0195	1	04/28/2023 18:46	WG2050685
1,1,1,2-Tetrachloroethane	U		0.00148	0.00391	1	04/28/2023 18:46	WG2050685
1,1,2,2-Tetrachloroethane	U		0.00109	0.00391	1	04/28/2023 18:46	WG2050685
1,1,2-Trichlorotrifluoroethane	U		0.00118	0.00391	1	04/28/2023 18:46	WG2050685
Tetrachloroethene	U		0.00140	0.00391	1	04/28/2023 18:46	WG2050685
Toluene	0.0111		0.00203	0.00782	1	04/28/2023 18:46	WG2050685
1,2,3-Trichlorobenzene	U	C3	0.0115	0.0195	1	04/28/2023 18:46	WG2050685
1,2,4-Trichlorobenzene	U		0.00688	0.0195	1	04/28/2023 18:46	WG2050685
1,1,1-Trichloroethane	U		0.00144	0.00391	1	04/28/2023 18:46	WG2050685
1,1,2-Trichloroethane	U		0.000933	0.00391	1	04/28/2023 18:46	WG2050685
Trichloroethene	U		0.000913	0.00156	1	04/28/2023 18:46	WG2050685
Trichlorofluoromethane	U		0.00129	0.00391	1	04/28/2023 18:46	WG2050685
1,2,3-Trichloropropane	U		0.00253	0.0195	1	04/28/2023 18:46	WG2050685
1,2,4-Trimethylbenzene	U		0.00247	0.00782	1	04/28/2023 18:46	WG2050685
1,2,3-Trimethylbenzene	U		0.00247	0.00782	1	04/28/2023 18:46	WG2050685
1,3,5-Trimethylbenzene	U		0.00313	0.00782	1	04/28/2023 18:46	WG2050685
Vinyl chloride	U		0.00181	0.00391	1	04/28/2023 18:46	WG2050685
Xylenes, Total	0.00330	J	0.00138	0.0102	1	04/28/2023 18:46	WG2050685
(S) Toluene-d8	*107*			*75.0-131*		*04/28/2023 18:46*	WG2050685
(S) 4-Bromofluorobenzene	*103*			*67.0-138*		*04/28/2023 18:46*	WG2050685
(S) 1,2-Dichloroethane-d4	*86.0*			*70.0-130*		*04/28/2023 18:46*	WG2050685

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U		1.70	5.11	1	05/01/2023 23:56	WG2051354
Residual Range Organics (RRO)	U		4.26	12.8	1	05/01/2023 23:56	WG2051354
(S) o-Terphenyl	*38.4*			*18.0-148*		*05/01/2023 23:56*	WG2051354

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	75.9		1	04/27/2023 17:51	WG2049982

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		1.45	4.27	25	04/29/2023 20:50	WG2051261
(S) a,a,a-Trifluorotoluene(FID)	*98.6*			*77.0-120*		*04/29/2023 20:50*	WG2051261

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U	C3	0.0623	0.0854	1	04/28/2023 19:05	WG2050685
Acrylonitrile	U		0.00617	0.0213	1	04/28/2023 19:05	WG2050685
Benzene	U		0.000798	0.00171	1	04/28/2023 19:05	WG2050685
Bromobenzene	U		0.00154	0.0213	1	04/28/2023 19:05	WG2050685
Bromodichloromethane	U		0.00124	0.00427	1	04/28/2023 19:05	WG2050685
Bromoform	U		0.00200	0.0427	1	04/28/2023 19:05	WG2050685
Bromomethane	U		0.00336	0.0213	1	04/28/2023 19:05	WG2050685
n-Butylbenzene	U		0.00897	0.0213	1	04/28/2023 19:05	WG2050685
sec-Butylbenzene	U		0.00492	0.0213	1	04/28/2023 19:05	WG2050685
tert-Butylbenzene	U		0.00333	0.00854	1	04/28/2023 19:05	WG2050685
Carbon tetrachloride	U		0.00153	0.00854	1	04/28/2023 19:05	WG2050685
Chlorobenzene	U		0.000359	0.00427	1	04/28/2023 19:05	WG2050685
Chlorodibromomethane	U		0.00105	0.00427	1	04/28/2023 19:05	WG2050685
Chloroethane	U		0.00290	0.00854	1	04/28/2023 19:05	WG2050685
Chloroform	U		0.00176	0.00427	1	04/28/2023 19:05	WG2050685
Chloromethane	U		0.00743	0.0213	1	04/28/2023 19:05	WG2050685
2-Chlorotoluene	U		0.00148	0.00427	1	04/28/2023 19:05	WG2050685
4-Chlorotoluene	U		0.000769	0.00854	1	04/28/2023 19:05	WG2050685
1,2-Dibromo-3-Chloropropane	U		0.00666	0.0427	1	04/28/2023 19:05	WG2050685
1,2-Dibromoethane	U		0.00111	0.00427	1	04/28/2023 19:05	WG2050685
Dibromomethane	U		0.00128	0.00854	1	04/28/2023 19:05	WG2050685
1,2-Dichlorobenzene	U		0.000726	0.00854	1	04/28/2023 19:05	WG2050685
1,3-Dichlorobenzene	U		0.00102	0.00854	1	04/28/2023 19:05	WG2050685
1,4-Dichlorobenzene	U		0.00120	0.00854	1	04/28/2023 19:05	WG2050685
Dichlorodifluoromethane	U		0.00275	0.00427	1	04/28/2023 19:05	WG2050685
1,1-Dichloroethane	U		0.000839	0.00427	1	04/28/2023 19:05	WG2050685
1,2-Dichloroethane	U	C3	0.00111	0.00427	1	04/28/2023 19:05	WG2050685
1,1-Dichloroethene	U		0.00103	0.00427	1	04/28/2023 19:05	WG2050685
cis-1,2-Dichloroethene	U		0.00125	0.00427	1	04/28/2023 19:05	WG2050685
trans-1,2-Dichloroethene	U		0.00178	0.00854	1	04/28/2023 19:05	WG2050685
1,2-Dichloropropane	U		0.00243	0.00854	1	04/28/2023 19:05	WG2050685
1,1-Dichloropropene	U		0.00138	0.00427	1	04/28/2023 19:05	WG2050685
1,3-Dichloropropane	U		0.000856	0.00854	1	04/28/2023 19:05	WG2050685
cis-1,3-Dichloropropene	U		0.00129	0.00427	1	04/28/2023 19:05	WG2050685
trans-1,3-Dichloropropene	U		0.00195	0.00854	1	04/28/2023 19:05	WG2050685
2,2-Dichloropropane	U		0.00236	0.00427	1	04/28/2023 19:05	WG2050685
Di-isopropyl ether	U		0.000700	0.00171	1	04/28/2023 19:05	WG2050685
Ethylbenzene	U		0.00126	0.00427	1	04/28/2023 19:05	WG2050685
Hexachloro-1,3-butadiene	U		0.0102	0.0427	1	04/28/2023 19:05	WG2050685
Isopropylbenzene	U		0.000726	0.00427	1	04/28/2023 19:05	WG2050685
p-Isopropyltoluene	U		0.00435	0.00854	1	04/28/2023 19:05	WG2050685
2-Butanone (MEK)	U		0.108	0.171	1	04/28/2023 19:05	WG2050685
Methylene Chloride	U		0.0113	0.0427	1	04/28/2023 19:05	WG2050685
4-Methyl-2-pentanone (MIBK)	U		0.00389	0.0427	1	04/28/2023 19:05	WG2050685

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Methyl tert-butyl ether	U		0.000598	0.00171	1	04/28/2023 19:05	WG2050685
Naphthalene	U		0.00833	0.0213	1	04/28/2023 19:05	WG2050685
n-Propylbenzene	U		0.00162	0.00854	1	04/28/2023 19:05	WG2050685
Styrene	U		0.000391	0.0213	1	04/28/2023 19:05	WG2050685
1,1,1,2-Tetrachloroethane	U		0.00162	0.00427	1	04/28/2023 19:05	WG2050685
1,1,2,2-Tetrachloroethane	U		0.00119	0.00427	1	04/28/2023 19:05	WG2050685
1,1,2-Trichlorotrifluoroethane	U		0.00129	0.00427	1	04/28/2023 19:05	WG2050685
Tetrachloroethene	U		0.00153	0.00427	1	04/28/2023 19:05	WG2050685
Toluene	0.00938		0.00222	0.00854	1	04/28/2023 19:05	WG2050685
1,2,3-Trichlorobenzene	U	C3	0.0125	0.0213	1	04/28/2023 19:05	WG2050685
1,2,4-Trichlorobenzene	U		0.00751	0.0213	1	04/28/2023 19:05	WG2050685
1,1,1-Trichloroethane	U		0.00158	0.00427	1	04/28/2023 19:05	WG2050685
1,1,2-Trichloroethane	U		0.00102	0.00427	1	04/28/2023 19:05	WG2050685
Trichloroethene	U		0.000997	0.00171	1	04/28/2023 19:05	WG2050685
Trichlorofluoromethane	U		0.00141	0.00427	1	04/28/2023 19:05	WG2050685
1,2,3-Trichloropropane	U		0.00277	0.0213	1	04/28/2023 19:05	WG2050685
1,2,4-Trimethylbenzene	U		0.00270	0.00854	1	04/28/2023 19:05	WG2050685
1,2,3-Trimethylbenzene	U		0.00270	0.00854	1	04/28/2023 19:05	WG2050685
1,3,5-Trimethylbenzene	U		0.00342	0.00854	1	04/28/2023 19:05	WG2050685
Vinyl chloride	U		0.00198	0.00427	1	04/28/2023 19:05	WG2050685
Xylenes, Total	0.00273	J	0.00150	0.0111	1	04/28/2023 19:05	WG2050685
(S) Toluene-d8	*108*			*75.0-131*		*04/28/2023 19:05*	WG2050685
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*04/28/2023 19:05*	WG2050685
(S) 1,2-Dichloroethane-d4	*85.2*			*70.0-130*		*04/28/2023 19:05*	WG2050685

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2.77	J	1.75	5.27	1	05/02/2023 00:09	WG2051354
Residual Range Organics (RRO)	U		4.39	13.2	1	05/02/2023 00:09	WG2051354
(S) o-Terphenyl	*67.7*			*18.0-148*		*05/02/2023 00:09*	WG2051354

Method Blank (MB)

(MB) R3918656-1 04/27/23 17:51

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00200			

L1609000-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1609000-03 04/27/23 17:51 • (DUP) R3918656-3 04/27/23 17:51

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	78.6	78.6	1	0.00585		10

Laboratory Control Sample (LCS)

(LCS) R3918656-2 04/27/23 17:51

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

Method Blank (MB)

(MB) R3919214-3 04/29/23 22:07

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPHG C6 - C12	1.37	J	0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	*94.8*			*77.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3919214-1 04/29/23 17:06 • (LCSD) R3919214-2 04/29/23 18:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPHG C6 - C12	5.50	5.89	5.87	107	107	71.0-124			0.340	20
(S) a,a,a-Trifluorotoluene(FID)				*99.6*	*99.7*	*77.0-120*				

L1608356-35 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1608356-35 04/29/23 22:51 • (MS) R3919214-4 04/30/23 09:02 • (MSD) R3919214-5 04/30/23 09:27

Analyte	Spike Amount (dry) mg/kg	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	458	7.33	486	513	105	111	49.3	50.0-150			5.41	27
(S) a,a,a-Trifluorotoluene(FID)					*99.7*	*102*		*77.0-120*				

Method Blank (MB)

(MB) R3919345-3 04/29/23 16:40

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPHG C6 - C12	U		0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	*98.1*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R3919345-2 04/29/23 15:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPHG C6 - C12	5.50	4.13	75.1	71.0-124	
(S) a,a,a-Trifluorotoluene(FID)			*106*	*77.0-120*	

L1609000-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1609000-03 04/29/23 19:42 • (MS) R3919345-4 04/30/23 08:01 • (MSD) R3919345-5 04/30/23 08:23

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	182	U	140	123	76.6	67.5	25	50.0-150			12.7	27
(S) a,a,a-Trifluorotoluene(FID)					*107*	*104*		*77.0-120*				

Method Blank (MB)

(MB) R3918851-2 04/28/23 10:40

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Acrylonitrile	U		0.00361	0.0125
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	U		0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00250
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Di-isopropyl ether	U		0.000410	0.00100
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250
Isopropylbenzene	U		0.000425	0.00250

Method Blank (MB)

(MB) R3918851-2 04/28/23 10:40

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	U		0.0635	0.100
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	0.000725	J	0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,2,3-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Vinyl chloride	U		0.00116	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*110*			*75.0-131*
(S) 4-Bromofluorobenzene	*97.4*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*88.4*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3918851-1 04/28/23 09:24

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.625	0.417	66.7	10.0-160	
Acrylonitrile	0.625	0.670	107	45.0-153	
Benzene	0.125	0.117	93.6	70.0-123	
Bromobenzene	0.125	0.111	88.8	73.0-121	
Bromodichloromethane	0.125	0.112	89.6	73.0-121	

Laboratory Control Sample (LCS)

(LCS) R3918851-1 04/28/23 09:24

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Bromoform	0.125	0.126	101	64.0-132	
Bromomethane	0.125	0.117	93.6	56.0-147	
n-Butylbenzene	0.125	0.126	101	68.0-135	
sec-Butylbenzene	0.125	0.109	87.2	74.0-130	
tert-Butylbenzene	0.125	0.103	82.4	75.0-127	
Carbon tetrachloride	0.125	0.117	93.6	66.0-128	
Chlorobenzene	0.125	0.124	99.2	76.0-128	
Chlorodibromomethane	0.125	0.117	93.6	74.0-127	
Chloroethane	0.125	0.106	84.8	61.0-134	
Chloroform	0.125	0.108	86.4	72.0-123	
Chloromethane	0.125	0.127	102	51.0-138	
2-Chlorotoluene	0.125	0.120	96.0	75.0-124	
4-Chlorotoluene	0.125	0.105	84.0	75.0-124	
1,2-Dibromo-3-Chloropropane	0.125	0.125	100	59.0-130	
1,2-Dibromoethane	0.125	0.126	101	74.0-128	
Dibromomethane	0.125	0.117	93.6	75.0-122	
1,2-Dichlorobenzene	0.125	0.134	107	76.0-124	
1,3-Dichlorobenzene	0.125	0.125	100	76.0-125	
1,4-Dichlorobenzene	0.125	0.121	96.8	77.0-121	
Dichlorodifluoromethane	0.125	0.139	111	43.0-156	
1,1-Dichloroethane	0.125	0.111	88.8	70.0-127	
1,2-Dichloroethane	0.125	0.0977	78.2	65.0-131	
1,1-Dichloroethene	0.125	0.110	88.0	65.0-131	
cis-1,2-Dichloroethene	0.125	0.120	96.0	73.0-125	
trans-1,2-Dichloroethene	0.125	0.117	93.6	71.0-125	
1,2-Dichloropropane	0.125	0.118	94.4	74.0-125	
1,1-Dichloropropene	0.125	0.114	91.2	73.0-125	
1,3-Dichloropropane	0.125	0.120	96.0	80.0-125	
cis-1,3-Dichloropropene	0.125	0.122	97.6	76.0-127	
trans-1,3-Dichloropropene	0.125	0.115	92.0	73.0-127	
2,2-Dichloropropane	0.125	0.124	99.2	59.0-135	
Di-isopropyl ether	0.125	0.110	88.0	60.0-136	
Ethylbenzene	0.125	0.129	103	74.0-126	
Hexachloro-1,3-butadiene	0.125	0.148	118	57.0-150	
Isopropylbenzene	0.125	0.133	106	72.0-127	
p-Isopropyltoluene	0.125	0.118	94.4	72.0-133	
2-Butanone (MEK)	0.625	0.616	98.6	30.0-160	
Methylene Chloride	0.125	0.125	100	68.0-123	
4-Methyl-2-pentanone (MIBK)	0.625	0.624	99.8	56.0-143	
Methyl tert-butyl ether	0.125	0.105	84.0	66.0-132	

Laboratory Control Sample (LCS)

(LCS) R3918851-1 04/28/23 09:24

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Naphthalene	0.125	0.111	88.8	59.0-130	
n-Propylbenzene	0.125	0.101	80.8	74.0-126	
Styrene	0.125	0.127	102	72.0-127	
1,1,1,2-Tetrachloroethane	0.125	0.132	106	74.0-129	
1,1,2,2-Tetrachloroethane	0.125	0.109	87.2	68.0-128	
1,1,2-Trichlorotrifluoroethane	0.125	0.125	100	61.0-139	
Tetrachloroethene	0.125	0.131	105	70.0-136	
Toluene	0.125	0.116	92.8	75.0-121	
1,2,3-Trichlorobenzene	0.125	0.0941	75.3	59.0-139	
1,2,4-Trichlorobenzene	0.125	0.170	136	62.0-137	
1,1,1-Trichloroethane	0.125	0.110	88.0	69.0-126	
1,1,2-Trichloroethane	0.125	0.123	98.4	78.0-123	
Trichloroethene	0.125	0.115	92.0	76.0-126	
Trichlorofluoromethane	0.125	0.115	92.0	61.0-142	
1,2,3-Trichloropropane	0.125	0.106	84.8	67.0-129	
1,2,4-Trimethylbenzene	0.125	0.117	93.6	70.0-126	
1,2,3-Trimethylbenzene	0.125	0.117	93.6	74.0-124	
1,3,5-Trimethylbenzene	0.125	0.111	88.8	73.0-127	
Vinyl chloride	0.125	0.118	94.4	63.0-134	
Xylenes, Total	0.375	0.388	103	72.0-127	
(S) Toluene-d8			*102*	*75.0-131*	
(S) 4-Bromofluorobenzene			*111*	*67.0-138*	
(S) 1,2-Dichloroethane-d4			*90.6*	*70.0-130*	

L1608836-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1608836-13 04/28/23 14:57 • (MS) R3918851-3 04/28/23 19:24 • (MSD) R3918851-4 04/28/23 19:43

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	0.583	U	0.156	0.153	26.7	26.2	1	10.0-160			1.85	40
Acrylonitrile	0.583	U	0.379	0.476	65.0	81.6	1	10.0-160			22.7	40
Benzene	0.117	U	0.127	0.129	109	111	1	10.0-149			1.90	37
Bromobenzene	0.117	U	0.135	0.130	116	112	1	10.0-156			3.77	38
Bromodichloromethane	0.117	U	0.110	0.118	94.6	101	1	10.0-143			6.40	37
Bromoform	0.117	U	0.110	0.110	94.2	94.5	1	10.0-146			0.260	36
Bromomethane	0.117	U	0.0892	0.0852	76.6	73.1	1	10.0-149			4.59	38
n-Butylbenzene	0.117	U	0.118	0.122	102	104	1	10.0-160			2.74	40
sec-Butylbenzene	0.117	U	0.127	0.129	109	111	1	10.0-159			1.34	39
tert-Butylbenzene	0.117	U	0.131	0.133	113	114	1	10.0-156			1.30	39

L1608836-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1608836-13 04/28/23 14:57 • (MS) R3918851-3 04/28/23 19:24 • (MSD) R3918851-4 04/28/23 19:43

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Carbon tetrachloride	0.117	U	0.119	0.132	102	113	1	10.0-145			10.6	37
Chlorobenzene	0.117	U	0.130	0.132	112	113	1	10.0-152			1.74	39
Chlorodibromomethane	0.117	U	0.124	0.122	107	105	1	10.0-146			1.62	37
Chloroethane	0.117	U	0.0765	0.0729	65.6	62.6	1	10.0-146			4.78	40
Chloroform	0.117	U	0.110	0.113	94.7	97.3	1	10.0-146			2.68	37
Chloromethane	0.117	U	0.110	0.127	94.1	109	1	10.0-159			14.7	37
2-Chlorotoluene	0.117	U	0.136	0.134	116	115	1	10.0-159			1.06	38
4-Chlorotoluene	0.117	U	0.126	0.126	108	108	1	10.0-155			0.341	39
1,2-Dibromo-3-Chloropropane	0.117	U	0.0742	0.0758	63.7	65.0	1	10.0-151			2.10	39
1,2-Dibromoethane	0.117	U	0.129	0.131	111	112	1	10.0-148			1.54	34
Dibromomethane	0.117	U	0.111	0.114	94.8	97.8	1	10.0-147			3.06	35
1,2-Dichlorobenzene	0.117	U	0.125	0.124	108	106	1	10.0-155			1.15	37
1,3-Dichlorobenzene	0.117	U	0.128	0.127	110	109	1	10.0-153			0.560	38
1,4-Dichlorobenzene	0.117	U	0.128	0.127	110	109	1	10.0-151			1.01	38
Dichlorodifluoromethane	0.117	U	0.117	0.121	100	104	1	10.0-160			3.97	35
1,1-Dichloroethane	0.117	U	0.116	0.121	99.1	103	1	10.0-147			4.24	37
1,2-Dichloroethane	0.117	U	0.0952	0.0995	81.7	85.4	1	10.0-148			4.41	35
1,1-Dichloroethene	0.117	U	0.157	0.164	135	141	1	10.0-155			4.44	37
cis-1,2-Dichloroethene	0.117	U	0.121	0.122	104	104	1	10.0-149			0.235	37
trans-1,2-Dichloroethene	0.117	U	0.124	0.130	106	111	1	10.0-150			4.40	37
1,2-Dichloropropane	0.117	U	0.119	0.127	102	109	1	10.0-148			5.93	37
1,1-Dichloropropene	0.117	U	0.128	0.132	110	113	1	10.0-153			2.75	35
1,3-Dichloropropane	0.117	U	0.131	0.129	113	111	1	10.0-154			1.65	35
cis-1,3-Dichloropropene	0.117	U	0.128	0.128	110	110	1	10.0-151			0.112	37
trans-1,3-Dichloropropene	0.117	U	0.126	0.125	108	107	1	10.0-148			1.25	37
2,2-Dichloropropane	0.117	U	0.108	0.116	92.5	99.8	1	10.0-138			7.53	36
Di-isopropyl ether	0.117	U	0.112	0.118	96.0	101	1	10.0-147			4.99	36
Ethylbenzene	0.117	U	0.133	0.139	114	119	1	10.0-160			4.09	38
Hexachloro-1,3-butadiene	0.117	U	0.109	0.104	93.6	89.2	1	10.0-160			4.83	40
Isopropylbenzene	0.117	U	0.131	0.137	113	117	1	10.0-155			4.06	38
p-Isopropyltoluene	0.117	U	0.124	0.127	106	109	1	10.0-160			2.05	40
2-Butanone (MEK)	0.583	U	0.466	0.422	79.9	72.3	1	10.0-160			9.98	40
Methylene Chloride	0.117	U	0.162	0.167	139	144	1	10.0-141		J5	3.48	37
4-Methyl-2-pentanone (MIBK)	0.583	U	0.535	0.549	91.7	94.1	1	10.0-160			2.64	35
Methyl tert-butyl ether	0.117	U	0.0987	0.104	84.7	89.4	1	11.0-147			5.50	35
Naphthalene	0.117	U	0.0593	0.0639	50.9	54.8	1	10.0-160			7.42	36
n-Propylbenzene	0.117	U	0.126	0.127	108	109	1	10.0-158			1.02	38
Styrene	0.117	U	0.125	0.130	107	112	1	10.0-160			4.15	40
1,1,1,2-Tetrachloroethane	0.117	U	0.128	0.124	110	106	1	10.0-149			3.18	39

L1608836-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1608836-13 04/28/23 14:57 • (MS) R3918851-3 04/28/23 19:24 • (MSD) R3918851-4 04/28/23 19:43

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
1,1,2,2-Tetrachloroethane	0.117	U	0.117	0.113	101	97.3	1	10.0-160			3.47	35
1,1,2-Trichlorotrifluoroethane	0.117	U	0.143	0.134	123	115	1	10.0-160			6.50	36
Tetrachloroethene	0.117	U	0.146	0.149	125	128	1	10.0-156			1.94	39
Toluene	0.117	U	0.131	0.132	112	113	1	10.0-156			0.654	38
1,2,3-Trichlorobenzene	0.117	U	0.0548	0.0623	47.0	53.5	1	10.0-160			12.9	40
1,2,4-Trichlorobenzene	0.117	U	0.101	0.103	86.7	88.3	1	10.0-160			1.82	40
1,1,1-Trichloroethane	0.117	U	0.128	0.131	110	113	1	10.0-144			2.53	35
1,1,2-Trichloroethane	0.117	U	0.130	0.129	111	111	1	10.0-160			0.442	35
Trichloroethene	0.117	U	0.122	0.129	105	111	1	10.0-156			5.70	38
Trichlorofluoromethane	0.117	U	0.0952	0.0814	81.7	69.8	1	10.0-160			15.7	40
1,2,3-Trichloropropane	0.117	U	0.113	0.113	96.6	97.2	1	10.0-156			0.633	35
1,2,4-Trimethylbenzene	0.117	U	0.126	0.127	108	109	1	10.0-160			1.13	36
1,2,3-Trimethylbenzene	0.117	U	0.122	0.121	105	104	1	10.0-160			0.589	36
1,3,5-Trimethylbenzene	0.117	U	0.125	0.128	108	110	1	10.0-160			1.92	38
Vinyl chloride	0.117	U	0.115	0.118	98.8	101	1	10.0-160			2.70	37
Xylenes, Total	0.350	U	0.400	0.406	114	116	1	10.0-160			1.42	38
(S) Toluene-d8					*105*	*108*		*75.0-131*				
(S) 4-Bromofluorobenzene					*102*	*101*		*67.0-138*				
(S) 1,2-Dichloroethane-d4					*89.4*	*86.6*		*70.0-130*				

Method Blank (MB)

(MB) R3919751-1 05/01/23 22:25

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	*67.4*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3919751-2 05/01/23 22:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Diesel Range Organics (DRO)	50.0	38.9	77.8	50.0-150	
(S) o-Terphenyl			*88.3*	*18.0-148*	

Method Blank (MB)

(MB) R3919752-1 05/01/23 22:25

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	*67.4*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R3919752-2 05/01/23 22:38

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Diesel Range Organics (DRO)	50.0	38.9	77.8	50.0-150	
(S) o-Terphenyl			*88.3*	*18.0-148*	

L1609000-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1609000-04 05/01/23 22:51 • (MS) R3919752-3 05/01/23 23:04 • (MSD) R3919752-4 05/01/23 23:17

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	60.8	U	39.0	39.3	64.1	64.8	1	50.0-150			0.641	20
(S) o-Terphenyl					*69.7*	*70.8*		*18.0-148*				

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

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
RDL	Reported Detection Limit.
RDL (dry)	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.
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.

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:
Stantec Consulting - Portland, OR

601 SW 2nd Ave., Suite 1400
Portland, OR 97204

Billing Information:
Accounts Payable
601 SW 2nd Ave., Suite 1400
Portland, OR 97204

Report to:
Robert McAlister

Email To: **robert.mcalister@stantec.com**

Project Description: ~~Warren Distribution~~ HUBBARD ADDITIONAL ASSESSMENT

City/State Collected: HUBBARD, OR

Please Circle: (PT) MT CT ET

Phone: ~~503-297-1631~~ 714 686 4435

Client Project # 227704604

Lab Project # **SECORTOR-HUBBARD**

Collected by (print): ROBERT MCALISTER

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately
Packed on Ice N ____ Y X

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: STANDARD TAT

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
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 # L1609000
E011

Acctnum: **SECORTOR**
Template: **T227599**
Prelogin: **P990980**
PM: **546 - Jared Starkey**
PB: BW 4/6

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Pres Chk	NWTPHDXNOSGT 4ozClr-NoPres	NWTPHGX 40mlAmb/MeOH10ml/Syr	TS 4ozClr-NoPres	V8260C 40mlAmb/MeOH10ml/Syr	Remarks	Sample # (lab only)
GP-8-14'-15'	GRAB	SS	14'-15'	4/20/23	1250	2		X	X	X	X		-01
GP-9-14'-15'		SS			1150								-02
GP-10-14'-15'		SS			1115								-03
GP-11-14'-15'		SS			950								-04
GP-12-14'-15'		SS			910								-05
MW-4-14'-15'		SS			1330								-06
		~~SS~~ GW											

* 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 # 8162 2098 0342

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
	4/24/23 ~~130~~	1300	FEDEX		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.5 °C Bottles Received: 12	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 4-25-23 Time: 900	Hold: Condition: NCF / (OK)
			Lei 17		

ANALYTICAL REPORT

May 05, 2023

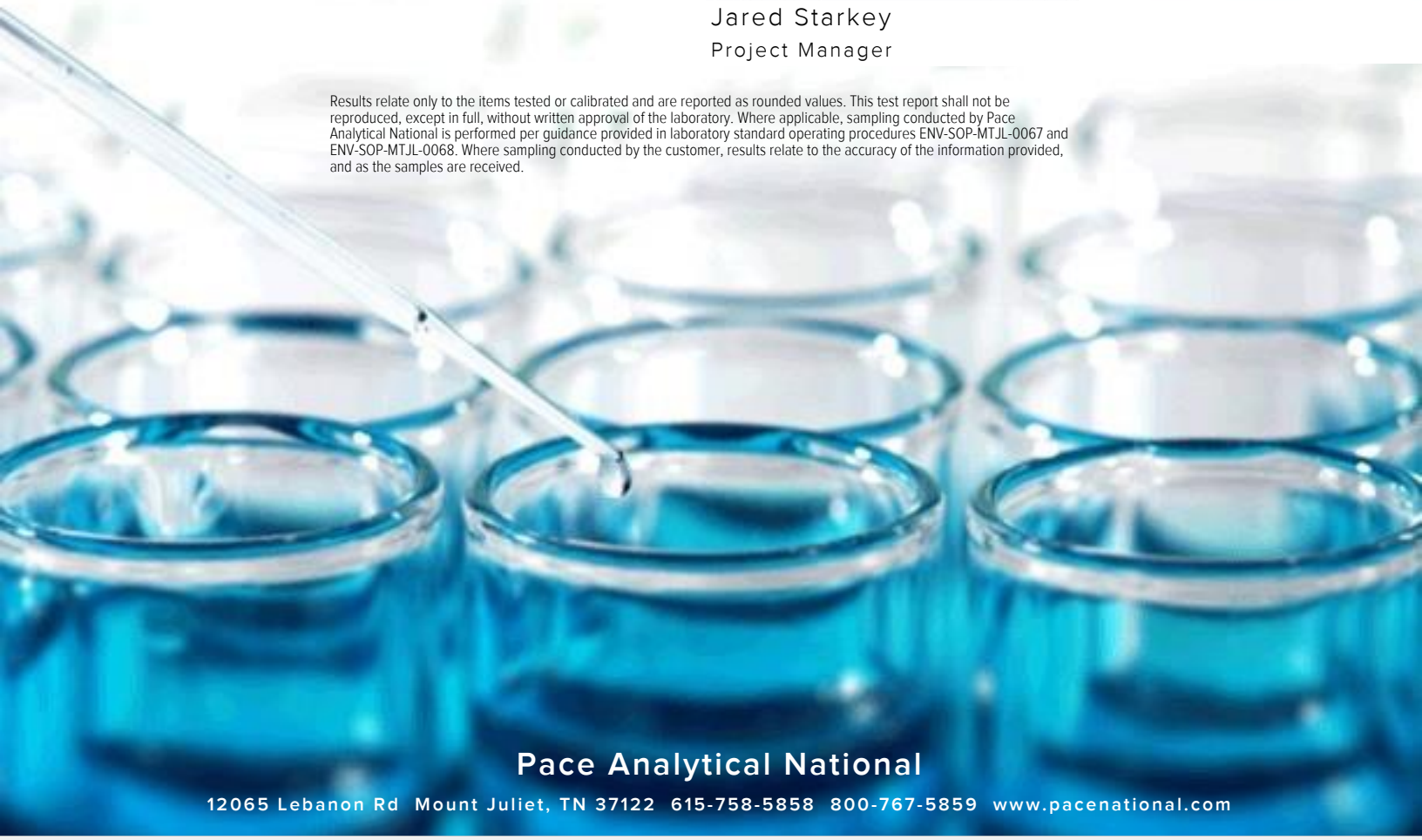
Stantec Consulting - Portland, OR

Sample Delivery Group:	L1609938
Samples Received:	04/27/2023
Project Number:	227704604
Description:	Hubbard

Report To: Robert McAlister
601 SW 2nd Ave., Suite 1400
Portland, OR 97204

Entire Report Reviewed By:

Jared Starkey
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-1 L1609938-01 GW

Collected by: Robert Mcalister | Collected date/time: 04/26/23 11:35 | Received date/time: 04/27/23 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2050800	1	05/03/23 15:51	05/04/23 11:52	ABL	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2051552	20	05/01/23 10:57	05/01/23 10:57	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2051588	20	05/01/23 05:32	05/01/23 05:32	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2052038	250	05/02/23 01:05	05/02/23 01:05	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2052934	1	05/04/23 07:59	05/04/23 16:22	HLJ	Mt. Juliet, TN

MW-2 L1609938-02 GW

Collected by: Robert Mcalister | Collected date/time: 04/26/23 11:00 | Received date/time: 04/27/23 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2050800	1	05/03/23 15:51	05/04/23 11:55	ABL	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2051552	5	05/01/23 07:24	05/01/23 07:24	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2051588	1	05/01/23 01:46	05/01/23 01:46	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2052934	1	05/04/23 07:59	05/04/23 16:42	HLJ	Mt. Juliet, TN

MW-3 L1609938-03 GW

Collected by: Robert Mcalister | Collected date/time: 04/26/23 10:20 | Received date/time: 04/27/23 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2050800	1	05/03/23 15:51	05/04/23 11:58	ABL	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2051552	5	05/01/23 10:14	05/01/23 10:14	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2051588	1	05/01/23 02:07	05/01/23 02:07	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2052934	1	05/04/23 07:59	05/04/23 17:02	HLJ	Mt. Juliet, TN

MW-4 L1609938-04 GW

Collected by: Robert Mcalister | Collected date/time: 04/26/23 09:30 | Received date/time: 04/27/23 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010D	WG2050800	1	05/03/23 15:51	05/04/23 12:01	ABL	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2051552	1	05/01/23 06:41	05/01/23 06:41	BAM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2051588	1	05/01/23 02:27	05/01/23 02:27	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2052934	1	05/04/23 07:59	05/04/23 17:23	HLJ	Mt. Juliet, TN

Unless qualified or notated within the narrative below, all sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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.

Jared Starkey
Project Manager

Volatile Organic Compounds (GC/MS) by Method 8260D

The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.

Batch	Lab Sample ID	Analytes
WG2051588	L1609938-01	1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, Bromomethane, Hexachloro-1,3-butadiene, Iodomethane, Naphthalene, n-Butylbenzene, n-Hexane, sec-Butylbenzene and trans-1,4-Dichloro-2-butene
WG2051588	L1609938-02	1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, Bromomethane, Hexachloro-1,3-butadiene, Iodomethane, Naphthalene, n-Butylbenzene, n-Hexane, sec-Butylbenzene and trans-1,4-Dichloro-2-butene
WG2051588	L1609938-03	1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, Bromomethane, Hexachloro-1,3-butadiene, Iodomethane, Naphthalene, n-Butylbenzene, n-Hexane, sec-Butylbenzene and trans-1,4-Dichloro-2-butene
WG2051588	L1609938-04	1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, Bromomethane, Hexachloro-1,3-butadiene, Iodomethane, Naphthalene, n-Butylbenzene, n-Hexane, sec-Butylbenzene and trans-1,4-Dichloro-2-butene

The associated batch QC was below the established quality control range for accuracy.

Batch	Lab Sample ID	Analytes
WG2051588	(LCSD) R3919384-2, L1609938-01, 02, 03, 04	n-Butylbenzene

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

The same analyte is found in the associated blank.

Batch	Analyte	Lab Sample ID
WG2052934	Residual Range Organics (RRO)	L1609938-02, 03, 04

DETECTION SUMMARY

Metals (ICP) by Method 6010D

Client ID	Lab Sample ID	Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
MW-1	L1609938-01	Lead,Dissolved	4.63	J	2.99	6.00	1	05/04/2023 11:52	WG2050800
MW-2	L1609938-02	Lead,Dissolved	18.5		2.99	6.00	1	05/04/2023 11:55	WG2050800
MW-3	L1609938-03	Lead,Dissolved	4.10	J	2.99	6.00	1	05/04/2023 11:58	WG2050800

Volatile Organic Compounds (GC) by Method NWTPHGX

Client ID	Lab Sample ID	Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
MW-1	L1609938-01	Gasoline Range Organics-NWTPH	67400		632	2000	20	05/01/2023 10:57	WG2051552
MW-4	L1609938-04	Gasoline Range Organics-NWTPH	96.8	J	31.6	100	1	05/01/2023 06:41	WG2051552

Volatile Organic Compounds (GC/MS) by Method 8260D

Client ID	Lab Sample ID	Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
MW-1	L1609938-01	Benzene	11900		23.5	125	250	05/02/2023 01:05	WG2052038
MW-1	L1609938-01	n-Butylbenzene	7.72	C3 J J4	3.14	10.0	20	05/01/2023 05:32	WG2051588
MW-1	L1609938-01	sec-Butylbenzene	8.12	C3 J	2.50	10.0	20	05/01/2023 05:32	WG2051588
MW-1	L1609938-01	1,2-Dibromoethane	8.18	J	2.52	10.0	20	05/01/2023 05:32	WG2051588
MW-1	L1609938-01	1,2-Dichloroethane	22.2		1.64	10.0	20	05/01/2023 05:32	WG2051588
MW-1	L1609938-01	Ethylbenzene	2310		2.74	10.0	20	05/01/2023 05:32	WG2051588
MW-1	L1609938-01	n-Hexane	283	C3	15.0	100	20	05/01/2023 05:32	WG2051588
MW-1	L1609938-01	Isopropylbenzene	84.3		2.10	10.0	20	05/01/2023 05:32	WG2051588
MW-1	L1609938-01	p-Isopropyltoluene	18.3		2.40	10.0	20	05/01/2023 05:32	WG2051588
MW-1	L1609938-01	Naphthalene	331	C3	3.48	50.0	20	05/01/2023 05:32	WG2051588
MW-1	L1609938-01	n-Propylbenzene	179		1.99	10.0	20	05/01/2023 05:32	WG2051588
MW-1	L1609938-01	Toluene	1720		5.56	10.0	20	05/01/2023 05:32	WG2051588
MW-1	L1609938-01	1,2,4-Trimethylbenzene	1270		6.44	10.0	20	05/01/2023 05:32	WG2051588
MW-1	L1609938-01	1,2,3-Trimethylbenzene	336		2.08	10.0	20	05/01/2023 05:32	WG2051588
MW-1	L1609938-01	1,3,5-Trimethylbenzene	308		2.08	10.0	20	05/01/2023 05:32	WG2051588
MW-1	L1609938-01	Xylenes, Total	9650		3.48	30.0	20	05/01/2023 05:32	WG2051588
MW-2	L1609938-02	2-Butanone (MEK)	1.58	J	1.19	5.00	1	05/01/2023 01:46	WG2051588
MW-3	L1609938-03	1,2-Dichloroethane	0.475	J	0.0819	0.500	1	05/01/2023 02:07	WG2051588
MW-4	L1609938-04	Benzene	0.461	J	0.0941	0.500	1	05/01/2023 02:27	WG2051588
MW-4	L1609938-04	Carbon disulfide	0.180	J	0.0962	0.500	1	05/01/2023 02:27	WG2051588
MW-4	L1609938-04	n-Hexane	3.20	C3 J	0.749	5.00	1	05/01/2023 02:27	WG2051588
MW-4	L1609938-04	Xylenes, Total	0.313	J	0.174	1.50	1	05/01/2023 02:27	WG2051588

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Client ID	Lab Sample ID	Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
MW-1	L1609938-01	Diesel Range Organics (DRO)	1130		66.7	200	1	05/04/2023 16:22	WG2052934
MW-2	L1609938-02	Diesel Range Organics (DRO)	699		66.7	200	1	05/04/2023 16:42	WG2052934
MW-2	L1609938-02	Residual Range Organics (RRO)	593	B	83.3	250	1	05/04/2023 16:42	WG2052934
MW-3	L1609938-03	Diesel Range Organics (DRO)	471		66.7	200	1	05/04/2023 17:02	WG2052934
MW-3	L1609938-03	Residual Range Organics (RRO)	843	B	83.3	250	1	05/04/2023 17:02	WG2052934
MW-4	L1609938-04	Diesel Range Organics (DRO)	133	J	66.7	200	1	05/04/2023 17:23	WG2052934
MW-4	L1609938-04	Residual Range Organics (RRO)	154	B J	83.3	250	1	05/04/2023 17:23	WG2052934

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Lead,Dissolved	4.63	J	2.99	6.00	1	05/04/2023 11:52	WG2050800

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	67400		632	2000	20	05/01/2023 10:57	WG2051552
(S) a,a,a-Trifluorotoluene(FID)	*98.6*			*78.0-120*		*05/01/2023 10:57*	WG2051552

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		226	500	20	05/01/2023 05:32	WG2051588
Acrylonitrile	U		13.4	100	20	05/01/2023 05:32	WG2051588
Benzene	11900		23.5	125	250	05/02/2023 01:05	WG2052038
Bromobenzene	U		2.36	10.0	20	05/01/2023 05:32	WG2051588
Bromodichloromethane	U		2.72	10.0	20	05/01/2023 05:32	WG2051588
Bromochloromethane	U		2.56	10.0	20	05/01/2023 05:32	WG2051588
Bromoform	U		2.58	10.0	20	05/01/2023 05:32	WG2051588
Bromomethane	U	C3	12.1	50.0	20	05/01/2023 05:32	WG2051588
n-Butylbenzene	7.72	C3 J J4	3.14	10.0	20	05/01/2023 05:32	WG2051588
sec-Butylbenzene	8.12	C3 J	2.50	10.0	20	05/01/2023 05:32	WG2051588
tert-Butylbenzene	U		2.54	10.0	20	05/01/2023 05:32	WG2051588
Carbon disulfide	U		1.92	10.0	20	05/01/2023 05:32	WG2051588
Carbon tetrachloride	U		2.56	10.0	20	05/01/2023 05:32	WG2051588
Chlorobenzene	U		2.34	10.0	20	05/01/2023 05:32	WG2051588
Chlorodibromomethane	U		2.80	10.0	20	05/01/2023 05:32	WG2051588
Chloroethane	U		3.84	50.0	20	05/01/2023 05:32	WG2051588
2-Chloroethyl vinyl ether	U		11.5	1000	20	05/01/2023 05:32	WG2051588
Chloroform	U		2.22	10.0	20	05/01/2023 05:32	WG2051588
Chloromethane	U		19.2	25.0	20	05/01/2023 05:32	WG2051588
2-Chlorotoluene	U		2.12	10.0	20	05/01/2023 05:32	WG2051588
4-Chlorotoluene	U		2.28	10.0	20	05/01/2023 05:32	WG2051588
1,2-Dibromo-3-Chloropropane	U		5.52	50.0	20	05/01/2023 05:32	WG2051588
1,2-Dibromoethane	8.18	J	2.52	10.0	20	05/01/2023 05:32	WG2051588
Dibromomethane	U		2.44	10.0	20	05/01/2023 05:32	WG2051588
1,2-Dichlorobenzene	U		2.14	10.0	20	05/01/2023 05:32	WG2051588
1,3-Dichlorobenzene	U		5.98	10.0	20	05/01/2023 05:32	WG2051588
1,4-Dichlorobenzene	U		2.40	10.0	20	05/01/2023 05:32	WG2051588
Dichlorodifluoromethane	U		7.48	50.0	20	05/01/2023 05:32	WG2051588
1,1-Dichloroethane	U		2.00	10.0	20	05/01/2023 05:32	WG2051588
1,2-Dichloroethane	22.2		1.64	10.0	20	05/01/2023 05:32	WG2051588
1,1-Dichloroethene	U		3.76	10.0	20	05/01/2023 05:32	WG2051588
cis-1,2-Dichloroethene	U		2.52	10.0	20	05/01/2023 05:32	WG2051588
trans-1,2-Dichloroethene	U		2.98	10.0	20	05/01/2023 05:32	WG2051588
1,2-Dichloropropane	U		2.98	10.0	20	05/01/2023 05:32	WG2051588
1,1-Dichloropropene	U		2.84	10.0	20	05/01/2023 05:32	WG2051588
1,3-Dichloropropane	U		2.18	20.0	20	05/01/2023 05:32	WG2051588
cis-1,3-Dichloropropene	U		2.22	10.0	20	05/01/2023 05:32	WG2051588
trans-1,3-Dichloropropene	U		2.36	10.0	20	05/01/2023 05:32	WG2051588
trans-1,4-Dichloro-2-butene	U	C3	9.34	100	20	05/01/2023 05:32	WG2051588
2,2-Dichloropropane	U		3.22	10.0	20	05/01/2023 05:32	WG2051588
Di-isopropyl ether	U		2.10	10.0	20	05/01/2023 05:32	WG2051588
Ethylbenzene	2310		2.74	10.0	20	05/01/2023 05:32	WG2051588
Hexachloro-1,3-butadiene	U	C3	6.74	20.0	20	05/01/2023 05:32	WG2051588

1 Cp
2 Tc
3 Ss
4 Cn
5 Ds
6 Sr
7 Qc
8 Gl
9 Al
10 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
2-Hexanone	U		15.7	100	20	05/01/2023 05:32	WG2051588
n-Hexane	283	C3	15.0	100	20	05/01/2023 05:32	WG2051588
Iodomethane	U	C3	11.1	100	20	05/01/2023 05:32	WG2051588
Isopropylbenzene	84.3		2.10	10.0	20	05/01/2023 05:32	WG2051588
p-Isopropyltoluene	18.3		2.40	10.0	20	05/01/2023 05:32	WG2051588
2-Butanone (MEK)	U		23.8	100	20	05/01/2023 05:32	WG2051588
Methylene Chloride	U		8.60	50.0	20	05/01/2023 05:32	WG2051588
4-Methyl-2-pentanone (MIBK)	U		9.56	100	20	05/01/2023 05:32	WG2051588
Methyl tert-butyl ether	U		2.02	10.0	20	05/01/2023 05:32	WG2051588
Naphthalene	331	C3	3.48	50.0	20	05/01/2023 05:32	WG2051588
n-Propylbenzene	179		1.99	10.0	20	05/01/2023 05:32	WG2051588
Styrene	U		2.36	10.0	20	05/01/2023 05:32	WG2051588
1,1,1,2-Tetrachloroethane	U		2.94	10.0	20	05/01/2023 05:32	WG2051588
1,1,2,2-Tetrachloroethane	U		2.66	10.0	20	05/01/2023 05:32	WG2051588
1,1,2-Trichlorotrifluoroethane	U		3.60	10.0	20	05/01/2023 05:32	WG2051588
Tetrachloroethene	U		6.00	10.0	20	05/01/2023 05:32	WG2051588
Toluene	1720		5.56	10.0	20	05/01/2023 05:32	WG2051588
1,2,3-Trichlorobenzene	U	C3	3.28	10.0	20	05/01/2023 05:32	WG2051588
1,2,4-Trichlorobenzene	U	C3	9.62	20.0	20	05/01/2023 05:32	WG2051588
1,1,1-Trichloroethane	U		2.98	10.0	20	05/01/2023 05:32	WG2051588
1,1,2-Trichloroethane	U		3.16	10.0	20	05/01/2023 05:32	WG2051588
Trichloroethene	U		3.80	10.0	20	05/01/2023 05:32	WG2051588
Trichlorofluoromethane	U		3.20	50.0	20	05/01/2023 05:32	WG2051588
1,2,3-Trichloropropane	U		4.74	50.0	20	05/01/2023 05:32	WG2051588
1,2,4-Trimethylbenzene	1270		6.44	10.0	20	05/01/2023 05:32	WG2051588
1,2,3-Trimethylbenzene	336		2.08	10.0	20	05/01/2023 05:32	WG2051588
1,3,5-Trimethylbenzene	308		2.08	10.0	20	05/01/2023 05:32	WG2051588
Vinyl acetate	U		13.8	100	20	05/01/2023 05:32	WG2051588
Vinyl chloride	U		4.68	10.0	20	05/01/2023 05:32	WG2051588
Xylenes, Total	9650		3.48	30.0	20	05/01/2023 05:32	WG2051588
(S) Toluene-d8	*98.3*			*80.0-120*		*05/01/2023 05:32*	WG2051588
(S) Toluene-d8	*107*			*80.0-120*		*05/02/2023 01:05*	WG2052038
(S) 4-Bromofluorobenzene	*99.5*			*77.0-126*		*05/01/2023 05:32*	WG2051588
(S) 4-Bromofluorobenzene	*98.6*			*77.0-126*		*05/02/2023 01:05*	WG2052038
(S) 1,2-Dichloroethane-d4	*96.3*			*70.0-130*		*05/01/2023 05:32*	WG2051588
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*05/02/2023 01:05*	WG2052038

Sample Narrative:

L1609938-01 WG2051588: Target compounds too high to run at a lower dilution.

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	1130		66.7	200	1	05/04/2023 16:22	WG2052934
Residual Range Organics (RRO)	U		83.3	250	1	05/04/2023 16:22	WG2052934
(S) o-Terphenyl	*108*			*52.0-156*		*05/04/2023 16:22*	WG2052934

Sample Narrative:

L1609938-01 WG2052934: Sample resembles laboratory standard for Mineral Spirits

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Lead,Dissolved	18.5		2.99	6.00	1	05/04/2023 11:55	WG2050800

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	U		158	500	5	05/01/2023 07:24	WG2051552
(S) a,a,a-Trifluorotoluene(FID)	*111*			*78.0-120*		*05/01/2023 07:24*	WG2051552

Sample Narrative:

L1609938-02 WG2051552: Lowest possible dilution due to sample foaming.

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	25.0	1	05/01/2023 01:46	WG2051588
Acrylonitrile	U		0.671	5.00	1	05/01/2023 01:46	WG2051588
Benzene	U		0.0941	0.500	1	05/01/2023 01:46	WG2051588
Bromobenzene	U		0.118	0.500	1	05/01/2023 01:46	WG2051588
Bromodichloromethane	U		0.136	0.500	1	05/01/2023 01:46	WG2051588
Bromochloromethane	U		0.128	0.500	1	05/01/2023 01:46	WG2051588
Bromoform	U		0.129	0.500	1	05/01/2023 01:46	WG2051588
Bromomethane	U	C3	0.605	2.50	1	05/01/2023 01:46	WG2051588
n-Butylbenzene	U	C3 J4	0.157	0.500	1	05/01/2023 01:46	WG2051588
sec-Butylbenzene	U	C3	0.125	0.500	1	05/01/2023 01:46	WG2051588
tert-Butylbenzene	U		0.127	0.500	1	05/01/2023 01:46	WG2051588
Carbon disulfide	U		0.0962	0.500	1	05/01/2023 01:46	WG2051588
Carbon tetrachloride	U		0.128	0.500	1	05/01/2023 01:46	WG2051588
Chlorobenzene	U		0.117	0.500	1	05/01/2023 01:46	WG2051588
Chlorodibromomethane	U		0.140	0.500	1	05/01/2023 01:46	WG2051588
Chloroethane	U		0.192	2.50	1	05/01/2023 01:46	WG2051588
2-Chloroethyl vinyl ether	U		0.575	50.0	1	05/01/2023 01:46	WG2051588
Chloroform	U		0.111	0.500	1	05/01/2023 01:46	WG2051588
Chloromethane	U		0.960	1.25	1	05/01/2023 01:46	WG2051588
2-Chlorotoluene	U		0.106	0.500	1	05/01/2023 01:46	WG2051588
4-Chlorotoluene	U		0.114	0.500	1	05/01/2023 01:46	WG2051588
1,2-Dibromo-3-Chloropropane	U		0.276	2.50	1	05/01/2023 01:46	WG2051588
1,2-Dibromoethane	U		0.126	0.500	1	05/01/2023 01:46	WG2051588
Dibromomethane	U		0.122	0.500	1	05/01/2023 01:46	WG2051588
1,2-Dichlorobenzene	U		0.107	0.500	1	05/01/2023 01:46	WG2051588
1,3-Dichlorobenzene	U		0.299	0.500	1	05/01/2023 01:46	WG2051588
1,4-Dichlorobenzene	U		0.120	0.500	1	05/01/2023 01:46	WG2051588
Dichlorodifluoromethane	U		0.374	2.50	1	05/01/2023 01:46	WG2051588
1,1-Dichloroethane	U		0.100	0.500	1	05/01/2023 01:46	WG2051588
1,2-Dichloroethane	U		0.0819	0.500	1	05/01/2023 01:46	WG2051588
1,1-Dichloroethene	U		0.188	0.500	1	05/01/2023 01:46	WG2051588
cis-1,2-Dichloroethene	U		0.126	0.500	1	05/01/2023 01:46	WG2051588
trans-1,2-Dichloroethene	U		0.149	0.500	1	05/01/2023 01:46	WG2051588
1,2-Dichloropropane	U		0.149	0.500	1	05/01/2023 01:46	WG2051588
1,1-Dichloropropene	U		0.142	0.500	1	05/01/2023 01:46	WG2051588
1,3-Dichloropropane	U		0.109	1.00	1	05/01/2023 01:46	WG2051588
cis-1,3-Dichloropropene	U		0.111	0.500	1	05/01/2023 01:46	WG2051588
trans-1,3-Dichloropropene	U		0.118	0.500	1	05/01/2023 01:46	WG2051588
trans-1,4-Dichloro-2-butene	U	C3	0.467	5.00	1	05/01/2023 01:46	WG2051588
2,2-Dichloropropane	U		0.161	0.500	1	05/01/2023 01:46	WG2051588

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Di-isopropyl ether	U		0.105	0.500	1	05/01/2023 01:46	WG2051588
Ethylbenzene	U		0.137	0.500	1	05/01/2023 01:46	WG2051588
Hexachloro-1,3-butadiene	U	C3	0.337	1.00	1	05/01/2023 01:46	WG2051588
2-Hexanone	U		0.787	5.00	1	05/01/2023 01:46	WG2051588
n-Hexane	U	C3	0.749	5.00	1	05/01/2023 01:46	WG2051588
Iodomethane	U	C3	0.554	5.00	1	05/01/2023 01:46	WG2051588
Isopropylbenzene	U		0.105	0.500	1	05/01/2023 01:46	WG2051588
p-Isopropyltoluene	U		0.120	0.500	1	05/01/2023 01:46	WG2051588
2-Butanone (MEK)	1.58	J	1.19	5.00	1	05/01/2023 01:46	WG2051588
Methylene Chloride	U		0.430	2.50	1	05/01/2023 01:46	WG2051588
4-Methyl-2-pentanone (MIBK)	U		0.478	5.00	1	05/01/2023 01:46	WG2051588
Methyl tert-butyl ether	U		0.101	0.500	1	05/01/2023 01:46	WG2051588
Naphthalene	U	C3	0.174	2.50	1	05/01/2023 01:46	WG2051588
n-Propylbenzene	U		0.0993	0.500	1	05/01/2023 01:46	WG2051588
Styrene	U		0.118	0.500	1	05/01/2023 01:46	WG2051588
1,1,1,2-Tetrachloroethane	U		0.147	0.500	1	05/01/2023 01:46	WG2051588
1,1,2,2-Tetrachloroethane	U		0.133	0.500	1	05/01/2023 01:46	WG2051588
1,1,2-Trichlorotrifluoroethane	U		0.180	0.500	1	05/01/2023 01:46	WG2051588
Tetrachloroethene	U		0.300	0.500	1	05/01/2023 01:46	WG2051588
Toluene	U		0.278	0.500	1	05/01/2023 01:46	WG2051588
1,2,3-Trichlorobenzene	U	C3	0.164	0.500	1	05/01/2023 01:46	WG2051588
1,2,4-Trichlorobenzene	U	C3	0.481	1.00	1	05/01/2023 01:46	WG2051588
1,1,1-Trichloroethane	U		0.149	0.500	1	05/01/2023 01:46	WG2051588
1,1,2-Trichloroethane	U		0.158	0.500	1	05/01/2023 01:46	WG2051588
Trichloroethene	U		0.190	0.500	1	05/01/2023 01:46	WG2051588
Trichlorofluoromethane	U		0.160	2.50	1	05/01/2023 01:46	WG2051588
1,2,3-Trichloropropane	U		0.237	2.50	1	05/01/2023 01:46	WG2051588
1,2,4-Trimethylbenzene	U		0.322	0.500	1	05/01/2023 01:46	WG2051588
1,2,3-Trimethylbenzene	U		0.104	0.500	1	05/01/2023 01:46	WG2051588
1,3,5-Trimethylbenzene	U		0.104	0.500	1	05/01/2023 01:46	WG2051588
Vinyl acetate	U		0.692	5.00	1	05/01/2023 01:46	WG2051588
Vinyl chloride	U		0.234	0.500	1	05/01/2023 01:46	WG2051588
Xylenes, Total	U		0.174	1.50	1	05/01/2023 01:46	WG2051588
(S) Toluene-d8	*97.6*			*80.0-120*		*05/01/2023 01:46*	WG2051588
(S) 4-Bromofluorobenzene	*100*			*77.0-126*		*05/01/2023 01:46*	WG2051588
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*05/01/2023 01:46*	WG2051588

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	699		66.7	200	1	05/04/2023 16:42	WG2052934
Residual Range Organics (RRO)	593	B	83.3	250	1	05/04/2023 16:42	WG2052934
(S) o-Terphenyl	*105*			*52.0-156*		*05/04/2023 16:42*	WG2052934

Sample Narrative:

L1609938-02 WG2052934: Sample does not resemble laboratory standards.

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Lead,Dissolved	4.10	J	2.99	6.00	1	05/04/2023 11:58	WG2050800

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	U		158	500	5	05/01/2023 10:14	WG2051552
(S) a,a,a-Trifluorotoluene(FID)	*111*			*78.0-120*		*05/01/2023 10:14*	WG2051552

Sample Narrative:

L1609938-03 WG2051552: Lowest possible dilution due to sample foaming.

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	25.0	1	05/01/2023 02:07	WG2051588
Acrylonitrile	U		0.671	5.00	1	05/01/2023 02:07	WG2051588
Benzene	U		0.0941	0.500	1	05/01/2023 02:07	WG2051588
Bromobenzene	U		0.118	0.500	1	05/01/2023 02:07	WG2051588
Bromodichloromethane	U		0.136	0.500	1	05/01/2023 02:07	WG2051588
Bromochloromethane	U		0.128	0.500	1	05/01/2023 02:07	WG2051588
Bromoform	U		0.129	0.500	1	05/01/2023 02:07	WG2051588
Bromomethane	U	C3	0.605	2.50	1	05/01/2023 02:07	WG2051588
n-Butylbenzene	U	C3 J4	0.157	0.500	1	05/01/2023 02:07	WG2051588
sec-Butylbenzene	U	C3	0.125	0.500	1	05/01/2023 02:07	WG2051588
tert-Butylbenzene	U		0.127	0.500	1	05/01/2023 02:07	WG2051588
Carbon disulfide	U		0.0962	0.500	1	05/01/2023 02:07	WG2051588
Carbon tetrachloride	U		0.128	0.500	1	05/01/2023 02:07	WG2051588
Chlorobenzene	U		0.117	0.500	1	05/01/2023 02:07	WG2051588
Chlorodibromomethane	U		0.140	0.500	1	05/01/2023 02:07	WG2051588
Chloroethane	U		0.192	2.50	1	05/01/2023 02:07	WG2051588
2-Chloroethyl vinyl ether	U		0.575	50.0	1	05/01/2023 02:07	WG2051588
Chloroform	U		0.111	0.500	1	05/01/2023 02:07	WG2051588
Chloromethane	U		0.960	1.25	1	05/01/2023 02:07	WG2051588
2-Chlorotoluene	U		0.106	0.500	1	05/01/2023 02:07	WG2051588
4-Chlorotoluene	U		0.114	0.500	1	05/01/2023 02:07	WG2051588
1,2-Dibromo-3-Chloropropane	U		0.276	2.50	1	05/01/2023 02:07	WG2051588
1,2-Dibromoethane	U		0.126	0.500	1	05/01/2023 02:07	WG2051588
Dibromomethane	U		0.122	0.500	1	05/01/2023 02:07	WG2051588
1,2-Dichlorobenzene	U		0.107	0.500	1	05/01/2023 02:07	WG2051588
1,3-Dichlorobenzene	U		0.299	0.500	1	05/01/2023 02:07	WG2051588
1,4-Dichlorobenzene	U		0.120	0.500	1	05/01/2023 02:07	WG2051588
Dichlorodifluoromethane	U		0.374	2.50	1	05/01/2023 02:07	WG2051588
1,1-Dichloroethane	U		0.100	0.500	1	05/01/2023 02:07	WG2051588
1,2-Dichloroethane	0.475	J	0.0819	0.500	1	05/01/2023 02:07	WG2051588
1,1-Dichloroethene	U		0.188	0.500	1	05/01/2023 02:07	WG2051588
cis-1,2-Dichloroethene	U		0.126	0.500	1	05/01/2023 02:07	WG2051588
trans-1,2-Dichloroethene	U		0.149	0.500	1	05/01/2023 02:07	WG2051588
1,2-Dichloropropane	U		0.149	0.500	1	05/01/2023 02:07	WG2051588
1,1-Dichloropropene	U		0.142	0.500	1	05/01/2023 02:07	WG2051588
1,3-Dichloropropane	U		0.109	1.00	1	05/01/2023 02:07	WG2051588
cis-1,3-Dichloropropene	U		0.111	0.500	1	05/01/2023 02:07	WG2051588
trans-1,3-Dichloropropene	U		0.118	0.500	1	05/01/2023 02:07	WG2051588
trans-1,4-Dichloro-2-butene	U	C3	0.467	5.00	1	05/01/2023 02:07	WG2051588
2,2-Dichloropropane	U		0.161	0.500	1	05/01/2023 02:07	WG2051588

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Di-isopropyl ether	U		0.105	0.500	1	05/01/2023 02:07	WG2051588
Ethylbenzene	U		0.137	0.500	1	05/01/2023 02:07	WG2051588
Hexachloro-1,3-butadiene	U	C3	0.337	1.00	1	05/01/2023 02:07	WG2051588
2-Hexanone	U		0.787	5.00	1	05/01/2023 02:07	WG2051588
n-Hexane	U	C3	0.749	5.00	1	05/01/2023 02:07	WG2051588
Iodomethane	U	C3	0.554	5.00	1	05/01/2023 02:07	WG2051588
Isopropylbenzene	U		0.105	0.500	1	05/01/2023 02:07	WG2051588
p-Isopropyltoluene	U		0.120	0.500	1	05/01/2023 02:07	WG2051588
2-Butanone (MEK)	U		1.19	5.00	1	05/01/2023 02:07	WG2051588
Methylene Chloride	U		0.430	2.50	1	05/01/2023 02:07	WG2051588
4-Methyl-2-pentanone (MIBK)	U		0.478	5.00	1	05/01/2023 02:07	WG2051588
Methyl tert-butyl ether	U		0.101	0.500	1	05/01/2023 02:07	WG2051588
Naphthalene	U	C3	0.174	2.50	1	05/01/2023 02:07	WG2051588
n-Propylbenzene	U		0.0993	0.500	1	05/01/2023 02:07	WG2051588
Styrene	U		0.118	0.500	1	05/01/2023 02:07	WG2051588
1,1,1,2-Tetrachloroethane	U		0.147	0.500	1	05/01/2023 02:07	WG2051588
1,1,2,2-Tetrachloroethane	U		0.133	0.500	1	05/01/2023 02:07	WG2051588
1,1,2-Trichlorotrifluoroethane	U		0.180	0.500	1	05/01/2023 02:07	WG2051588
Tetrachloroethene	U		0.300	0.500	1	05/01/2023 02:07	WG2051588
Toluene	U		0.278	0.500	1	05/01/2023 02:07	WG2051588
1,2,3-Trichlorobenzene	U	C3	0.164	0.500	1	05/01/2023 02:07	WG2051588
1,2,4-Trichlorobenzene	U	C3	0.481	1.00	1	05/01/2023 02:07	WG2051588
1,1,1-Trichloroethane	U		0.149	0.500	1	05/01/2023 02:07	WG2051588
1,1,2-Trichloroethane	U		0.158	0.500	1	05/01/2023 02:07	WG2051588
Trichloroethene	U		0.190	0.500	1	05/01/2023 02:07	WG2051588
Trichlorofluoromethane	U		0.160	2.50	1	05/01/2023 02:07	WG2051588
1,2,3-Trichloropropane	U		0.237	2.50	1	05/01/2023 02:07	WG2051588
1,2,4-Trimethylbenzene	U		0.322	0.500	1	05/01/2023 02:07	WG2051588
1,2,3-Trimethylbenzene	U		0.104	0.500	1	05/01/2023 02:07	WG2051588
1,3,5-Trimethylbenzene	U		0.104	0.500	1	05/01/2023 02:07	WG2051588
Vinyl acetate	U		0.692	5.00	1	05/01/2023 02:07	WG2051588
Vinyl chloride	U		0.234	0.500	1	05/01/2023 02:07	WG2051588
Xylenes, Total	U		0.174	1.50	1	05/01/2023 02:07	WG2051588
(S) Toluene-d8	*103*			*80.0-120*		*05/01/2023 02:07*	WG2051588
(S) 4-Bromofluorobenzene	*103*			*77.0-126*		*05/01/2023 02:07*	WG2051588
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*05/01/2023 02:07*	WG2051588

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Diesel Range Organics (DRO)	471		66.7	200	1	05/04/2023 17:02	WG2052934
Residual Range Organics (RRO)	843	B	83.3	250	1	05/04/2023 17:02	WG2052934
(S) o-Terphenyl	*114*			*52.0-156*		*05/04/2023 17:02*	WG2052934

Sample Narrative:

L1609938-03 WG2052934: Sample does not resemble laboratory standards.

Metals (ICP) by Method 6010D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Lead,Dissolved	U		2.99	6.00	1	05/04/2023 12:01	WG2050800

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	96.8	J	31.6	100	1	05/01/2023 06:41	WG2051552
(S) a,a,a-Trifluorotoluene(FID)	*103*			*78.0-120*		*05/01/2023 06:41*	WG2051552

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	25.0	1	05/01/2023 02:27	WG2051588
Acrylonitrile	U		0.671	5.00	1	05/01/2023 02:27	WG2051588
Benzene	0.461	J	0.0941	0.500	1	05/01/2023 02:27	WG2051588
Bromobenzene	U		0.118	0.500	1	05/01/2023 02:27	WG2051588
Bromodichloromethane	U		0.136	0.500	1	05/01/2023 02:27	WG2051588
Bromochloromethane	U		0.128	0.500	1	05/01/2023 02:27	WG2051588
Bromoform	U		0.129	0.500	1	05/01/2023 02:27	WG2051588
Bromomethane	U	C3	0.605	2.50	1	05/01/2023 02:27	WG2051588
n-Butylbenzene	U	C3 J4	0.157	0.500	1	05/01/2023 02:27	WG2051588
sec-Butylbenzene	U	C3	0.125	0.500	1	05/01/2023 02:27	WG2051588
tert-Butylbenzene	U		0.127	0.500	1	05/01/2023 02:27	WG2051588
Carbon disulfide	0.180	J	0.0962	0.500	1	05/01/2023 02:27	WG2051588
Carbon tetrachloride	U		0.128	0.500	1	05/01/2023 02:27	WG2051588
Chlorobenzene	U		0.117	0.500	1	05/01/2023 02:27	WG2051588
Chlorodibromomethane	U		0.140	0.500	1	05/01/2023 02:27	WG2051588
Chloroethane	U		0.192	2.50	1	05/01/2023 02:27	WG2051588
2-Chloroethyl vinyl ether	U		0.575	50.0	1	05/01/2023 02:27	WG2051588
Chloroform	U		0.111	0.500	1	05/01/2023 02:27	WG2051588
Chloromethane	U		0.960	1.25	1	05/01/2023 02:27	WG2051588
2-Chlorotoluene	U		0.106	0.500	1	05/01/2023 02:27	WG2051588
4-Chlorotoluene	U		0.114	0.500	1	05/01/2023 02:27	WG2051588
1,2-Dibromo-3-Chloropropane	U		0.276	2.50	1	05/01/2023 02:27	WG2051588
1,2-Dibromoethane	U		0.126	0.500	1	05/01/2023 02:27	WG2051588
Dibromomethane	U		0.122	0.500	1	05/01/2023 02:27	WG2051588
1,2-Dichlorobenzene	U		0.107	0.500	1	05/01/2023 02:27	WG2051588
1,3-Dichlorobenzene	U		0.299	0.500	1	05/01/2023 02:27	WG2051588
1,4-Dichlorobenzene	U		0.120	0.500	1	05/01/2023 02:27	WG2051588
Dichlorodifluoromethane	U		0.374	2.50	1	05/01/2023 02:27	WG2051588
1,1-Dichloroethane	U		0.100	0.500	1	05/01/2023 02:27	WG2051588
1,2-Dichloroethane	U		0.0819	0.500	1	05/01/2023 02:27	WG2051588
1,1-Dichloroethene	U		0.188	0.500	1	05/01/2023 02:27	WG2051588
cis-1,2-Dichloroethene	U		0.126	0.500	1	05/01/2023 02:27	WG2051588
trans-1,2-Dichloroethene	U		0.149	0.500	1	05/01/2023 02:27	WG2051588
1,2-Dichloropropane	U		0.149	0.500	1	05/01/2023 02:27	WG2051588
1,1-Dichloropropene	U		0.142	0.500	1	05/01/2023 02:27	WG2051588
1,3-Dichloropropane	U		0.109	1.00	1	05/01/2023 02:27	WG2051588
cis-1,3-Dichloropropene	U		0.111	0.500	1	05/01/2023 02:27	WG2051588
trans-1,3-Dichloropropene	U		0.118	0.500	1	05/01/2023 02:27	WG2051588
trans-1,4-Dichloro-2-butene	U	C3	0.467	5.00	1	05/01/2023 02:27	WG2051588
2,2-Dichloropropane	U		0.161	0.500	1	05/01/2023 02:27	WG2051588
Di-isopropyl ether	U		0.105	0.500	1	05/01/2023 02:27	WG2051588
Ethylbenzene	U		0.137	0.500	1	05/01/2023 02:27	WG2051588
Hexachloro-1,3-butadiene	U	C3	0.337	1.00	1	05/01/2023 02:27	WG2051588

1 Cp
2 Tc
3 Ss
4 Cn
5 Ds
6 Sr
7 Qc
8 Gl
9 Al
10 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
2-Hexanone	U		0.787	5.00	1	05/01/2023 02:27	WG2051588
n-Hexane	3.20	C3 J	0.749	5.00	1	05/01/2023 02:27	WG2051588
Iodomethane	U	C3	0.554	5.00	1	05/01/2023 02:27	WG2051588
Isopropylbenzene	U		0.105	0.500	1	05/01/2023 02:27	WG2051588
p-Isopropyltoluene	U		0.120	0.500	1	05/01/2023 02:27	WG2051588
2-Butanone (MEK)	U		1.19	5.00	1	05/01/2023 02:27	WG2051588
Methylene Chloride	U		0.430	2.50	1	05/01/2023 02:27	WG2051588
4-Methyl-2-pentanone (MIBK)	U		0.478	5.00	1	05/01/2023 02:27	WG2051588
Methyl tert-butyl ether	U		0.101	0.500	1	05/01/2023 02:27	WG2051588
Naphthalene	U	C3	0.174	2.50	1	05/01/2023 02:27	WG2051588
n-Propylbenzene	U		0.0993	0.500	1	05/01/2023 02:27	WG2051588
Styrene	U		0.118	0.500	1	05/01/2023 02:27	WG2051588
1,1,1,2-Tetrachloroethane	U		0.147	0.500	1	05/01/2023 02:27	WG2051588
1,1,2,2-Tetrachloroethane	U		0.133	0.500	1	05/01/2023 02:27	WG2051588
1,1,2-Trichlorotrifluoroethane	U		0.180	0.500	1	05/01/2023 02:27	WG2051588
Tetrachloroethene	U		0.300	0.500	1	05/01/2023 02:27	WG2051588
Toluene	U		0.278	0.500	1	05/01/2023 02:27	WG2051588
1,2,3-Trichlorobenzene	U	C3	0.164	0.500	1	05/01/2023 02:27	WG2051588
1,2,4-Trichlorobenzene	U	C3	0.481	1.00	1	05/01/2023 02:27	WG2051588
1,1,1-Trichloroethane	U		0.149	0.500	1	05/01/2023 02:27	WG2051588
1,1,2-Trichloroethane	U		0.158	0.500	1	05/01/2023 02:27	WG2051588
Trichloroethene	U		0.190	0.500	1	05/01/2023 02:27	WG2051588
Trichlorofluoromethane	U		0.160	2.50	1	05/01/2023 02:27	WG2051588
1,2,3-Trichloropropane	U		0.237	2.50	1	05/01/2023 02:27	WG2051588
1,2,4-Trimethylbenzene	U		0.322	0.500	1	05/01/2023 02:27	WG2051588
1,2,3-Trimethylbenzene	U		0.104	0.500	1	05/01/2023 02:27	WG2051588
1,3,5-Trimethylbenzene	U		0.104	0.500	1	05/01/2023 02:27	WG2051588
Vinyl acetate	U		0.692	5.00	1	05/01/2023 02:27	WG2051588
Vinyl chloride	U		0.234	0.500	1	05/01/2023 02:27	WG2051588
Xylenes, Total	0.313	J	0.174	1.50	1	05/01/2023 02:27	WG2051588
(S) Toluene-d8	*99.1*			*80.0-120*		*05/01/2023 02:27*	WG2051588
(S) 4-Bromofluorobenzene	*92.1*			*77.0-126*		*05/01/2023 02:27*	WG2051588
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*05/01/2023 02:27*	WG2051588

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	133	J	66.7	200	1	05/04/2023 17:23	WG2052934
Residual Range Organics (RRO)	154	B J	83.3	250	1	05/04/2023 17:23	WG2052934
(S) o-Terphenyl	*109*			*52.0-156*		*05/04/2023 17:23*	WG2052934

Method Blank (MB)

(MB) R3920952-1 05/04/23 11:16

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Lead,Dissolved	U		2.99	6.00

Laboratory Control Sample (LCS)

(LCS) R3920952-2 05/04/23 11:18

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Lead,Dissolved	1000	987	98.7	80.0-120	

L1608986-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1608986-03 05/04/23 11:21 • (MS) R3920952-4 05/04/23 11:27 • (MSD) R3920952-5 05/04/23 11:29

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 %
Lead,Dissolved	1000	U	952	973	95.2	97.3	1	75.0-125			2.27	20

Method Blank (MB)

(MB) R3919444-3 04/30/23 23:51

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	U		31.6	100
(S) a,a,a-Trifluorotoluene(FID)	*111*			*78.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3919444-1 04/30/23 21:19 • (LCSD) R3919444-2 04/30/23 21:53

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 %
Gasoline Range Organics-NWTPH	5500	4830	4890	87.8	88.9	70.0-124			1.23	20
(S) a,a,a-Trifluorotoluene(FID)				*106*	*106*	*78.0-120*				

Method Blank (MB)

(MB) R3919384-3 04/30/23 20:29

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		11.3	25.0
Acrylonitrile	U		0.671	5.00
Benzene	U		0.0941	0.500
Bromobenzene	U		0.118	0.500
Bromodichloromethane	U		0.136	0.500
Bromochloromethane	U		0.128	0.500
Bromoform	U		0.129	0.500
Bromomethane	U		0.605	2.50
n-Butylbenzene	U		0.157	0.500
sec-Butylbenzene	U		0.125	0.500
tert-Butylbenzene	U		0.127	0.500
Carbon disulfide	U		0.0962	0.500
Carbon tetrachloride	U		0.128	0.500
Chlorobenzene	U		0.117	0.500
Chlorodibromomethane	U		0.140	0.500
Chloroethane	U		0.192	2.50
2-Chloroethyl vinyl ether	U		0.575	50.0
Chloroform	U		0.111	0.500
Chloromethane	U		0.960	1.25
2-Chlorotoluene	U		0.106	0.500
4-Chlorotoluene	U		0.114	0.500
1,2-Dibromo-3-Chloropropane	U		0.276	2.50
1,2-Dibromoethane	U		0.126	0.500
Dibromomethane	U		0.122	0.500
1,2-Dichlorobenzene	U		0.107	0.500
1,3-Dichlorobenzene	U		0.299	0.500
1,4-Dichlorobenzene	U		0.120	0.500
Dichlorodifluoromethane	U		0.374	2.50
1,1-Dichloroethane	U		0.100	0.500
1,2-Dichloroethane	U		0.0819	0.500
1,1-Dichloroethene	U		0.188	0.500
cis-1,2-Dichloroethene	U		0.126	0.500
trans-1,2-Dichloroethene	U		0.149	0.500
1,2-Dichloropropane	U		0.149	0.500
1,1-Dichloropropene	U		0.142	0.500
1,3-Dichloropropane	U		0.109	1.00
cis-1,3-Dichloropropene	U		0.111	0.500
trans-1,3-Dichloropropene	U		0.118	0.500
trans-1,4-Dichloro-2-butene	U		0.467	5.00
2,2-Dichloropropane	U		0.161	0.500

Method Blank (MB)

(MB) R3919384-3 04/30/23 20:29

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Di-isopropyl ether	U		0.105	0.500
Ethylbenzene	U		0.137	0.500
Hexachloro-1,3-butadiene	U		0.337	1.00
2-Hexanone	U		0.787	5.00
n-Hexane	U		0.749	5.00
Iodomethane	U		0.554	5.00
Isopropylbenzene	U		0.105	0.500
p-Isopropyltoluene	U		0.120	0.500
2-Butanone (MEK)	U		1.19	5.00
Methylene Chloride	U		0.430	2.50
4-Methyl-2-pentanone (MIBK)	U		0.478	5.00
Methyl tert-butyl ether	U		0.101	0.500
Naphthalene	U		0.174	2.50
n-Propylbenzene	U		0.0993	0.500
Styrene	U		0.118	0.500
1,1,1,2-Tetrachloroethane	U		0.147	0.500
1,1,2,2-Tetrachloroethane	U		0.133	0.500
1,1,2-Trichlorotrifluoroethane	U		0.180	0.500
Tetrachloroethene	U		0.300	0.500
Toluene	U		0.278	0.500
1,2,3-Trichlorobenzene	U		0.164	0.500
1,2,4-Trichlorobenzene	U		0.481	1.00
1,1,1-Trichloroethane	U		0.149	0.500
1,1,2-Trichloroethane	U		0.158	0.500
Trichloroethene	U		0.190	0.500
Trichlorofluoromethane	U		0.160	2.50
1,2,3-Trichloropropane	U		0.237	2.50
1,2,4-Trimethylbenzene	U		0.322	0.500
1,2,3-Trimethylbenzene	U		0.104	0.500
1,3,5-Trimethylbenzene	U		0.104	0.500
Vinyl acetate	U		0.692	5.00
Vinyl chloride	U		0.234	0.500
Xylenes, Total	U		0.174	1.50
(S) Toluene-d8	*103*			*80.0-120*
(S) 4-Bromofluorobenzene	*95.2*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3919384-1 04/30/23 19:07 • (LCSD) R3919384-2 04/30/23 19:27

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 %
Acetone	25.0	27.8	27.9	111	112	19.0-160			0.359	27
Acrylonitrile	25.0	23.9	24.8	95.6	99.2	55.0-149			3.70	20
Benzene	5.00	5.40	5.10	108	102	70.0-123			5.71	20
Bromobenzene	5.00	4.51	4.45	90.2	89.0	73.0-121			1.34	20
Bromodichloromethane	5.00	5.33	5.29	107	106	75.0-120			0.753	20
Bromochloromethane	5.00	5.84	5.96	117	119	76.0-122			2.03	20
Bromoform	5.00	4.65	4.56	93.0	91.2	68.0-132			1.95	20
Bromomethane	5.00	2.10	2.35	42.0	47.0	10.0-160			11.2	25
n-Butylbenzene	5.00	3.67	3.53	73.4	70.6	73.0-125		J4	3.89	20
sec-Butylbenzene	5.00	3.95	3.93	79.0	78.6	75.0-125			0.508	20
tert-Butylbenzene	5.00	4.40	4.31	88.0	86.2	76.0-124			2.07	20
Carbon disulfide	5.00	5.26	4.98	105	99.6	61.0-128			5.47	20
Carbon tetrachloride	5.00	5.39	5.43	108	109	68.0-126			0.739	20
Chlorobenzene	5.00	5.48	5.24	110	105	80.0-121			4.48	20
Chlorodibromomethane	5.00	5.08	5.02	102	100	77.0-125			1.19	20
Chloroethane	5.00	5.25	5.16	105	103	47.0-150			1.73	20
2-Chloroethyl vinyl ether	25.0	21.3	21.8	85.2	87.2	51.0-160			2.32	20
Chloroform	5.00	5.40	5.28	108	106	73.0-120			2.25	20
Chloromethane	5.00	5.18	4.76	104	95.2	41.0-142			8.45	20
2-Chlorotoluene	5.00	4.80	4.61	96.0	92.2	76.0-123			4.04	20
4-Chlorotoluene	5.00	4.66	4.52	93.2	90.4	75.0-122			3.05	20
1,2-Dibromo-3-Chloropropane	5.00	4.16	4.38	83.2	87.6	58.0-134			5.15	20
1,2-Dibromoethane	5.00	4.77	4.65	95.4	93.0	80.0-122			2.55	20
Dibromomethane	5.00	4.79	4.96	95.8	99.2	80.0-120			3.49	20
1,2-Dichlorobenzene	5.00	4.58	4.49	91.6	89.8	79.0-121			1.98	20
1,3-Dichlorobenzene	5.00	4.93	4.64	98.6	92.8	79.0-120			6.06	20
1,4-Dichlorobenzene	5.00	5.00	4.71	100	94.2	79.0-120			5.97	20
Dichlorodifluoromethane	5.00	6.62	6.75	132	135	51.0-149			1.94	20
1,1-Dichloroethane	5.00	5.34	4.98	107	99.6	70.0-126			6.98	20
1,2-Dichloroethane	5.00	5.06	5.00	101	100	70.0-128			1.19	20
1,1-Dichloroethene	5.00	4.93	4.79	98.6	95.8	71.0-124			2.88	20
cis-1,2-Dichloroethene	5.00	5.17	5.28	103	106	73.0-120			2.11	20
trans-1,2-Dichloroethene	5.00	5.66	5.31	113	106	73.0-120			6.38	20
1,2-Dichloropropane	5.00	4.70	4.79	94.0	95.8	77.0-125			1.90	20
1,1-Dichloropropene	5.00	5.07	4.87	101	97.4	74.0-126			4.02	20
1,3-Dichloropropane	5.00	4.82	4.78	96.4	95.6	80.0-120			0.833	20
cis-1,3-Dichloropropene	5.00	5.10	4.99	102	99.8	80.0-123			2.18	20
trans-1,3-Dichloropropene	5.00	4.84	4.87	96.8	97.4	78.0-124			0.618	20
trans-1,4-Dichloro-2-butene	5.00	3.81	4.15	76.2	83.0	33.0-144			8.54	20
2,2-Dichloropropane	5.00	5.90	5.87	118	117	58.0-130			0.510	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3919384-1 04/30/23 19:07 • (LCSD) R3919384-2 04/30/23 19:27

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 %
Di-isopropyl ether	5.00	4.80	4.94	96.0	98.8	58.0-138			2.87	20
Ethylbenzene	5.00	5.31	4.90	106	98.0	79.0-123			8.03	20
Hexachloro-1,3-butadiene	5.00	3.38	3.35	67.6	67.0	54.0-138			0.892	20
2-Hexanone	25.0	22.9	23.4	91.6	93.6	67.0-149			2.16	20
n-Hexane	5.00	3.95	4.29	79.0	85.8	57.0-133			8.25	20
Iodomethane	25.0	8.45	9.46	33.8	37.8	33.0-147			11.3	26
Isopropylbenzene	5.00	5.07	4.84	101	96.8	76.0-127			4.64	20
p-Isopropyltoluene	5.00	4.25	4.14	85.0	82.8	76.0-125			2.62	20
2-Butanone (MEK)	25.0	26.2	27.2	105	109	44.0-160			3.75	20
Methylene Chloride	5.00	5.47	5.23	109	105	67.0-120			4.49	20
4-Methyl-2-pentanone (MIBK)	25.0	23.2	23.8	92.8	95.2	68.0-142			2.55	20
Methyl tert-butyl ether	5.00	4.92	5.03	98.4	101	68.0-125			2.21	20
Naphthalene	5.00	3.74	3.74	74.8	74.8	54.0-135			0.000	20
n-Propylbenzene	5.00	4.39	4.29	87.8	85.8	77.0-124			2.30	20
Styrene	5.00	4.95	4.62	99.0	92.4	73.0-130			6.90	20
1,1,1,2-Tetrachloroethane	5.00	5.73	5.33	115	107	75.0-125			7.23	20
1,1,2,2-Tetrachloroethane	5.00	4.22	4.41	84.4	88.2	65.0-130			4.40	20
1,1,2-Trichlorotrifluoroethane	5.00	4.55	4.64	91.0	92.8	69.0-132			1.96	20
Tetrachloroethene	5.00	5.26	5.32	105	106	72.0-132			1.13	20
Toluene	5.00	5.40	5.09	108	102	79.0-120			5.91	20
1,2,3-Trichlorobenzene	5.00	3.86	3.94	77.2	78.8	50.0-138			2.05	20
1,2,4-Trichlorobenzene	5.00	3.75	3.79	75.0	75.8	57.0-137			1.06	20
1,1,1-Trichloroethane	5.00	5.62	5.63	112	113	73.0-124			0.178	20
1,1,2-Trichloroethane	5.00	4.75	4.85	95.0	97.0	80.0-120			2.08	20
Trichloroethene	5.00	5.41	5.18	108	104	78.0-124			4.34	20
Trichlorofluoromethane	5.00	5.00	5.27	100	105	59.0-147			5.26	20
1,2,3-Trichloropropane	5.00	4.51	4.77	90.2	95.4	73.0-130			5.60	20
1,2,4-Trimethylbenzene	5.00	4.59	4.43	91.8	88.6	76.0-121			3.55	20
1,2,3-Trimethylbenzene	5.00	4.49	4.42	89.8	88.4	77.0-120			1.57	20
1,3,5-Trimethylbenzene	5.00	4.53	4.37	90.6	87.4	76.0-122			3.60	20
Vinyl acetate	25.0	26.8	27.7	107	111	11.0-160			3.30	20
Vinyl chloride	5.00	5.50	5.37	110	107	67.0-131			2.39	20
Xylenes, Total	15.0	15.6	14.7	104	98.0	79.0-123			5.94	20
(S) Toluene-d8				*103*	*102*	*80.0-120*				
(S) 4-Bromofluorobenzene				*97.8*	*98.6*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*99.7*	*103*	*70.0-130*				

Method Blank (MB)

(MB) R3919758-3 05/01/23 20:46

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.0941	0.500
(S) Toluene-d8	*107*			*80.0-120*
(S) 4-Bromofluorobenzene	*99.7*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*98.4*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3919758-1 05/01/23 19:25 • (LCSD) R3919758-2 05/01/23 19:45

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 %
Benzene	5.00	5.24	5.33	105	107	70.0-123			1.70	20
(S) Toluene-d8				*108*	*106*	*80.0-120*				
(S) 4-Bromofluorobenzene				*100*	*103*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*104*	*103*	*70.0-130*				

1 Cp
2 Tc
3 Ss
4 Cn
5 Ds
6 Sr
7 Qc
8 Gl
9 Al
10 Sc

Method Blank (MB)

(MB) R3921016-1 05/04/23 11:34

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Diesel Range Organics (DRO)	U		66.7	200
Residual Range Organics (RRO)	105	J	83.3	250
(S) o-Terphenyl	*107*			*52.0-156*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3921016-2 05/04/23 11:54 • (LCSD) R3921016-3 05/04/23 12:14

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 %
Diesel Range Organics (DRO)	1500	1420	1460	94.7	97.3	50.0-150			2.78	20
(S) o-Terphenyl				*115*	*113*	*52.0-156*				

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.
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J4	The associated batch QC was outside the established quality control range for accuracy.

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:
Stantec Consulting - Portland, OR

601 SW 2nd Ave., Suite 1400
Portland, OR 97204

Billing Information:
Accounts Payable
601 SW 2nd Ave., Suite 1400
Portland, OR 97204

Pres Chk

Report to:
Robert McAlister

Email To: **robert.mcalister@stantec.com**

Project Description:
~~Warren Distribution~~ RM HUBBARD

City/State Collected: HUBBARD OR

Please Circle: (PT) MT CT ET

Phone: ~~503-297-1631~~ RM 714 686 4435

Client Project # 227704604

Lab Project # SECORTOR-HUBBARD

Collected by (print): ROBERT MCALISTER

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ___ Y X

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: STANDARD TAT

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	NWTPHDXLVINOSGT 40mlAmb-HCl-BT	NWTPHGX 40mlAmb HCl	PBICP 250mlHDPE-HNO3 (DISSOLVED LEAD) <2	V8260LL 40mlAmb-HCl
MW-1	~~GRAB~~ RM GRAB	GW	—	4/26/23	1135	9	X	X	X	X
MW-2		GW	—		1100					
MW-3		GW	—		1020					
MW-4		GW	—		930					
		~~GW~~ RM								

Chain of Custody Page 1 of 1

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
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 # L609938
Tab 1161

Acctnum: **SECORTOR**
Template: **T227600**
Prelogin: **P990981**
PM: **546 - Jared Starkey**
PB: BW 4/4

Shipped Via:

Remarks	Sample # (lab only)
	-01
	-02
	-03
	-04

* 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
DC	4/26/23	1300	FEDEX	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 3.2 +0 =3.2 36
				If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 4/27/23 Time: 0930
			Alexa (ZE)	Hold: Condition: NCF / OK