

# Site Investigation Report

---

Allen Street Study Area  
DEQ Task Order 067-23-11  
ECSI No. 3521

*Prepared for:*

**Oregon Department of Environmental Quality**

November 26, 2024

Project No. M0785.32.001

*Prepared by:*

Maul Foster & Alongi, Inc.  
3140 NE Broadway, Portland, OR 97232

© 2024 Maul Foster & Alongi, Inc.



# Site Investigation Report

Allen Street Study Area  
DEQ Task Order 067-23-11  
ECSI No. 3521

*The material and data in this report were prepared  
under the supervision and direction of the undersigned.*

*Maul Foster & Alongi, Inc.*



---

Dana Domenighini  
Project Environmental Scientist

---

Michael Pickering, RG  
Principal Geologist

# Contents

---

Abbreviations.....	v
<b>1 Introduction.....</b>	<b>1</b>
1.1 Purpose .....	1
1.2 Scope of Work.....	1
<b>2 Background.....</b>	<b>1</b>
2.1 Site Location, History, and Description .....	1
2.2 Geology and Hydrogeology.....	2
2.3 Previous Environmental Activities .....	2
<b>3 Site Investigation Activities .....</b>	<b>4</b>
3.1 Preparatory Activities.....	4
3.2 Assessment Activities.....	4
3.2.1 Soil Vapor Assessment.....	4
3.2.2 Groundwater Assessment.....	5
3.3 Waste Handling and Disposal .....	6
<b>4 Chemical Analyses and Results.....</b>	<b>6</b>
4.1 Analyses Performed.....	6
4.2 Laboratory Analytical Results.....	6
4.2.1 Soil Vapor Samples.....	7
4.2.2 Groundwater Samples.....	7
4.3 Risk-Based Screening of Analytical Data .....	7
4.3.1 Soil Vapor .....	7
4.3.2 Groundwater .....	8
<b>5 Conclusions.....</b>	<b>8</b>
References .....	9

## Limitations

## Figures

### Following the Report

1-1 Site Location

2-1 Site Overview and Investigation Locations

## Tables

### Following the Report

4-1 Summary of Soil Vapor Analytical Results

4-2 Summary of Groundwater Analytical Results

## Appendixes

### Appendix A

Standard Operating Procedures

### Appendix B

Photograph Log

### Appendix C

Field Sampling Data Sheets

### Appendix D

Laboratory Analytical Reports

### Appendix E

Data Validation Memorandum

# Abbreviations

---

bgs	below ground surface
DEQ	Oregon Department of Environmental Quality
EPA	U.S. Environmental Protection Agency
FSDS	field sampling data sheet
HASP	health and safety plan
IDW	investigation-derived waste
MFA	Maul Foster & Alongi, Inc.
RBC	risk-based concentration
SOP	standard operating procedure
TCE	trichloroethene
the Site	Allen Street Study Area, 1420 to 1540 SW Allen Street, Corvallis, Oregon
ug/L	microgram per liter
VOC	volatile organic compound
Work Plan	Site Investigation Work Plan

# 1 Introduction

---

Maul Foster & Alongi, Inc. (MFA) prepared this report to present the results of the site investigation at the Allen Street Study Area located at 1420 to 1540 SW Allen Street in Corvallis, Oregon (the Site) (Figure 1-1). The Site was selected for a site investigation by the Oregon Department of Environmental Quality (DEQ). This site investigation report was prepared for DEQ under Task 5 of Task Order 067-23-11.

## 1.1 Purpose

The purpose of this project was to characterize the nature and extent of contamination in soil vapor at the Site, evaluate the potential for migration of contaminants from groundwater into soil vapor and the potential threat of vapor intrusion into residences at the Site, and determine if further action is required at the Site.

Chemical data from the investigation activities were screened against DEQ risk-based concentrations (RBCs) (DEQ 2024) to assess whether the Site poses an unacceptable risk to human health for current and likely future receptors.

## 1.2 Scope of Work

The scope of work described in the Site Investigation Work Plan (the “Work Plan;” MFA 2024) included the following general tasks:

- Assessment of soil vapor and groundwater conditions at the Site.
- Development of a sampling and analysis plan.
- Management of investigation-derived waste (IDW).
- Preparation of this report discussing the above activities, the analytical results, and the potential risks posed by chemical contamination at the Site.

# 2 Background

---

## 2.1 Site Location, History, and Description

The Site is located in sections 2 and 3, township 12 south, range 5 west of the Willamette Meridian in Corvallis, Oregon (Figure 1-1). The Site is comprised of six residential properties located at 1420 to 1540 SW Allen Street (Benton County tax lots 12502CC02600, 12502CC02700, 12503D000190, 12503D001900, 12503D001800, and 12503D002000). The portions of the Site

that are the focus of the investigation activities include the occupied residential buildings (see Figure 2-1).<sup>1</sup> The Site is surrounded by Avery Park and undeveloped land, with the Willamette Pacific railroad located east of the Site followed by industrial properties (Benton County Public Works and storage units).

The residences were constructed in the 1930s and 1940s, with the exception of the mobile home addressed as 1440 SW Allen Street which has been present since the 1970s. The residences generally range in size from 937- to 2,520-square-feet. The residences located at 1460 and 1520 SW Allen Street have basements.<sup>2</sup> The residence at 1440 SW Allen Street is a mobile home. The remaining residences are either slab-on-grade or have crawlspaces. Each residence has a domestic water supply well located on the property, except for the residence at 1420 SW Allen Street that is connected to the municipal water and sewer systems. Volatile organic compound (VOC) impacts were identified in one of the wells in 2001. See Section 2.3 for information regarding the VOC impacts and associated investigations.

## 2.2 Geology and Hydrogeology

Field forms from previous investigations indicate that silt and clay was encountered at the Site down to a depth of 18 to 22 feet below ground surface (bgs), underlain by sand and gravels from approximately 18 to 41 feet bgs. Groundwater was encountered from 12 to 22 feet bgs. No lithologic coring was completed during this assessment.

Topography at the Site and the vicinity is generally flat but gradually slopes down to the west toward Mary's River; site elevation is approximately 230 feet above mean sea level. Mary's River is located approximately 0.25 miles north and west of the Site and flows north and then east toward the Willamette River, which is located approximately 0.5 miles northeast of the Site. Based on proximity to Mary's River and the flow direction of the river, groundwater is expected to flow to the west-northwest.

## 2.3 Previous Environmental Activities

In July 2001, trichloroethene (TCE) was detected in a domestic well located at 1460 SW Allen Street, when the owner conducted testing of their well. DEQ subsequently tested 13 water wells in the area for VOCs and identified several additional wells along SW Allen Street with concentrations of TCE ranging from 0.7 to 60 micrograms per liter (ug/L). Five of the domestic wells along SW Allen Street had concentrations above the DEQ ingestion and inhalation from tap water RBC. As a result, DEQ installed carbon-treatment units on the five contaminated wells. DEQ continues to monitor and maintain the carbon units. The exact source of the TCE is unknown, but DEQ has identified three possible sources: Benton County Shops (located east of the Site), Willamette Pacific Railroad right-of-way (located east of SW Allen Street), and residential shops.

In April 2003, DEQ conducted a Preliminary Assessment to evaluate the nature and extent of solvent contamination at the Site. A total of 11 soil borings were advanced across the Site and soil and groundwater samples were collected. In addition, eight groundwater samples were collected from

---

<sup>1</sup> All residences are currently occupied, except for the residence at 1440 SW Allen Street; however, this residence may be occupied again in the future. In addition, the residence at 1540 SW Allen Street is planned for demolition in the summer of 2025 and a new residence will be constructed along the northern portion of the property (see Figure 2-1).

<sup>2</sup> Only the eastern portion of the residence at 1460 SW Allen Street is equipped with a basement.

domestic wells. The samples were analyzed for VOCs. Concentrations of VOCs were not detected in the soil samples. However, TCE and its breakdown products were detected in several of the groundwater samples collected (ranging from 1.3 to 491 ug/L), with several of the TCE concentrations exceeding the RBCs for ingestion and inhalation from tap water, vapor intrusion into residential and occupational settings, and volatilization to outdoor air for residential exposure. The analytical results indicated that TCE is present in groundwater at the Benton County Shops, in the vicinity of the Willamette Pacific Railroad right-of-way, and in four domestic wells. The investigations determined that the source of contamination is likely in the southwest area of the Site. DEQ considered the Site a high priority for a site investigation to determine the source of TCE contamination and groundwater flow patterns.

In August 2005, GeoEngineers, Inc. conducted a site investigation to assess the origin and extent of VOC impacts at the Site, assess groundwater flow gradients, and identify potential source areas. The site investigation included the installation of seven groundwater monitoring wells (MW-1 through MW-7),<sup>3</sup> soil sampling from the monitoring well borings, four quarters of groundwater sampling from the monitoring wells, and sampling of the domestic wells. The site investigation concluded that a TCE source area is present in the vicinity of monitoring well MW-3 (see Figure 2-1) and that there was an unacceptable risk to residents from tap water of untreated groundwater and a potentially unacceptable risk from vapor intrusion to indoor air.

In December 2007, a soil vapor investigation was conducted by GeoEngineers, Inc. to assess if VOCs in groundwater and/or soil were resulting in unacceptable risk to residents because of vapor intrusion to indoor air or volatilization to outdoor air. A total of 14 temporary soil vapor points were installed at 5 feet bgs at seven properties (1420 through 1540 SW Allen Street and 470 and 490 Hopkins Avenue). Concentrations of VOCs were not detected in the soil vapor samples collected. However, it was noted that the method reporting limits were elevated and wet to saturated soils were encountered during the investigation which may have restricted the migration of soil vapor to the sampling apparatus. It was recommended that additional soil gas sampling be conducted in the drier months to confirm that soil gas does not pose an unacceptable risk to human health. As a result, an additional soil vapor investigation was conducted in September 2008, which include installing 12 temporary soil vapor points at six properties (1420 to 1540 SW Allen Street). TCE was detected in all 12 soil vapor samples at concentrations ranging from 5.5 to 130 micrograms per cubic meter, with the highest concentration detected in samples collected in the vicinity of the residences addressed as 1520 and 1540 SW Allen Street. Concentrations of TCE in soil vapor in at least one sample from each residence exceeded the site-specific RBC for residential exposure via vapor intrusion to indoor air. However, following the investigation, DEQ finalized their vapor intrusion guidance, and the RBCs were updated. Therefore, the results of the 2008 investigation were below the final RBCs for vapor intrusion and additional investigation was not conducted.

In 2023, DEQ updated the vapor intrusion RBCs and a review of 2008 results indicate that concentrations of TCE in soil vapor in at least one location from each residence (except for 1480 SW Allen Street) are above the new RBC value. In addition, concentrations of TCE in groundwater from the domestic wells also exceed the vapor intrusion RBCs at three residences (1440 to 1480 SW Allen Street). As a result, DEQ is conducting this soil vapor investigation to assess the risk to residents.

---

<sup>3</sup> Only MW-3 and MW-6 are still present (see Figure 2-1).

# 3 Site Investigation Activities

---

Site investigation activities performed to complete the scope of work identified in Section 1.2 included installation of soil vapor sampling wells and collection of soil vapor samples from the installed wells and groundwater samples from the existing groundwater wells to identify potential contaminant impacts. This section presents the scope of work conducted to accomplish these activities.

## 3.1 Preparatory Activities

**Site Health and Safety Plan (HASP).** MFA prepared a site-specific HASP for the proposed activities. The HASP was prepared in general accordance with the Occupational Safety and Health Act and the Oregon Administrative Rules. A copy of the HASP was available for use by MFA staff during the field activities. A HASP for subcontractor activities was developed by the selected subcontractors prior to performing on-site activities.

**Underground Utility Location.** Prior to beginning the field investigation work, underground utilities were located and marked using the Oregon Utility Notification Center. A private utility locate was conducted by Applied Professional Services, Inc. on September 23, 2024 (prior to drilling activities) to locate potential underground utilities/structures in the vicinity of each of the proposed boring locations. A representative of MFA oversaw the private utility locate activities. Underground utility locates were conducted in accordance with MFA Standard Operating Procedure (SOP) 18 (see Appendix A).

**Property Access and Work Notification.** MFA notified DEQ of the work schedule. DEQ coordinated access with the property owners and obtained site access agreements prior to commencement of field activities.

## 3.2 Assessment Activities

Representatives of MFA oversaw the drilling to document the activities and to collect soil vapor and groundwater samples for chemical analysis. A photograph log is included as Appendix B. The assessment activities were performed in general accordance with the Work Plan and DEQ's Brownfield Program Quality Assurance Project Plan (DEQ 2016).

### 3.2.1 Soil Vapor Assessment

On September 30 and October 1 through 4, 2024, twenty-one soil vapor sample borings were advanced to assess soil vapor conditions surrounding the residences (including the proposed residence to be constructed in the summer of 2025 at 1540 SW Allen Street). The soil vapor borings were advanced at 12 locations (SVW-01, SVW-02, SVW-05 through SVW-12, TSV-01, and TSV-02) as collocated pairs, with one boring advanced to 5 feet bgs (referred to as the shallow boring/well and designated in the sample ID as "S") and one boring advanced to 10 feet bgs (referred to as the deep boring/well and designated in the sample ID as "D"), using push-probe technology by Cascade Remediation Services of Clackamas, Oregon. Push-probe drilling was conducted in accordance with

SOP 7 (see Appendix B). Due to access limitations, the borings at SVW-07 were advanced using a hand auger. See Figure 2-1 for the soil vapor sample locations. The following locations were adjusted from the Work Plan based on communication with DEQ:

- **SVW-03 and SVW-04:** Borings at these locations were not advanced because an access agreement with the property owner was not obtained.
- **SVW-06:** Due to the potential presence of subsurface features including a septic drain field and pipes and a drywell, borings at this location were determined to need to be advanced using a hand auger. In addition, DEQ determined that the deep boring (SVW-06D) would not be advanced because this portion of the residence was not equipped with a basement and challenging lithological conditions were encountered.
- **SVW-07D and SVW-08:** Due to homeowner access restrictions, borings at SVW-08 were advanced using a hand auger. In addition, DEQ determined that the deep borings (SVW-07D and SVW-08D) would not be advanced because the residence was not equipped with a basement and challenging lithological conditions were encountered.

Seventeen of the twenty-one borings (SVW-01S/D, SVW-02S/D, SVW-05S/D, SVW-06S through SVW-08S, and SVW-09S/D through SVW-12S/D) were converted to soil vapor monitoring wells. The soil vapor wells were installed in accordance with SOP 11 (Appendix A) and Oregon Administrative Rule 690-240. Each of the wells were constructed using one-inch-diameter, Schedule 40 polyvinyl chloride casing with one foot of screen (screen installed from 4 to 5 feet bgs and 9 to 10 feet bgs). Polyethylene tubing was connected to the vapor screen and is accessible at the surface with a quarter-turn valve. Each of the wells were completed with a flush-mount concrete monument. Because the residence at 1540 SW Allen Street is planned for demolition, the soil vapor boring surrounding this structure (TSV-01S/D and TSV-02S/D) were installed as temporary sampling ports through the soil using a post run tubing sampling system.

On October 4 and October 7 and 8, 2024, MFA collected soil vapor samples from the four temporary sampling ports and the 17 newly installed wells. Soil vapor samples were collected in accordance with SOP 16 (see Appendix A). A helium shroud was deployed around each vapor sampling location to assess leaks in the sample train. MFA used a Dielectric model MGD-2002 helium leak detector to measure helium in and around the sampling location in the field. Samples were then analyzed for helium to assess leaks in the sample train. Elevated concentrations of helium were detected in the field at several sampling locations, including inside the wells themselves (up to 5,700 parts per million). Because the sample trains passed the in-field leak detection tests,<sup>4</sup> MFA concluded that this was likely caused by methane interference potentially related to the presence of septic systems on the residential properties. DEQ was notified of MFA's observations and determined it was suitable to continue with sampling regardless of the elevated readings. Field sampling data sheets (FSDS) are included as Appendix C.

### 3.2.2 Groundwater Assessment

Two existing groundwater monitoring wells were sampled to assess groundwater conditions (MW-03 and MW-06; Figure 2-1). Prior to performing sampling activities, MFA developed the wells in

---

<sup>4</sup> Sample location TSV-02D was above the threshold for one of the leak detection tests, with a helium concentration greater than 10 percent of the concentration of helium in the shroud. However, the sampling train was reassembled multiple times with similar concentrations of helium, including concentrations detected inside the well. Therefore, it was difficult to determine if the detections were helium or interference from methane or other gases.

accordance with SOP 12 (Appendix A), using a Waterra inertial pump in conjunction with a surge block and foot valve and purged using a peristaltic pump. FSDS for the well development are included in Appendix C. Following development of the monitoring wells, groundwater samples were collected from each of the wells in accordance with SOP 9 (Appendix A), using dedicated disposable polyethylene tubing and a peristaltic pump. Groundwater elevations were measured in accordance with SOP 13 (Appendix A).

Visual and olfactory observations were also documented. No olfactory or visual impacts were detected in groundwater collected from the monitoring wells. FSDS for the groundwater samples are included in Appendix C.

### 3.3 Waste Handling and Disposal

Waste generated during this project consists of soil and decontamination/purge water generated during well installation and development and monitoring events. The driller provided Oregon Department of Transportation approved 55-gallon drums for IDW storage on site. Chemical analysis and waste profiling were conducted and IDW was transported by WasteXpress to their facility in Portland, Oregon. Final disposal documentation was not received at the time of this report and will be forwarded to DEQ upon receipt. Disposable sampling equipment and personal protective equipment was disposed of as solid waste.

## 4 Chemical Analyses and Results

---

The soil vapor and groundwater samples were submitted to Pace Analytical National Laboratory in Mount Juliet, Tennessee, under their Price Agreement with the State of Oregon. Copies of the analytical laboratory reports are included in Appendix D. A data validation memorandum presents the quality assurance/quality control review of the data and is included in Appendix E. The results of the data quality review indicate that the data are of acceptable quality and are suitable for their intended purpose with the qualifiers assigned.<sup>5</sup>

### 4.1 Analyses Performed

Soil vapor samples were analyzed for VOCs by U.S. Environmental Protection Agency (EPA) Method TO-15 and helium by ASTM International Method D1946. Groundwater samples were analyzed for VOCs by EPA Method 8260D.

### 4.2 Laboratory Analytical Results

The analytical results are presented in Tables 4-1 (soil vapor) and 4-2 (groundwater).

---

<sup>5</sup> Analytical results for samples TSV-01S/D, TSV-02S/D, and SVW-10D were rejected. Additional discussion of these results is included in Section 4.2.1.

## 4.2.1 Soil Vapor Samples

Various VOCs were detected above laboratory reporting limits in the soil vapor samples analyzed, with concentrations ranging from 0.789 to 2,760 micrograms per cubic meter.

Helium was detected at concentrations ranging from 0.126 to 11.4 percent in soil vapor samples SVW-01S, SVW-02S, SVW-05S/D, SVW-09S, SVW-10S/D, SVW-11S/D, SVW-12S/D, TSV-01S/D, and TSV-02S/D. MFA confirmed that the grade of helium applied to the shroud was 99.9 percent and that the shroud concentration for the samples were 40.3 to 58.0 percent. The helium concentration in the samples was well below the action level, which is 5 percent of the shroud concentration, in all samples except for TSV-01S/D, TSV-02S/D, and SVW-10D. MFA concluded that the level of helium in these samples indicates that the results are not representative of soil vapor. As a result, data associated with samples TSV-01S/D, TSV-02S/D, and SVW-10D were rejected (see data validation memorandum in Appendix E). The level of helium in the remaining samples indicates that the potential impact to data quality is low. Data associated with samples SVW-01S, SVW-02S, SVW-05S/D, SVW-09S, SVW-10S, SVW-11S/D, and SVW-12S/D were qualified as estimated (see Appendix E).

As previously discussed in Section 3.2.1, elevated readings of helium detected in the field were believed to be the result of methane interference. However, the rejected sample results indicate there were leaks in the sample trains at sample locations TSV-01S/D, TSV-02S/D, and SVW-10D. MFA observed that there were multiple sampling train configurations received from Pace Analytical National Laboratory (i.e., several manifolds only had one sampling port, while others had two and some of the manifolds were quick-release versions). As a result, this added additional uncertainty and possibilities of leaks during the in-field leak tests. These results were discussed with DEQ, and it was determined that additional evaluation should be completed to clarify when the residence at 1540 SW Allen Street will be demolished to determine if resampling at locations TSV-01 and TSV-02 should be completed. In addition, DEQ concluded that resampling at SVW-10D was not needed as sample results at SVW-09D were determined to be a suitable proxy. However, an evaluation to determine if additional sampling is needed at this location will be completed following the second soil vapor sampling event.

## 4.2.2 Groundwater Samples

VOCs detected above laboratory reporting limits in the groundwater samples analyzed were limited to cis-1,2-dichloroethene, trans-1,2-dichloroethene, and TCE, with concentrations ranging from 1.96 to 5.76 ug/L in both groundwater samples.

## 4.3 Risk-Based Screening of Analytical Data

The data collected during this scope of work were compared to the DEQ RBCs for residential exposure via vapor intrusion to indoor air for both soil vapor and groundwater.

### 4.3.1 Soil Vapor

Benzene and chloroform exceeded the chronic RBC for residential receptors in SVW-05S, with chloroform also exceeding the chronic RBC in SVW-09D, SVW-12S, and SVW-12D. As no known sources of chloroform have been identified in the area, MFA identified that chloroform is often found in soil vapor due to irrigation from chlorinated water, leaks from water lines, etc. Although the residences are not connected to the municipal water source (with the exception of 1420 SW Allen

Street), a municipal water line is located in nearby SW Hopkins Avenue (City of Corvallis 2024), which is in the inferred up- to cross-gradient location of the residences.

None of the remaining VOCs exceeded the chronic or acute RBCs for residential receptors.

### 4.3.2 Groundwater

TCE in groundwater exceeded the chronic RBC for residential receptors in wells MW-03 and MW-06. Monitoring well MW-03 is located east of SW Allen Street in the presumed up- to cross-gradient groundwater flow direction. Monitoring well MW-06 is located adjacent to the residence at 1440 SW Allen Street. No soil vapor sampling was conducted at 1440 SW Allen Street because an access agreement with the property owner was not obtained. The residence at 1440 SW Allen Street is an unoccupied mobile home. Since this type of structure does not sit directly on the ground it is not likely a concern for soil vapor intrusion.

None of the remaining VOCs exceeded the chronic or acute RBCs for residential receptors.

## 5 Conclusions

---

The site investigation activities included soil vapor well installation and collection of soil vapor and groundwater samples for chemical analysis.

Analytical results detected various VOCs in soil vapor and groundwater at the Site. Chemical data from this investigation was screened against DEQ's vapor intrusion RBCs for residential receptors. Based on the results of the site investigation, there is a potential risk to receptors at the residence located at 1460 (SVW-05), 1520 (SVW-09), and 1540 SW Allen Street (SVW-12). Soil vapor trends will be evaluated after future investigation activities are conducted.

Additional activities that will be completed during subsequent monitoring events include:

- A second soil vapor sampling event will be completed in the spring of 2025. To evaluate the potential presence and/or interference from methane gas during the second sampling event, a secondary meter that quantifies various gas concentrations (i.e., a landfill gas meter) will be used. Further, MFA will coordinate closely with Pace Analytical National Laboratory to ensure the sampling trains provided are sufficient to identify/reduce the possibility of leaks in the field.
- The collection of water level measurements from the two existing monitoring wells will be completed in the spring of 2025. Based on site limitations and the residential supply well data available, DEQ determined a second groundwater sampling event will not be completed as described in the Work Plan.
- The potential resampling at locations TSV-01 and TSV-02 will be discussed with DEQ once additional information related to the demolition of the residence at 1540 SW Allen Street is available.

# References

---

- City of Corvallis. 2024. *City of Corvallis Utilities, Public Viewer*. Accessed November 8, 2024. <https://corvallisoregon.maps.arcgis.com/apps/webappviewer/index.html?id=d098de302300453eaaf0c506b289c0f5>.
- DEQ. 2016. *Quality Assurance Project Plan, Brownfield Program*. Oregon Department of Environmental Quality: Portland, OR. November.
- DEQ. 2024. *Table 1: Chronic and Acute Vapor Intrusion Risk-Based Concentrations*. Oregon Department of Environmental Quality. March.
- MFA. 2024. *Site Investigation Work Plan, Allen Street Study Area, DEQ Task Order 067-23-11, ECSI No. 3521*. Prepared for the Oregon Department of Environmental Quality. Maul Foster & Alongj, Inc.: Portland, OR. July 19.

# Limitations

---

The services undertaken in completing this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

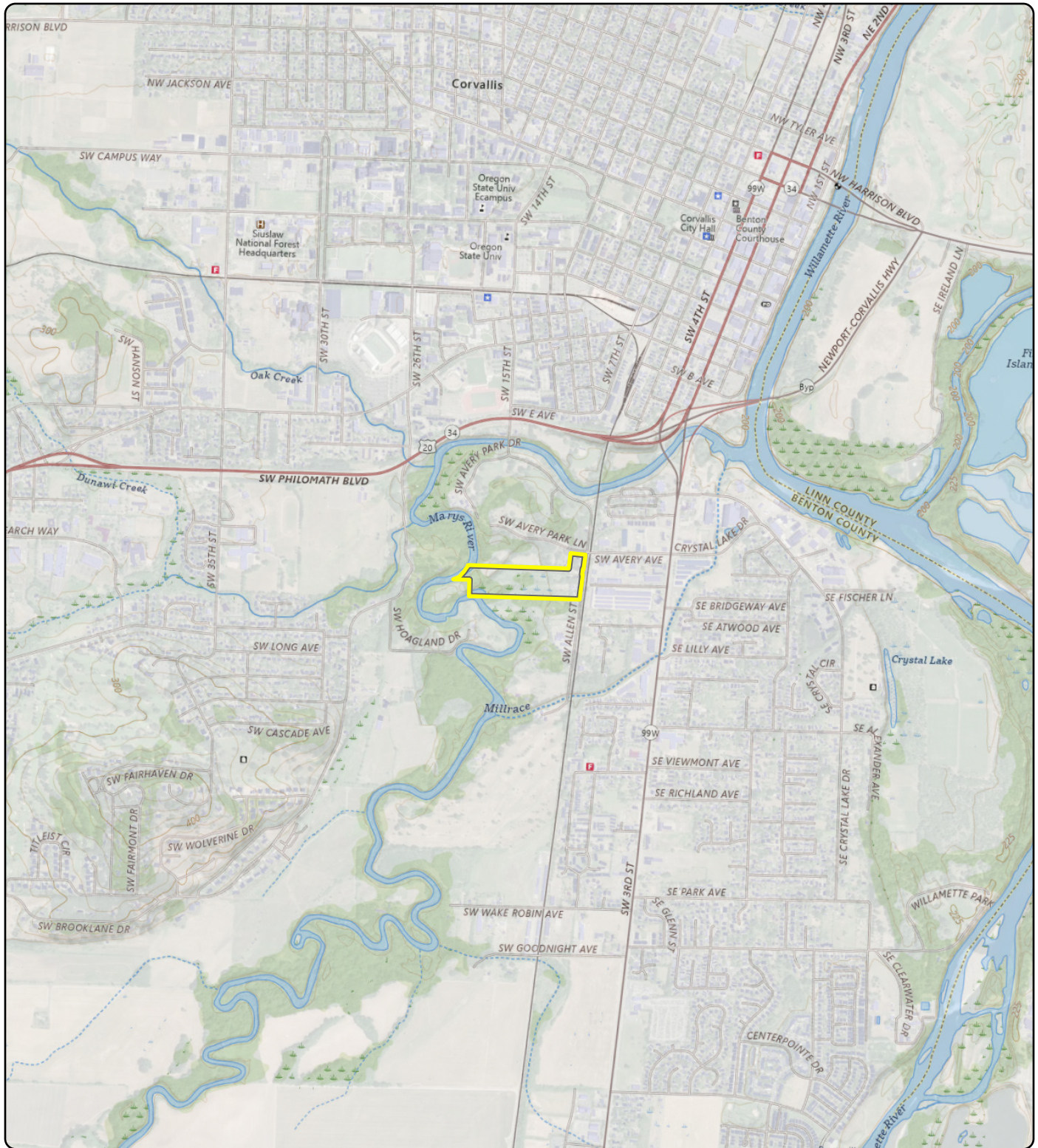
Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this report.

# Figures

---



MAUL  
FOSTER  
ALONGI




**Notes**  
 U.S. Geological Survey 7.5-minute topographic quadrangle (2020): Corvallis.  
 Township 12 south, range 5 west, sections 2 and 11.

**Data Source**  
 Property boundary obtained from Benton County.

**MAUL FOSTER ALONGI**  
 p. 971 544 2139 | www.maulfooster.com

This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.  
 © 2024 Maul Foster & Alongi, Inc.

**Legend**  
 Property Boundary

## Figure 1-1 Site Location

Allen Street Study Area Site Investigation  
 Oregon Department of Environmental Quality  
 1420 to 1540 SW Allen Street  
 Corvallis, OR



Project: M0785-32-001 Produced By: eswatson Reviewed By: cdomenighini Print Date: 11/14/2024 Path: X:\0\_MFA\_Projects\M0785-32-001\Pro\M0785-32-001\_005.aprx Fig 2-1 Site Overview and Investigation Locations



## Figure 2-1 Site Overview and Investigation Locations

Allen Street Study Area  
Site Investigation  
Oregon Department of  
Environmental Quality  
1420 to 1540 SW Allen Street  
Corvallis, OR

### Legend

- Existing Monitoring Well
- Collocated Soil Vapor Wells (Shallow and Deep)
- Soil Vapor Well (Shallow Only)
- Previously Proposed Soil Vapor Well (Not Installed)
- Temporary Soil Vapor Sample
- Future Residence (Approximate)
- Property Boundary
- Tax Lot



**Data Sources**  
Aerial photograph obtained from the Oregon Geospatial Enterprise Office; tax lot data obtained from Benton County.

 MAUL FOSTER ALONGI  
p. 971 544 2139 | www.maulfooster.com

This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.  
© 2024 Maul Foster & Alongi, Inc.

# Tables

---



MAUL  
FOSTER  
ALONGI

**Table 4-1  
Summary of Soil Vapor Analytical Results  
Allen Street Site Investigation  
Corvallis, Oregon**

Location:	RBC, Soil Vapor, Volatilization to Indoor Air <sup>(1)</sup>		TSV-01D	TSV-01S	TSV-02D	TSV-02S	SVW-01D	SVW-01S	SVW-02D	SVW-02S	SVW-05D	SVW-05S	SVW-06S
Sample Name:	Chronic	Acute	TSV-01D	TSV-01S	TSV-02D	TSV-02S	SVW-01D	SVW-01S	SVW-02D	SVW-02S	SVW-05D	SVW-05S	SVW-06S
Collection Date:	Residential		10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/07/2024	10/07/2024	10/07/2024	10/07/2024	10/07/2024	10/07/2024	10/07/2024
<b>Helium (%)</b>													
Helium <sup>(a)</sup>	NV	NV	<b>11.4</b>	<b>6.41</b>	<b>3.30</b>	<b>8.17</b>	0.100 U	<b>0.475</b>	0.100 U	<b>0.403</b>	<b>1.83</b>	<b>0.265</b>	0.100 U
<b>TPH (ug/m<sup>3</sup>)</b>													
Gasoline-range hydrocarbons	10,000	NV	-- R	-- R	-- R	-- R	<b>880</b>	826 UJ	826 U	826 UJ	826 UJ	<b>1,050 J</b>	826 U
<b>VOCs (ug/m<sup>3</sup>)</b>													
1,1,1-Trichloroethane	170,000	370,000	-- R	-- R	-- R	-- R	1.09 U	1.09 UJ	1.09 U	1.09 UJ	1.09 UJ	1.09 UJ	1.09 U
1,1,2,2-Tetrachloroethane	1.6	NV	-- R	-- R	-- R	-- R	1.37 U	1.37 UJ	1.37 U	1.37 UJ	1.37 UJ	1.37 UJ	1.37 U
1,1,2-Trichloroethane	5.9	NV	-- R	-- R	-- R	-- R	1.09 U	1.09 UJ	1.09 U	1.09 UJ	1.09 UJ	1.09 UJ	1.09 U
1,1-Dichloroethane	59	NV	-- R	-- R	-- R	-- R	0.802 U	0.802 UJ	0.802 U	0.802 UJ	0.802 UJ	0.802 UJ	0.802 U
1,1-Dichloroethene	7,000	6,700	-- R	-- R	-- R	-- R	0.793 U	0.793 UJ	0.793 U	0.793 UJ	0.793 UJ	0.793 UJ	0.793 U
1,2,4-Trichlorobenzene	70	NV	-- R	-- R	-- R	-- R	4.66 U	4.66 UJ	4.66 U	4.66 UJ	4.66 UJ	4.66 UJ	4.66 U
1,2,4-Trimethylbenzene	2,100	NV	-- R	-- R	-- R	-- R	<b>3.47</b>	<b>1.81 J</b>	<b>1.21</b>	<b>2.11 J</b>	<b>1.19 J</b>	<b>6.72 J</b>	<b>5.35</b>
1,2-Dibromoethane	0.16	NV	-- R	-- R	-- R	-- R	1.54 U	1.54 UJ	1.54 U	1.54 UJ	1.54 UJ	1.54 UJ	1.54 U
1,2-Dichlorobenzene	7,000	NV	-- R	-- R	-- R	-- R	1.2 U	1.2 UJ	1.2 U	1.2 UJ	1.2 UJ	1.2 UJ	1.2 U
1,2-Dichloroethane	3.6	NV	-- R	-- R	-- R	-- R	0.81 U	0.81 UJ	0.81 U	0.81 UJ	0.81 UJ	0.81 UJ	0.81 U
1,2-Dichloropropane	25	7,700	-- R	-- R	-- R	-- R	0.924 U	0.924 UJ	0.924 U	0.924 UJ	0.924 UJ	0.924 UJ	0.924 U
1,3,5-Trimethylbenzene	2,100	NV	-- R	-- R	-- R	-- R	0.982 U	0.982 UJ	0.982 U	0.982 UJ	0.982 UJ	<b>1.96 J</b>	<b>2.22</b>
1,3-Butadiene	3.1	22,000	-- R	-- R	-- R	-- R	4.43 U	4.43 UJ	4.43 U	4.43 UJ	4.43 UJ	4.43 UJ	4.43 U
1,3-Dichlorobenzene	NV	NV	-- R	-- R	-- R	-- R	1.2 U	1.2 UJ	1.2 U	1.2 UJ	1.2 UJ	1.2 UJ	1.2 U
1,4-Dichlorobenzene	8.5	400,000	-- R	-- R	-- R	-- R	1.2 U	1.2 UJ	1.2 U	1.2 UJ	1.2 UJ	1.2 UJ	1.2 U
1,4-Dioxane	19	240,000	-- R	-- R	-- R	-- R	2.27 U	2.27 UJ	2.27 U	2.27 UJ	2.27 UJ	2.27 UJ	2.27 U
2,2,4-Trimethylpentane	NV	NV	-- R	-- R	-- R	-- R	0.934 U	<b>1.71 J</b>	0.934 U	0.934 UJ	0.934 UJ	0.934 UJ	0.934 U
2-Butanone	170,000	170,000	-- R	-- R	-- R	-- R	3.69 U	3.69 UJ	3.69 U	3.69 UJ	3.69 UJ	<b>17.1 J</b>	3.69 U
2-Chlorotoluene	NV	NV	-- R	-- R	-- R	-- R	1.03 U	1.03 UJ	1.03 U	1.03 UJ	1.03 UJ	1.03 UJ	1.03 U
2-Hexanone	1,000	NV	-- R	-- R	-- R	-- R	5.11 U	5.11 UJ	5.11 U	5.11 UJ	5.11 UJ	5.11 UJ	5.11 U
2-Propanol	7,000	110,000	-- R	-- R	-- R	-- R	<b>11.4</b>	3.07 UJ	<b>5.68</b>	<b>3.2 J</b>	3.07 UJ	<b>128 J</b>	<b>3.07</b>
4-Ethyltoluene	NV	NV	-- R	-- R	-- R	-- R	0.982 U	0.982 UJ	0.982 U	0.982 UJ	0.982 UJ	<b>1.27 J</b>	<b>3.67</b>
4-Methyl-2-pentanone	100,000	NV	-- R	-- R	-- R	-- R	5.12 U	5.12 UJ	5.12 U	5.12 UJ	5.12 UJ	5.12 UJ	5.12 U
Acetone	NV	2,100,000	-- R	-- R	-- R	-- R	2.97 U	<b>11.2 J</b>	2.97 U	<b>33.3 J</b>	2.97 UJ	<b>144 J</b>	<b>22.9</b>
Allyl chloride	16	NV	-- R	-- R	-- R	-- R	0.626 U	0.626 UJ	0.626 U	0.626 UJ	0.626 UJ	0.626 UJ	0.626 U
Benzene	12	970	-- R	-- R	-- R	-- R	<b>7.25</b>	<b>3.02 J</b>	<b>7.99</b>	<b>1.86 J</b>	<b>4.73 J</b>	<b>21.5 J</b>	<b>0.984</b>
Benzyl chloride	1.9	8,000	-- R	-- R	-- R	-- R	1.04 U	1.04 UJ	1.04 U	1.04 UJ	1.04 UJ	1.04 UJ	1.04 U
Bromodichloromethane	2.5	NV	-- R	-- R	-- R	-- R	1.34 U	1.34 UJ	1.34 U	1.34 UJ	1.34 UJ	1.34 UJ	1.34 U
Bromoform	85	NV	-- R	-- R	-- R	-- R	6.21 U	6.21 UJ	6.21 U	6.21 UJ	6.21 UJ	6.21 UJ	6.21 U
Bromomethane	170	130,000	-- R	-- R	-- R	-- R	0.776 U	0.776 UJ	0.776 U	0.776 UJ	0.776 UJ	0.776 UJ	0.776 U
Carbon disulfide	24,000	210,000	-- R	-- R	-- R	-- R	<b>68.5</b>	<b>19.3 J</b>	<b>71.3</b>	<b>11.2 J</b>	<b>23.1 J</b>	<b>33.9 J</b>	1.24 U
Carbon tetrachloride	16	63,000	-- R	-- R	-- R	-- R	1.26 U	1.26 UJ	1.26 U	1.26 UJ	1.26 UJ	1.26 UJ	1.26 U
Chlorobenzene	1,700	NV	-- R	-- R	-- R	-- R	0.924 U	0.924 UJ	0.924 U	0.924 UJ	0.924 UJ	0.924 UJ	0.924 U
Chloroethane	140,000	1,300,000	-- R	-- R	-- R	-- R	0.528 U	0.528 UJ	0.528 U	0.528 UJ	0.528 UJ	0.528 UJ	0.528 U
Chloroform	4.1	16,000	-- R	-- R	-- R	-- R	<b>2.83</b>	<b>1.19 J</b>	0.973 U	<b>2.55 J</b>	0.973 UJ	<b>10.9 J</b>	<b>1.29</b>
Chloromethane	3,100	33,000	-- R	-- R	-- R	-- R	0.413 U	0.413 UJ	0.413 U	0.413 UJ	0.413 UJ	0.413 UJ	0.413 U
cis-1,2-Dichloroethene	1,400	NV	-- R	-- R	-- R	-- R	0.793 U	0.793 UJ	0.793 U	0.793 UJ	0.793 UJ	0.793 UJ	0.793 U
cis-1,3-Dichloropropene	NV	NV	-- R	-- R	-- R	-- R	0.908 U	0.908 UJ	0.908 U	0.908 UJ	0.908 UJ	0.908 UJ	0.908 U
Cyclohexane	210,000	NV	-- R	-- R	-- R	-- R	<b>11.9</b>	0.689 UJ	<b>7.16</b>	0.689 UJ	<b>4.24 J</b>	<b>1.57 J</b>	0.689 U
Dibromochloromethane	NV	NV	-- R	-- R	-- R	-- R	1.7 U	1.7 UJ	1.7 U	1.7 UJ	1.7 UJ	1.7 UJ	1.7 U

**Table 4-1**  
**Summary of Soil Vapor Analytical Results**  
**Allen Street Site Investigation**  
**Corvallis, Oregon**

Location:	RBC, Soil Vapor, Volatilization to Indoor Air <sup>(1)</sup>		TSV-01D	TSV-01S	TSV-02D	TSV-02S	SVW-01D	SVW-01S	SVW-02D	SVW-02S	SVW-05D	SVW-05S	SVW-06S
Sample Name:	Chronic	Acute	TSV-01D	TSV-01S	TSV-02D	TSV-02S	SVW-01D	SVW-01S	SVW-02D	SVW-02S	SVW-05D	SVW-05S	SVW-06S
Collection Date:	Residential		10/04/2024	10/04/2024	10/04/2024	10/04/2024	10/07/2024	10/07/2024	10/07/2024	10/07/2024	10/07/2024	10/07/2024	10/07/2024
Dichlorodifluoromethane (Freon 12)	3,500	NV	-- R	-- R	-- R	-- R	<b>2.93</b>	<b>2.45 J</b>	<b>2.7</b>	<b>2.43 J</b>	<b>2.4 J</b>	<b>2.17 J</b>	<b>2.15</b>
Ethanol	NV	NV	-- R	-- R	-- R	-- R	<b>20.6</b>	4.71 UJ	<b>10.9</b>	<b>6.83 J</b>	<b>9.18 J</b>	<b>2,300</b>	<b>7.9</b>
Ethylbenzene	37	730,000	-- R	-- R	-- R	-- R	<b>1.86</b>	<b>0.975 J</b>	<b>1.24</b>	<b>1.4 J</b>	<b>1.7 J</b>	<b>2.94 J</b>	<b>7.02</b>
Freon 113	170,000	NV	-- R	-- R	-- R	-- R	1.53 U	1.53 UJ	1.53 U	1.53 UJ	1.53 UJ	1.53 UJ	1.53 U
Freon 114	NV	NV	-- R	-- R	-- R	-- R	1.4 U	1.4 UJ	1.4 U	1.4 UJ	1.4 UJ	1.4 UJ	1.4 U
Heptane	14,000	NV	-- R	-- R	-- R	-- R	<b>6.91</b>	0.818 UJ	<b>2.45</b>	0.818 UJ	<b>9 J</b>	<b>11.7 J</b>	0.818 U
Hexachlorobutadiene	4.3	NV	-- R	-- R	-- R	-- R	6.73 U	6.73 UJ	6.73 U	6.73 UJ	6.73 UJ	6.73 UJ	6.73 U
Isopropylbenzene	14,000	NV	-- R	-- R	-- R	-- R	0.983 U	0.983 UJ	0.983 U	0.983 UJ	0.983 UJ	0.983 UJ	0.983 U
m,p-Xylene	NV	NV	-- R	-- R	-- R	-- R	<b>5.33</b>	<b>2.82 J</b>	<b>2.84</b>	<b>4.42 J</b>	<b>2.67 J</b>	<b>13.1 J</b>	<b>33.8</b>
Methyl methacrylate	24,000	NV	-- R	-- R	-- R	-- R	0.819 U	0.819 UJ	0.819 U	0.819 UJ	0.819 UJ	0.819 UJ	0.819 U
Methyl tert-butyl ether	360	270,000	-- R	-- R	-- R	-- R	0.721 U	0.721 UJ	0.721 U	0.721 UJ	0.721 UJ	0.721 UJ	0.721 U
Methylene chloride	3,400	70,000	-- R	-- R	-- R	-- R	0.694 U	0.694 UJ	0.694 U	0.694 UJ	0.694 UJ	0.694 UJ	0.694 U
Naphthalene	2.8	6,700	-- R	-- R	-- R	-- R	3.3 U	3.3 UJ	3.3 U	3.3 UJ	3.3 UJ	3.3 UJ	3.3 U
n-Hexane	24,000	NV	-- R	-- R	-- R	-- R	<b>59.2</b>	2.22 UJ	<b>32.2</b>	2.22 UJ	<b>93.8 J</b>	<b>7.62 J</b>	2.22 U
n-Propylbenzene	35,000	NV	-- R	-- R	-- R	-- R	0.982 U	0.982 UJ	0.982 U	0.982 UJ	0.982 UJ	<b>1.32 J</b>	0.982 U
o-Xylene	3,500	NV	-- R	-- R	-- R	-- R	<b>3.41</b>	<b>1.58 J</b>	<b>1.97</b>	<b>2.66 J</b>	<b>1.73 J</b>	<b>3.84 J</b>	<b>14.7</b>
Propylene	100,000	NV	-- R	-- R	-- R	-- R	<b>2,760</b>	2.15 UJ	<b>1,470</b>	2.15 UJ	<b>1,390 J</b>	<b>32.7 J</b>	2.15 U
Styrene	35,000	700,000	-- R	-- R	-- R	-- R	1.7 U	1.7 UJ	1.7 U	1.7 UJ	1.7 UJ	1.7 UJ	1.7 U
Tetrachloroethene	360	1,400	-- R	-- R	-- R	-- R	1.36 U	1.36 UJ	1.36 U	<b>2.02 J</b>	1.36 UJ	1.36 UJ	<b>2.38</b>
Tetrahydrofuran	70,000	NV	-- R	-- R	-- R	-- R	0.59 U	0.59 UJ	0.59 U	0.59 UJ	0.59 UJ	<b>5.51 J</b>	<b>2.65</b>
Toluene	170,000	250,000	-- R	-- R	-- R	-- R	<b>14.1</b>	<b>5.95 J</b>	<b>7.57</b>	<b>6.86 J</b>	<b>6.33 J</b>	<b>17.2 J</b>	<b>35.3</b>
trans-1,2-Dichloroethene	1,400	26,000	-- R	-- R	-- R	-- R	0.793 U	0.793 UJ	0.793 U	0.793 UJ	0.793 UJ	0.793 UJ	0.793 U
trans-1,3-Dichloropropene	NV	NV	-- R	-- R	-- R	-- R	0.908 U	0.908 UJ	0.908 U	0.908 UJ	0.908 UJ	0.908 UJ	0.908 U
Trichloroethene	16	70	-- R	-- R	-- R	-- R	1.07 U	1.07 UJ	1.07 U	1.07 UJ	1.07 UJ	1.07 UJ	1.07 U
Trichlorofluoromethane (Freon 11)	NV	NV	-- R	-- R	-- R	-- R	<b>2</b>	<b>1.33 J</b>	<b>2.06</b>	<b>1.21 J</b>	1.12 UJ	1.12 UJ	1.12 U
Vinyl acetate	7,000	6,700	-- R	-- R	-- R	-- R	2.22 U	2.22 UJ	2.22 U	2.22 UJ	2.22 UJ	2.22 UJ	2.22 U
Vinyl bromide	6.2	NV	-- R	-- R	-- R	-- R	0.875 U	0.875 UJ	0.875 U	0.875 UJ	0.875 UJ	0.875 UJ	0.875 U
Vinyl chloride	5.6	43,000	-- R	-- R	-- R	-- R	0.511 U	0.511 UJ	0.511 U	0.511 UJ	0.511 UJ	0.511 UJ	0.511 U
Xylenes, total <sup>(b)</sup>	3,500	290,000	-- R	-- R	-- R	-- R	<b>8.74</b>	<b>4.4 J</b>	<b>4.81</b>	<b>7.08 J</b>	<b>4.4 J</b>	<b>16.9 J</b>	<b>48.5</b>

**Table 4-1  
Summary of Soil Vapor Analytical Results  
Allen Street Site Investigation  
Corvallis, Oregon**

Location:	RBC, Soil Vapor, Volatilization to Indoor Air <sup>(1)</sup>		SVW-07S	SVW-08S	SVW-09D	SVW-09S	SVW-10D	SVW-10S	SVW-11D	SVW-11S	SVW-12D	SVW-12S
Sample Name:	Chronic	Acute	SVW-07S	SVW-08S	SVW-09D	SVW-09S	SVW-10D	SVW-10S	SVW-11D	SVW-11S	SVW-12D	SVW-12S
Collection Date:	Residential		10/07/2024	10/07/2024	10/08/2024	10/08/2024	10/08/2024	10/08/2024	10/08/2024	10/08/2024	10/08/2024	10/08/2024
<b>Helium (%)</b>												
Helium <sup>(a)</sup>	NV	NV	0.100 U	0.100 U	0.100 U	<b>0.416</b>	<b>3.12</b>	<b>0.172</b>	<b>0.672</b>	<b>0.154</b>	<b>0.371</b>	<b>0.126</b>
<b>TPH (ug/m<sup>3</sup>)</b>												
Gasoline-range hydrocarbons	10,000	NV	826 U	826 U	826 U	826 UJ	-- R	826 UJ	826 UJ	826 UJ	826 UJ	826 UJ
<b>VOCs (ug/m<sup>3</sup>)</b>												
1,1,1-Trichloroethane	170,000	370,000	1.09 U	1.09 U	1.09 U	1.09 UJ	-- R	1.09 UJ	1.09 UJ	1.09 UJ	1.09 UJ	1.09 UJ
1,1,2,2-Tetrachloroethane	1.6	NV	1.37 U	1.37 U	1.37 U	1.37 UJ	-- R	1.37 UJ	1.37 UJ	1.37 UJ	1.37 UJ	1.37 UJ
1,1,2-Trichloroethane	5.9	NV	1.09 U	1.09 U	1.09 U	1.09 UJ	-- R	1.09 UJ	1.09 UJ	1.09 UJ	1.09 UJ	1.09 UJ
1,1-Dichloroethane	59	NV	0.802 U	0.802 U	0.802 U	0.802 UJ	-- R	0.802 UJ	0.802 UJ	0.802 UJ	0.802 UJ	0.802 UJ
1,1-Dichloroethene	7,000	6,700	0.793 U	0.793 U	0.793 U	0.793 UJ	-- R	0.793 UJ	0.793 UJ	0.793 UJ	0.793 UJ	0.793 UJ
1,2,4-Trichlorobenzene	70	NV	4.66 U	4.66 U	4.66 U	4.66 UJ	-- R	4.66 UJ	4.66 UJ	4.66 UJ	4.66 UJ	4.66 UJ
1,2,4-Trimethylbenzene	2,100	NV	0.982 U	<b>4.42</b>	0.982 U	0.982 UJ	-- R	<b>1.43 J</b>	0.982 UJ	<b>1.5 J</b>	0.982 UJ	0.982 UJ
1,2-Dibromoethane	0.16	NV	1.54 U	1.54 U	1.54 U	1.54 UJ	-- R	1.54 UJ	1.54 UJ	1.54 UJ	1.54 UJ	1.54 UJ
1,2-Dichlorobenzene	7,000	NV	1.2 U	1.2 U	1.2 U	1.2 UJ	-- R	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ
1,2-Dichloroethane	3.6	NV	0.81 U	0.81 U	0.81 U	0.81 UJ	-- R	0.81 UJ	0.81 UJ	0.81 UJ	0.81 UJ	0.81 UJ
1,2-Dichloropropane	25	7,700	0.924 U	0.924 U	0.924 U	0.924 UJ	-- R	0.924 UJ	0.924 UJ	0.924 UJ	0.924 UJ	0.924 UJ
1,3,5-Trimethylbenzene	2,100	NV	0.982 U	<b>1.42</b>	0.982 U	0.982 UJ	-- R	0.982 UJ	0.982 UJ	0.982 UJ	0.982 UJ	0.982 UJ
1,3-Butadiene	3.1	22,000	4.43 U	4.43 U	4.43 U	4.43 UJ	-- R	4.43 UJ	4.43 UJ	4.43 UJ	4.43 UJ	4.43 UJ
1,3-Dichlorobenzene	NV	NV	1.2 U	1.2 U	1.2 U	1.2 UJ	-- R	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ
1,4-Dichlorobenzene	8.5	400,000	1.2 U	1.2 U	1.2 U	1.2 UJ	-- R	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ	1.2 UJ
1,4-Dioxane	19	240,000	2.27 U	2.27 U	2.27 U	2.27 UJ	-- R	2.27 UJ	2.27 UJ	2.27 UJ	2.27 UJ	2.27 UJ
2,2,4-Trimethylpentane	NV	NV	0.934 U	0.934 U	0.934 U	0.934 UJ	-- R	0.934 UJ	0.934 UJ	0.934 UJ	0.934 UJ	0.934 UJ
2-Butanone	170,000	170,000	3.69 U	3.69 U	3.69 U	3.69 UJ	-- R	3.69 UJ	3.69 UJ	3.69 UJ	3.69 UJ	3.69 UJ
2-Chlorotoluene	NV	NV	1.03 U	1.03 U	1.03 U	1.03 UJ	-- R	1.03 UJ	1.03 UJ	1.03 UJ	1.03 UJ	1.03 UJ
2-Hexanone	1,000	NV	5.11 U	5.11 U	5.11 U	5.11 UJ	-- R	5.11 UJ	5.11 UJ	5.11 UJ	5.11 UJ	5.11 UJ
2-Propanol	7,000	110,000	3.07 U	<b>19.8</b>	3.07 U	<b>7.42 J</b>	-- R	<b>4.52 J</b>	3.07 UJ	<b>6.1 J</b>	<b>3.49 J</b>	<b>7.08 J</b>
4-Ethyltoluene	NV	NV	0.982 U	<b>1.02</b>	0.982 U	0.982 UJ	-- R	0.982 UJ	0.982 UJ	0.982 UJ	0.982 UJ	0.982 UJ
4-Methyl-2-pentanone	100,000	NV	5.12 U	5.12 U	5.12 U	5.12 UJ	-- R	5.12 UJ	5.12 UJ	5.12 UJ	5.12 UJ	5.12 UJ
Acetone	NV	2,100,000	<b>11.2</b>	<b>66.5</b>	2.97 U	<b>33.7 J</b>	-- R	<b>34.7 J</b>	<b>24.2 J</b>	<b>21.5 J</b>	<b>19.6 J</b>	<b>14.3 J</b>
Allyl chloride	16	NV	0.626 U	0.626 U	0.626 U	0.626 UJ	-- R	0.626 UJ	0.626 UJ	0.626 UJ	0.626 UJ	0.626 UJ
Benzene	12	970	0.639 U	<b>0.789</b>	<b>4.09</b>	0.639 UJ	-- R	0.639 UJ	<b>0.885 J</b>	0.639 UJ	<b>7.41 J</b>	<b>0.815 J</b>
Benzyl chloride	1.9	8,000	1.04 U	1.04 U	1.04 U	1.04 UJ	-- R	1.04 UJ	1.04 UJ	1.04 UJ	1.04 UJ	1.04 UJ
Bromodichloromethane	2.5	NV	1.34 U	1.34 U	1.34 U	1.34 UJ	-- R	1.34 UJ	1.34 UJ	1.34 UJ	1.34 UJ	1.34 UJ
Bromoform	85	NV	6.21 U	6.21 U	6.21 U	6.21 UJ	-- R	6.21 UJ	6.21 UJ	6.21 UJ	6.21 UJ	6.21 UJ
Bromomethane	170	130,000	0.776 U	0.776 U	0.776 U	0.776 UJ	-- R	0.776 UJ	0.776 UJ	0.776 UJ	0.776 UJ	0.776 UJ
Carbon disulfide	24,000	210,000	1.24 U	1.24 U	<b>68.5</b>	1.24 UJ	-- R	<b>19.8 J</b>	<b>6.94 J</b>	1.24 UJ	<b>58.5 J</b>	<b>18.4 J</b>
Carbon tetrachloride	16	63,000	1.26 U	1.26 U	1.26 U	1.26 UJ	-- R	1.26 UJ	1.26 UJ	1.26 UJ	1.26 UJ	1.26 UJ
Chlorobenzene	1,700	NV	0.924 U	0.924 U	0.924 U	0.924 UJ	-- R	0.924 UJ	0.924 UJ	0.924 UJ	0.924 UJ	0.924 UJ
Chloroethane	140,000	1,300,000	0.528 U	0.528 U	0.528 U	0.528 UJ	-- R	0.528 UJ	0.528 UJ	0.528 UJ	0.528 UJ	0.528 UJ
Chloroform	4.1	16,000	0.973 U	0.973 U	<b>4.43</b>	<b>1.08 J</b>	-- R	<b>2.28 J</b>	0.973 UJ	<b>3.91 J</b>	<b>26.3 J</b>	<b>7.11 J</b>
Chloromethane	3,100	33,000	0.413 U	<b>0.896</b>	0.413 U	0.413 UJ	-- R	0.413 UJ	<b>1.46 J</b>	0.413 UJ	0.413 UJ	0.413 UJ
cis-1,2-Dichloroethene	1,400	NV	0.793 U	0.793 U	0.793 U	0.793 UJ	-- R	0.793 UJ	0.793 UJ	0.793 UJ	0.793 UJ	0.793 UJ
cis-1,3-Dichloropropene	NV	NV	0.908 U	0.908 U	0.908 U	0.908 UJ	-- R	0.908 UJ	0.908 UJ	0.908 UJ	0.908 UJ	0.908 UJ
Cyclohexane	210,000	NV	0.689 U	0.689 U	<b>5.51</b>	0.689 UJ	-- R	0.689 UJ	<b>0.878 J</b>	0.689 UJ	<b>2.38 J</b>	0.689 UJ
Dibromochloromethane	NV	NV	1.7 U	1.7 U	1.7 U	1.7 UJ	-- R	1.7 UJ	1.7 UJ	1.7 UJ	1.7 UJ	1.7 UJ

**Table 4-1  
Summary of Soil Vapor Analytical Results  
Allen Street Site Investigation  
Corvallis, Oregon**

Location:	RBC, Soil Vapor, Volatilization to Indoor Air <sup>(1)</sup>		SVW-07S	SVW-08S	SVW-09D	SVW-09S	SVW-10D	SVW-10S	SVW-11D	SVW-11S	SVW-12D	SVW-12S
Sample Name:	Chronic	Acute	SVW-07S	SVW-08S	SVW-09D	SVW-09S	SVW-10D	SVW-10S	SVW-11D	SVW-11S	SVW-12D	SVW-12S
Collection Date:	Residential		10/07/2024	10/07/2024	10/08/2024	10/08/2024	10/08/2024	10/08/2024	10/08/2024	10/08/2024	10/08/2024	10/08/2024
Dichlorodifluoromethane (Freon 12)	3,500	NV	<b>2.52</b>	<b>2.46</b>	<b>2.67</b>	<b>2.46 J</b>	-- R	<b>2.36 J</b>	<b>2.54 J</b>	<b>2.41 J</b>	<b>2.51 J</b>	<b>2.68 J</b>
Ethanol	NV	NV	4.71 U	<b>43.9</b>	4.71 U	<b>10.1 J</b>	-- R	<b>6.41 J</b>	<b>6.2 J</b>	<b>20 J</b>	<b>6.11 J</b>	<b>7.56 J</b>
Ethylbenzene	37	730,000	0.867 U	<b>1.49</b>	0.867 U	0.867 UJ	-- R	<b>0.88 J</b>	0.867 UJ	0.867 UJ	<b>1.2 J</b>	<b>1.45 J</b>
Freon 113	170,000	NV	1.53 U	1.53 U	1.53 U	1.53 UJ	-- R	1.53 UJ	1.53 UJ	1.53 UJ	1.53 UJ	1.53 UJ
Freon 114	NV	NV	1.4 U	1.4 U	1.4 U	1.4 UJ	-- R	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ
Heptane	14,000	NV	0.818 U	0.818 U	<b>3.02</b>	0.818 UJ	-- R	0.818 UJ	0.818 UJ	0.818 UJ	<b>0.953 J</b>	0.818 UJ
Hexachlorobutadiene	4.3	NV	6.73 U	6.73 U	6.73 U	6.73 UJ	-- R	6.73 UJ	6.73 UJ	6.73 UJ	6.73 UJ	6.73 UJ
Isopropylbenzene	14,000	NV	0.983 U	0.983 U	0.983 U	0.983 UJ	-- R	0.983 UJ	0.983 UJ	0.983 UJ	0.983 UJ	0.983 UJ
m,p-Xylene	NV	NV	1.73 U	<b>6.2</b>	<b>1.94</b>	1.73 UJ	-- R	<b>2.22 J</b>	1.73 UJ	1.73 UJ	1.73 UJ	<b>2.16 J</b>
Methyl methacrylate	24,000	NV	0.819 U	0.819 U	0.819 U	0.819 UJ	-- R	0.819 UJ	0.819 UJ	0.819 UJ	0.819 UJ	0.819 UJ
Methyl tert-butyl ether	360	270,000	0.721 U	0.721 U	0.721 U	0.721 UJ	-- R	0.721 UJ	0.721 UJ	0.721 UJ	0.721 UJ	0.721 UJ
Methylene chloride	3,400	70,000	0.694 U	<b>29.6</b>	0.694 U	0.694 UJ	-- R	0.694 UJ	0.694 UJ	0.694 UJ	0.694 UJ	0.694 UJ
Naphthalene	2.8	6,700	3.3 U	3.3 U	3.3 U	3.3 UJ	-- R	3.3 UJ	3.3 UJ	3.3 UJ	3.3 UJ	3.3 UJ
n-Hexane	24,000	NV	2.22 U	<b>31.2</b>	<b>36.7</b>	2.22 UJ	-- R	2.22 UJ	<b>5.82 J</b>	2.22 UJ	<b>8.88 J</b>	2.22 UJ
n-Propylbenzene	35,000	NV	0.982 U	0.982 U	0.982 U	0.982 UJ	-- R	0.982 UJ	0.982 UJ	0.982 UJ	0.982 UJ	0.982 UJ
o-Xylene	3,500	NV	0.867 U	<b>2.95</b>	0.867 U	0.867 UJ	-- R	<b>1.37 J</b>	0.867 UJ	0.867 UJ	<b>1.41 J</b>	<b>1.4 J</b>
Propylene	100,000	NV	2.15 U	<b>158</b>	2.15 U	2.15 UJ	-- R	<b>24.3 J</b>	<b>394 J</b>	2.15 UJ	<b>80.9 J</b>	2.15 UJ
Styrene	35,000	700,000	1.7 U	1.7 U	1.7 U	1.7 UJ	-- R	1.7 UJ	1.7 UJ	1.7 UJ	1.7 UJ	1.7 UJ
Tetrachloroethene	360	1,400	1.36 U	1.36 U	<b>2.55</b>	1.36 UJ	-- R	1.36 UJ	1.36 UJ	1.36 UJ	1.36 UJ	1.36 UJ
Tetrahydrofuran	70,000	NV	0.59 U	0.59 U	0.59 U	0.59 UJ	-- R	0.59 UJ	0.59 UJ	0.59 UJ	0.59 UJ	0.59 UJ
Toluene	170,000	250,000	1.88 U	<b>7.12</b>	<b>5.05</b>	<b>2.15 J</b>	-- R	<b>3.09 J</b>	1.88 UJ	1.88 UJ	<b>4.41 J</b>	1.88 UJ
trans-1,2-Dichloroethene	1,400	26,000	0.793 U	0.793 U	0.793 U	0.793 UJ	-- R	0.793 UJ	0.793 UJ	0.793 UJ	0.793 UJ	0.793 UJ
trans-1,3-Dichloropropene	NV	NV	0.908 U	0.908 U	0.908 U	0.908 UJ	-- R	0.908 UJ	0.908 UJ	0.908 UJ	0.908 UJ	0.908 UJ
Trichloroethene	16	70	1.07 U	1.07 U	1.07 U	1.07 UJ	-- R	1.07 UJ	1.07 UJ	1.07 UJ	1.07 UJ	1.07 UJ
Trichlorofluoromethane (Freon 11)	NV	NV	1.12 U	1.12 U	1.12 U	1.12 UJ	-- R	1.12 UJ	<b>1.33 J</b>	1.12 UJ	<b>1.44 J</b>	1.12 UJ
Vinyl acetate	7,000	6,700	2.22 U	2.22 U	2.22 U	2.22 UJ	-- R	2.22 UJ	2.22 UJ	2.22 UJ	2.22 UJ	2.22 UJ
Vinyl bromide	6.2	NV	0.875 U	0.875 U	0.875 U	0.875 UJ	-- R	0.875 UJ	0.875 UJ	0.875 UJ	0.875 UJ	0.875 UJ
Vinyl chloride	5.6	43,000	0.511 U	0.511 U	0.511 U	0.511 UJ	-- R	0.511 UJ	0.511 UJ	0.511 UJ	0.511 UJ	0.511 UJ
Xylenes, total <sup>(b)</sup>	3,500	290,000	1.73 U	<b>9.15</b>	<b>2.37 J</b>	1.73 UJ	-- R	<b>3.59 J</b>	1.73 UJ	1.73 UJ	<b>2.28 J</b>	<b>3.56 J</b>

**Table 4-1**  
**Summary of Soil Vapor Analytical Results**  
**Allen Street Site Investigation**  
**Corvallis, Oregon**

**Notes**

**Bold** indicates a detection above the reporting limit.

Shading (color key below) indicates values that exceed RBCs; non-detects (U, UJ) and rejected results (R) were not compared with screening criteria.

Data summation rules are as follows: non-detect results are multiplied by one-half when used for sums. When all results are non-detect, the highest reporting limit is provided as the sum.

RBC, Soil Vapor, Volatilization to Indoor Air, Chronic, Residential

-- = result value is not shown because it has been qualified as rejected.

J = result is estimated.

NV = no value.

R = result is rejected. The analyte may or may not be present in the sample. The results are not shown.

RBC = risk-based concentration.

TPH = total petroleum hydrocarbons.

U = result is non-detect at the method reporting limit.

UJ = result is non-detect with an estimated method reporting limit.

ug/m<sup>3</sup> = micrograms per cubic meter.

VOC = volatile organic compound.

<sup>(a)</sup> Helium was applied to the shrouded sampling train during sample collection to identify leaks. A detection of helium indicates a leak in the sampling train.

<sup>(b)</sup> Total xylenes is the sum of m,p-xylene and o-xylene. When both results are non-detect, the highest reporting limit is shown.

**Reference**

<sup>(1)</sup> DEQ. 2024. Table 1: *Chronic and Acute Vapor Intrusion Risk-Based Concentrations*. Oregon Department of Environmental Quality. March.

**Table 4-2**  
**Summary of Groundwater Analytical Results**  
**Allen Street Site Investigation**  
**Corvallis, Oregon**



Location:	RBC, Vapor Intrusion, Groundwater Volatilization to Indoor Air		MW-03	MW-06	
Sample Name:	Chronic	Acute	MW-03	MW-06	MW-06-DUP
Collection Date:	Residential		10/09/2024	10/09/2024	10/09/2024
<b>VOCs (ug/L)</b>					
1,1,1,2-Tetrachloroethane	8.3	NV	0.147 U	0.147 U	0.147 U
1,1,1-Trichloroethane	13,000	28,000	0.149 U	0.149 U	0.149 U
1,1,2,2-Tetrachloroethane	6.8	NV	0.133 U	0.133 U	0.133 U
1,1,2-Trichloroethane	10	NV	0.158 U	0.158 U	0.158 U
1,1-Dichloroethane	13	NV	0.1 U	0.1 U	0.1 U
1,1-Dichloroethene	300	290	0.188 U	0.188 U	0.188 U
1,1-Dichloropropene	NV	NV	0.142 U	0.142 U	0.142 U
1,2,3-Trichlorobenzene	NV	NV	0.23 U	0.23 U	0.23 U
1,2,3-Trichloropropane	47	270	0.237 U	0.237 U	0.237 U
1,2,3-Trimethylbenzene	990	NV	0.104 U	0.104 U	0.104 U
1,2,4-Trichlorobenzene	91	NV	0.481 U	0.481 U	0.481 U
1,2,4-Trimethylbenzene	560	NV	0.322 U	0.322 U	0.322 U
1,2-Dibromo-3-chloropropane	0.067	750	0.276 U	0.276 U	0.276 U
1,2-Dibromoethane	0.34	NV	0.126 U	0.126 U	0.126 U
1,2-Dichlorobenzene	5,900	NV	0.107 U	0.107 U	0.107 U
1,2-Dichloroethane	4	NV	0.0819 U	0.0819 U	0.0819 U
1,2-Dichloropropane	12	3,600	0.149 U	0.149 U	0.149 U
1,3,5-Trimethylbenzene	400	NV	0.104 U	0.104 U	0.104 U
1,3-Dichlorobenzene	NV	NV	0.11 U	0.11 U	0.11 U
1,3-Dichloropropane	NV	NV	0.11 U	0.11 U	0.11 U
1,4-Dichlorobenzene	5.8	270,000	0.12 U	0.12 U	0.12 U
2,2-Dichloropropane	NV	NV	0.161 U	0.161 U	0.161 U
2-Butanone	4,000,000	3,800,000	1.19 U	1.19 U	1.19 U
2-Chlorotoluene	NV	NV	0.106 U	0.106 U	0.106 U
4-Chlorotoluene	NV	NV	0.114 U	0.114 U	0.114 U
4-Isopropyltoluene	NV	NV	0.12 U	0.12 U	0.12 U
4-Methyl-2-pentanone	1,100,000	NV	0.478 U	0.478 U	0.478 U
Acetone	NV	NV	11.3 U	11.3 U	11.3 U
Acrolein	6.9	2,300	2.54 U	2.54 U	2.54 U
Acrylonitrile	13	70,000	0.671 U	0.671 U	0.671 U
Benzene	2.8	230	0.0941 U	0.0941 U	0.0941 U
Bromobenzene	1,500	NV	0.118 U	0.118 U	0.118 U
Bromodichloromethane	1.6	NV	0.136 U	0.136 U	0.136 U
Bromoform	250	NV	0.129 U	0.129 U	0.129 U
Bromomethane	25	19,000	0.605 UJ	0.605 UJ	0.605 UJ
Carbon disulfide	1,900	16,000	0.0962 U	0.0962 U	0.0962 U
Carbon tetrachloride	0.71	2,900	0.128 U	0.128 U	0.128 U
Chlorobenzene	810	NV	0.116 U	0.116 U	0.116 U
Chloroethane	14,000	130,000	0.192 U	0.192 U	0.192 U
Chloroform	1.4	5,700	0.111 U	0.111 U	0.111 U
Chloromethane	350	3,700	0.96 UJ	0.96 UJ	0.96 UJ
cis-1,2-Dichloroethene	430	NV	<b>3.87</b>	<b>2.31</b>	<b>2.03</b>
cis-1,3-Dichloropropene	NV	NV	0.111 U	0.111 U	0.111 U
Dibromochloromethane	NV	NV	0.14 U	0.14 U	0.14 U
Dibromomethane	230	NV	0.122 U	0.122 U	0.122 U

**Table 4-2**  
**Summary of Groundwater Analytical Results**  
**Allen Street Site Investigation**  
**Corvallis, Oregon**



Location:	RBC, Vapor Intrusion, Groundwater Volatilization to Indoor Air		MW-03	MW-06	
	Chronic	Acute	MW-03	MW-06	MW-06-DUP
Sample Name:	Residential		10/09/2024	10/09/2024	10/09/2024
Collection Date:					
Dichlorodifluoromethane (Freon 12)	9.8	NV	0.374 U	0.374 U	0.374 U
Diisopropyl ether	12,000	NV	0.105 U	0.105 U	0.105 U
Ethylbenzene	7.1	140,000	0.137 U	0.137 U	0.137 U
Freon 113	390	NV	0.18 U	0.18 U	0.18 U
Hexachlorobutadiene	0.74	NV	0.337 U	0.337 U	0.337 U
Isopropylbenzene	2,200	NV	0.105 U	0.105 U	0.105 U
Methyl tert-butyl ether	740	540,000	0.101 U	0.101 U	0.101 U
Methylene chloride	1,200	25,000	0.43 U	0.43 U	0.43 U
Naphthalene	11	27,000	1 U	1 U	1 U
n-Butylbenzene	NV	NV	0.157 U	0.157 U	0.157 U
n-Propylbenzene	5,300	NV	0.0993 U	0.0993 U	0.0993 U
sec-Butylbenzene	NV	NV	0.125 U	0.125 U	0.125 U
Styrene	20,000	420,000	0.118 U	0.118 U	0.118 U
tert-Butylbenzene	NV	NV	0.127 U	0.127 U	0.127 U
Tetrachloroethene	29	110	0.3 U	0.3 U	0.3 U
Toluene	36,000	52,000	0.278 U	0.278 U	0.278 U
trans-1,2-Dichloroethene	180	3,400	<b>3.73</b>	<b>2.11</b>	<b>1.96</b>
trans-1,3-Dichloropropene	NV	NV	0.118 U	0.118 U	0.118 U
Trichloroethene	2.1	9.2	<b>5.76</b>	<b>4.48</b>	<b>4.25</b>
Trichlorofluoromethane (Freon 11)	NV	NV	0.16 U	0.16 U	0.16 U
Vinyl chloride	0.2	1,500	0.234 U	0.234 U	0.234 U
Xylenes, total <sup>(a)</sup>	780	68,000	0.174 U	0.174 U	0.174 U

**Notes**

**Bold** indicates a detection above the reporting limit.

Shading (color key below) indicates values that exceed RBCs; non-detects (U or UJ) were not compared with screening criteria.

RBC, Groundwater, Volatilization to Indoor Air, Chronic, Residential

NV = no value.

RBC = risk-based concentration.

U = result is non-detect at the method detection limit.

ug/L = micrograms per liter.

VOC = volatile organic compound.

<sup>(a)</sup>Total xylenes is reported by the laboratory.

**Reference**

<sup>(1)</sup>DEQ. 2024. Table 1: *Chronic and Acute Vapor Intrusion Risk-Based Concentrations*. Oregon Department of Environmental Quality. March.

# Appendix A

---

## Standard Operating Procedures



MAUL  
FOSTER  
ALONGI



## Standard Operating Procedure

### Push-Probe Drilling

SOP Number: 7

Date: 03/09/2021

Revision Number: 0.1

## Scope and Application

This standard operating procedure (SOP) describes the use of a push probe (i.e., Geoprobe™) to observe subsurface conditions and collect samples of various environmental media (e.g., soil, sediment, groundwater, soil vapor) for laboratory analysis. Push-probe drilling is generally not suitable for soils with gravel/rock clast larger than about 4 inches in diameter. If gravelly/rocky soils are expected at the project site, consider use of the sonic drilling method described in SOP 8.

Push-probe drilling can be used for a variety of purposes, including:

- Retrieving cores to document subsurface soil or sediment conditions and to obtain samples for physical and/or chemical evaluation
- Sampling soil vapors, using temporary well points
- Collecting reconnaissance groundwater samples from temporary well screens
- Installing permanent monitoring wells

## Equipment and Materials Required

The following equipment and materials are necessary for this procedure:

- Push-probe drill rig and operator provided by a subcontractor to MFA. Ensure that the subcontractor is licensed to perform the drilling work.
- Sampling equipment appropriate for the media to be sampled (e.g., water level meter, pumps, hand tools, and pump tubing).
- Laboratory-supplied sample containers.
- Traffic cones, measuring tape, buckets.
- Department of Transportation (DOT)-approved containers (e.g., 55-gallon drum) for storing excess soil and decontamination water; the drums are typically provided by the drilling subcontractor.
- Boring log form and notebook.
- Equipment decontamination supplies if sampling equipment will be reused between sample locations (see SOP 1 for equipment decontamination procedures).
- Personal protective equipment (as required by the project health and safety plan).

## Methodology

When the project-specific sampling and analysis plan (SAP) provides additional or different requirements for push-probe drilling, it takes precedence over this SOP. In the absence of a SAP, the procedures in this SOP shall be used.

## Utility Locate:

- Before beginning the fieldwork, assess the proposed drilling location(s) for the presence of overhead and underground utilities, and adjust the locations, as needed, to avoid identified utilities.
- See SOP 18 for the utility locating procedures.

## Push-Probe Drilling Process:

- The push-probe drilling rig is equipped with a soil sampling device that retrieves a continuous soil core. A combination of static force and percussion is used to drive the soil sampler into unconsolidated geologic material. A plastic liner placed inside the sampler contains the soil core and permits its removal from the sampler for examination. The sampler is driven into the subsurface, typically in 4- or 5-foot intervals, depending on the length of the sampling device. When each interval depth is reached, the soil sampler is removed from the ground, and the liner is removed to facilitate soil observation and sampling.
- This process is repeated for each soil sample interval until the targeted boring depth is reached.
- Ensure that the drilling subcontractor decontaminates all subsurface equipment before and after each boring. Document the decontamination procedures in the field notebook. Store decontamination water in DOT-approved containers for later off-site disposal.

## Logging and Soil Sampling Process:

- Remove the soil core from the sampler for field screening, description, and sampling.
- Describe the lithology in accordance with SOP 2.
- Confirm the required depth interval(s) for soil sample collection and field screening with the MFA project manager, or conduct the work in accordance with the SAP. The sample interval may require adjustment based on core recovery, soil stratigraphy and characteristics, and evidence of contamination. Confirm any adjustments to the sample intervals with the project manager.
- If the project requires field screening for organic vapor, conduct it in accordance with SOP 3.
- If the project requires laboratory analyses for gasoline-range petroleum hydrocarbons or volatile organic compounds, conduct the sampling in accordance with SOP 5.
- Contain all soil core remaining after sample collection in DOT-approved containers for later off-site disposal. See SOP 1 for drum storage, labeling, and documentation procedures.

## Reconnaissance Groundwater Sampling Process:

- Typically, reconnaissance groundwater samples are collected at the first occurrence of groundwater in a boring. Confirm the required depth and procedures for groundwater sample collection with the MFA project manager, or conduct the work in accordance with the SAP. If the project requires use of the low-flow sampling method, refer to SOP 9 for the low-flow sampling procedures.
- Reconnaissance groundwater samples are collected using a decontaminated stainless steel or disposable, temporary polyvinyl chloride well screen placed in the boring. If the soils in the boring are fine-grained and may cause excessive turbidity in groundwater, consider using a filter pack

around the screen to reduce turbidity. Alternatively, purging the well screen of groundwater prior to sample collection may also reduce the turbidity. See SOP 9 for purging procedures.

- Purging and sampling will be conducted using a peristaltic pump unless otherwise specified in the SAP. New tubing will be used for each boring. Field parameters (e.g., temperature, conductivity, and pH) will be recorded in accordance with SOP 9 during purging and sampling.

### **Monitoring Well Installation:**

- If the project requires installation of a monitoring well in the boring, refer to SOP 11 for the well installation procedures. Confirm the procedures with the MFA project manager.

### **Borehole Abandonment Process:**

- Abandon each borehole in accordance with local and state regulations/procedures. The abandonment will be performed by the drilling subcontractor.
- The abandonment procedure typically consists of backfilling the boring with granular bentonite and hydrating the bentonite with potable water.
- If the boring was advanced through concrete or asphalt, backfill the boring to about 6 inches below grade to allow for placement of asphalt or concrete in the remaining 6 inches to match the surface conditions.



## Standard Operating Procedure

### Low-Flow Groundwater Sampling

SOP Number: 9

Date: 06/29/2023

Revision Number: 0.2

## Scope and Application

This standard operating procedure (SOP) describes use of the low-flow sampling method for collection of reconnaissance groundwater samples from borings and groundwater samples from monitoring wells. The method uses low pumping rates during purging and sample collection to minimize water-level drawdown and hydraulic stress at the well-aquifer interface.

## Equipment and Materials Required

The following materials are necessary for this procedure:

- Personal protective equipment (as specified in the health and safety plan)
- Water quality meter (e.g., Oakton, YSI Inc. multiparameter meter)
- Turbidity meter
- Water-level meter
- Peristaltic pump and tubing
- Laboratory-supplied sample containers
- Laboratory chain-of-custody form and cooler with ice
- Filter if dissolved analyses will be performed
- Well construction logs documenting the screen depth and interval for all wells to be sampled
- Equipment decontamination supplies if sampling equipment will be reused between sample locations (see SOP 1 for equipment decontamination procedures)
- 5-gallon buckets with lids
- Department of Transportation-approved storage containers (e.g., drums, totes)
- Groundwater field sampling datasheet and notebook

## Methodology

When the project-specific sampling and analysis plan (SAP) provides additional or different requirements for low-flow groundwater sampling, it takes precedence over this SOP. In the absence of a SAP, the procedures in this SOP shall be used.

### General Sampling Procedure:

#### Water Level Measurement

- Water-level measurement procedures are described in detail in SOP 13.

- Open the well cap to allow the water level to equilibrate (approximately ten minutes).
- Measure the water level in the well, using an electronic water-level meter to the nearest 0.01 foot to determine the depth to groundwater below the top of the well casing.
- If light nonaqueous-phase liquid (LNAPL) is present (typically indicated by a dark, oily sheen on the top of the water level meter), discuss with the MFA project manager how to proceed.

### Purging

- If the water level is above the top of the well screen, place the end of the sample tubing in the middle of the well screen interval. If the water level is below the top of the screen, place the end of the sample tubing at the midpoint between the water level and the bottom of the well screen.
- Typical low-flow sampling pumping rates range from 0.1 to 0.5 liters per minute, depending on the hydrogeologic characteristics at the site. The objective of the rate selected is to minimize excessive drawdown (<0.3 feet) of the water level.
- Measure water quality parameters (dissolved oxygen, pH, electrical conductivity, turbidity, and temperature) using a flow-through cell connected to the discharge end of the peristaltic pump tubing. Purging will be considered complete when the water quality parameters stabilize per the following for three consecutive readings taken over 3-minute intervals (consistent with EPA guidance)<sup>1</sup>:

**Dissolved Oxygen** (10% for values greater than 0.5 mg/L, if three Dissolved Oxygen values are less than 0.5 mg/L, consider the values as stabilized),

**Specific Conductance** (3%),

**Temperature** (3%),

**pH** ( $\pm 0.1$  unit),

**Oxidation/Reduction Potential** ( $\pm 10$  millivolts).

- Document the purge procedures, including pumping rates, water quality parameter measurements, and the water level during purging, on the groundwater field sampling datasheet.
- Place purge water in Department of Transportation-approved containers (e.g., 55-gallon drum) stored on site. See SOP 1 for drum storage, labeling, and documentation procedures.

### Sample Collection

- Following the purging process, collect groundwater samples in laboratory-supplied containers.
- Confirm the laboratory analytical methods and sample container requirement with the MFA project manager or project chemist. If analysis for gasoline-range petroleum hydrocarbons or volatile organic compounds (VOCs) is proposed, fill the sample containers for gasoline and VOC analysis before filling sample containers for other analytical methods. Sample containers for gasoline and VOC analysis shall be filled to capacity without overfilling and capped so that no headspace or air bubbles remain in the container.

---

<sup>1</sup> EPA. 2017. Low stress (low flow) purging and sampling procedure for the collection of groundwater samples from monitoring wells. September 19.

**Low Yield (Alternate Method)**

- If drawdown of the water table cannot be avoided by reducing the pumping rate, and the well goes dry during purging, discontinue pumping and water quality parameter measurements.
- Collect the groundwater sample after the water level above the well bottom recovers to 90 percent of the prepurge water level. For example, if the water level was 10 feet above the well bottom before purging, begin sampling when the water level has recovered to 9 feet or more above the well bottom.
- If the water column volume is insufficient to meet the sample volume requirement, allow the water level to again recover to 90 percent before continuing sampling. Repeat this procedure until all sample containers are filled.



## Standard Operating Procedure

### Well Installation

SOP Number: 11

Date: 03/09/2021

Revision Number: 0.1

## Scope and Application

This standard operating procedure (SOP) describes the use of conventional machine slotted polyvinyl chloride (PVC) or prepacked well screens to install monitoring wells. The screen permits water to enter the well from the saturated aquifer, prevents soil from entering the well, and serves structurally to support the aquifer material. The slot size of the well screen is typically based on selection of the filter pack material. Monitoring wells must be designed and installed to ensure that low-turbidity groundwater samples, groundwater levels, and hydraulic conductivity data that are representative of conditions in the aquifer can be obtained.

## Equipment and Materials Required

The following materials are necessary for this procedure:

- Drill rig and operator provided by a subcontractor to MFA. Ensure that the subcontractor is licensed to perform the well installations.
- Personal protective equipment (as specified in the health and safety plan).
- Water-level meter.
- Monitoring well construction log and notebook.

## Methodology

When the project-specific sampling and analysis plan (SAP) provides additional or different requirements for well installation, it takes precedence over this SOP. In the absence of a SAP, the procedures in this SOP shall be used.

The drilling contractor will be responsible for conforming to all applicable local and state regulations for well construction.

The proposed well construction should be provided to the driller in advance so that (1) the driller can confirm that the proposed construction is consistent with state regulations, and (2) the driller comes to the project site with sufficient materials for the well construction.

### General Procedure:

**Drilling and Well Construction.** This SOP assumes that a boring has already been drilled and is ready for well installation. See SOPs 7 and 8 for drilling procedures. If the boring was advanced to a depth below the targeted well screen interval, backfill the boring with cement-bentonite slurry or bentonite chips so that the boring bottom is at a depth about 2 feet below the lower screen interval depth. Well construction will include flush-threaded Schedule 40 PVC casing and conventional PVC well screen or stainless steel mesh prepacked well screen, placed at the bottom of the boring.

**Filter Pack.** Clean silica sand pack will be placed between the boring wall and the PVC screen/riser (i.e., the annulus) from the bottom of the well to approximately 1 to 2 feet above the screened interval. The filter pack should have greater hydraulic conductivity than the surrounding formation so that water can be drawn into the well. Before installation of the seal, the well may be surged using a surge block or similar technique to consolidate the filter pack and eliminate voids. Measure and document the depth to the sand filter pack before setting the seal.

**Seal.** A bentonite seal 1 to 2 feet thick will be placed above the sand. The bentonite will be hydrated and allowed to sit for a minimum of 30 minutes for proper hydration and sealing. Measure and document the depth to the top of the seal before placing grout.

**Grout.** Cement-bentonite slurry or bentonite chips (hydrated after installation) will be placed above the bentonite seal following proper hydration of the seal. The cement-bentonite slurry will be placed to within 1 foot of the ground surface.

**Surface Seal and Monument.** A concrete surface seal will secure a flush-mounted, traffic-rated monument, or a bollard-protected stickup monument. Flush-mounted surface monuments will be completed slightly above grade to prevent ponding of water on the monument lid. A locking cap and lock will secure the top of the well casing in a surface monument. Tamper-resistant bolts (e.g., pentagonal) may be used to secure the lid of a flush-mounted monument. The lid of a stickup monument should be secured with a lock.

The well constructor shall permanently affix a well identification label to the wellhead. In addition, the well number should be marked on the well (e.g., punched into monument ring, written on the well casing/cap with permanent marker). A v-notch is typically cut into the north side of the PVC riser for use as a survey point and for water level measurements.

**Documentation.** The field representative will produce the following documentation during the well installation:

- Length of well components, including blank casing, well screen, and sump (if included).
- Preinstallation boring depth below ground surface (bgs).
- Depth bgs to top and bottom of screen.
- Depth bgs to top of filter pack and seal.
- Types, brands, and amounts of materials (sand, bentonite, grout) used.
- Decontamination procedures followed, if needed (see SOP 1 for equipment decontamination procedures).
- If potable water was placed into the boring or well during installation, document the total volume of water placed; this information will be needed for well development (see SOP 12).
- Any deviation from standard procedures or any problems encountered during the installation activities.



## Standard Operating Procedure

### Well Development

SOP Number: 12

Date: 03/09/2021

Revision Number: 0.1

## Scope and Application

This standard operating procedure (SOP) describes the methods for developing new monitoring well installations. New wells should be developed no sooner than a period of 24 hours after the grout seal has been placed; longer periods of 48 to 72 hours may be necessary, depending on applicable local or state regulations. The objective of well development is to ensure that low-turbidity groundwater samples, groundwater levels, and hydraulic conductivity data representative of conditions in the aquifer can be obtained from the well. This SOP is also applicable to the redevelopment of existing monitoring wells.

## Equipment and Materials Required

The following materials are necessary for this procedure:

- Personal protective equipment (as specified in the health and safety plan)
- Well purge equipment (e.g., Waterra Pump, bailer, and peristaltic pump)
- Water-quality meter (e.g., Oakton and turbidity meter)
- Water-level meter
- Well construction logs for all wells to be developed
- Equipment decontamination supplies if sampling equipment will be reused between sample locations (see SOP 1 for equipment decontamination procedures)
- Five-gallon buckets with lids
- Department of Transportation-approved storage containers (e.g., drums, totes)
- Well development log and notebook

## Methodology

When the project-specific sampling and analysis plan (SAP) provides additional or different requirements for well development, it takes precedence over this SOP. In the absence of a SAP, the procedures in this SOP shall be used.

Owing to the potential for hazardous substances in groundwater, well development requires consideration of the work area and equipment setup, health and safety procedures, use of appropriate personal protective equipment, procedures for equipment decontamination, and disposal of expendable development supplies. Confirm all procedures in advance with the MFA project manager and the MFA health and safety professional.

1. Cut a segment of plastic sheeting to an approximate 10-foot-by-10-foot dimension. Cut a hole in the center of the sheeting and place the sheeting over the well so that the well monument can be accessed through the hole and the sheeting lies flat on the ground. The sheeting defines the

work area for well development. All equipment that may come in contact with groundwater should remain in this work area until it has been decontaminated or containerized for disposal.

2. Measure the depth to water and the total depth of the well before development. Confirm that the entire screen length is below the water level; if it is not, contact the MFA project manager to discuss potential modification of the well-development procedures.
3. Subtract the depth to water from the total well depth to determine the height of the column of groundwater present in the well casing. Multiply the height by the gallon-per-foot value in the table below, corresponding to the diameter of the well being developed, to calculate the volume of water in the well casing. Record the readings and casing volume on the well development log.

Casing Diameter (inches)	Volume (gallons per foot)
1	0.04
2	0.17
3	0.37
4	0.65
5	1.02
6	1.46

4. Surge groundwater through the entire well screen interval with a weighted bailer or Waterra pump with tubing equipped with surge block. Begin surging at the top of the well screen by vigorously moving the bailer or surge block in approximately 1-foot vertical increments. Gradually increase the surge depth until the entire screen interval has been surged. The surge time for each 1-foot increment will depend on type of drilling, lithology, and well completion details. Generally, there should be at least one minute of surging across each increment.
5. After surging the well screen, purge groundwater from the well into buckets at a higher purging rate than the expected purging rate of groundwater sampling. Ideally, purging will be completed using a method that does not continue to surge the well (i.e., peristaltic or submersible pump). If a Waterra pump is used, remove the surge block from the tubing and set the tubing intake above the well screen for purging. Measure the water level during the purging process and adjust the pumping rate to maintain a water level above the top of the screen interval if possible. Document the volume of water removed.
6. When the volume of water purged equals the casing volume, use the water-quality meter to measure the temperature, pH, conductivity, and turbidity of the purge water. Repeat the measurements for each casing volume removed. Note that a YSI water-quality meter or similar meters should not be used in highly turbid water, per the manufacturer's recommendation.
7. After the removal of five casing volumes, review the stability of the water quality meter readings. The well will be considered developed if the water quality readings have stabilized for three consecutive casing volumes for the following:

**pH** ( $\pm 0.1$  unit),

**Specific Conductance** (3%),

**Turbidity** (10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized),

8. If the water-quality readings stabilize before a total of ten casing volumes are removed, development is complete. If the water-quality readings do not stabilize, well development will be consider complete after ten casing volumes have been removed.
9. If the water level cannot be maintained above the well screen or the well pumps dry during purging, contact the MFA project manager for further instructions.
10. If potable water was placed into the boring during drilling or into the well during installation, remove that volume of water and then begin purging as described in step 5.



## Standard Operating Procedure

### Monitoring Well—Water Elevation

SOP Number: 13

Date: 03/09/2021

Revision Number: 0.1

## Scope and Application

This standard operating procedure (SOP) describes the methods for obtaining groundwater level measurements and light nonaqueous-phase liquid (LNAPL) measurements from monitoring wells. Measurement may be collected as an independent event or in conjunction with groundwater sampling or sampling of removed LNAPL.

## Equipment and Materials Required

The following materials are necessary for this procedure:

- Personal protective equipment (as specified in the health and safety plan)
- Equipment decontamination supplies if equipment will be reused between well locations (see SOP 1 for equipment decontamination procedures)
- Field notebook
- Water-level meter or oil/water interface probe if water levels and LNAPL levels will be measured
- Bailers or tape/paste to confirm LNAPL detections if required; see SOP 10 for procedures for managing LNAPL when removing LNAPL from a well

## Methodology

When the project-specific sampling and analysis plan (SAP) provides additional or different requirements for water-level and LNAPL measurements, it takes precedence over this SOP. In the absence of a SAP, the procedures in this SOP shall be used.

### General Sampling Procedure:

Review well construction details and historical groundwater and LNAPL levels and thicknesses if available.

During groundwater sampling events, measurements should be collected before, during, and after purging and sampling. During purging and low-flow sampling, water-level measurements are conducted to ensure that drawdown is not occurring. Low-flow sampling methods are described in SOP 9. The following procedures should be followed when collecting groundwater-level and LNAPL measurements from wells.

#### Water Level Measurement

1. Test the water-level meter to ensure proper instrument response. This can be accomplished by immersing the probe tip in a small container of water.
2. Open the well cover and cap and allow the water level to equilibrate with atmospheric pressure for several minutes so that a static water level is attained. Audible air movement into or out of

the well upon loosening of the well cap is an indication that the water level is not in equilibrium with atmospheric pressure.

3. Locate the measurement reference point at the top of the well casing. Typically, this is a small notch in the casing or a point marked with a pen. If no measure point is present, measure the water level from the north side of the casing and note the result in the field notebook.
4. Lower the water-level meter probe into the well casing until the probe signal indicates that water has been contacted.
5. Observe the depth-to-water (DTW) reading from the measurement reference point at the top of the well casing to the nearest 0.01 foot. Over the course of about a minute, raise and re-lower the probe and observe the resulting DTW reading. If the reading remains unchanged to within 0.01 foot, this is an indication that the water level has equilibrated with atmospheric pressure; the reading can then be recorded in the field notebook as the static water level reading. If the reading changes, allow more time for the water level to become static.
6. If the work scope or SAP requires measurement of the depth-to-bottom (DTB), lower the probe to the bottom of the well and record the DTB reading from the reference point to the nearest 0.01 foot.
7. Remove the probe and decontaminate the probe and the portion of the probe tape inserted into the well casing.

#### **Water Level and LNAPL Measurement**

1. Repeat above steps 1 through 7.
2. Lower the interface probe into the well casing until the probe signal indicates that LNAPL has been contacted. Typically, the interface probe will signal by a repeating beep when LNAPL is present. A steady signal indicates that LNAPL is absent and that the probe is recording the DTW.
3. Observe the LNAPL reading as described in step 5 above until a static reading to the nearest 0.01 foot is achieved, and record the reading in the field notebook.
4. Lower the probe until a steady signal indicates that water has been contacted. Observe the water-level reading as described in step 5 above to confirm a static water level, and record the reading in the field notebook.
5. If LNAPL is detected in a well with no prior history of LNAPL presence, or the LNAPL thickness is greater than in prior observations, verify the presence and thickness using an alternative technique (e.g., bailer, tape, and water/petroleum colorimetric paste). See SOP 10 for procedures for managing LNAPL when removing LNAPL from a well.
6. Remove the interface probe and decontaminate the probe and the portion of the probe tape inserted into the well casing.



## Standard Operating Procedure

### Soil Vapor Sampling

SOP Number: 16

Date: 03/09/2021

Revision Number: 0.1

## Scope and Application

This standard operating procedure (SOP) describes the methods for collecting soil vapor samples from temporary or permanent equipment installed in unsaturated subsurface soil. Sample collection may require drilling through concrete or asphalt to gain access to subsurface soils.

## Equipment and Materials Required

- The following materials are necessary for this procedure:
- Personal protective equipment (as specified in the health and safety plan)
- Measuring tape, Teflon™ tape, wrenches
- Laboratory-supplied sample canister (e.g., Summa), manifolds, and flow controllers
- Leak-detection equipment (helium tank, two-stage regulator, and gas-flow-control valve; and helium leak detector)
- Vacuum (purge) pump
- Laboratory chain-of-custody form
- Equipment decontamination supplies if vapor-sampling equipment[instruments?] will be reused between sample locations (see SOP 1 for equipment decontamination procedures)
- Soil vapor field sampling datasheet and notebook

## Methodology

When the project-specific sampling and analysis plan (SAP) provides additional or different requirements for vapor sampling, it takes precedence over this SOP. In the absence of a SAP, the procedures in this SOP shall be used.

Complete the attached questionnaire before beginning vapor-sampling activities. The intent of this questionnaire is to document potential sources of vapors that could require the collection of vapor samples that are not representative of vapors present in subsurface soil.

### General Sampling Procedure:

#### Sample collection from a temporary or permanent boring

- Installation of the sample point may be completed manually or by a drilling subcontractor. See SOPs 7 and 8 for drilling procedures.
- Vapor point construction details, including screen length and depth placement, annular material, and seal specifications, may be project-specific and should be described in the project SAP.
- Clear the ground surface of brush, root mat, grass, leaves, and other debris.

- Remove soil to the target depth, verify that the sample depth is correct, and record the depth in the field notebook and the boring log (see SOP 2).
- Assemble and attach the sampling equipment as described below. Before sampling, temporary sampling points must equilibrate for at least 30 minutes. Permanent points should equilibrate for at least 48 hours.

### Sample collection from a subslab sample point

Subslab soil-gas sampling points consist of a Cox-Colvin & Associates, Inc. (Cox-Colvin) Vapor Pin™ system. The procedures developed by Cox-Colvin for installing and removing the Vapor Pin system, including the secure cover, are attached.

### Assembly and attachment of sampling equipment

- Connect the sampling equipment as shown in the attached figure such that the equipment can be purged, leak tested, shut-in tested, and sampled in the field.
- The vapor pin installed in an asphalt or cement slab will be connected to the ¼ turn Swagelok® ball valve (Valve #1—sampling valve), using appurtenant stainless steel or Tygon® tubing. The sampling valve is connected to a vacuum gauge, which is attached to the flow controller.
- At the flow controller, a Swagelok tee connection will be fitted to the canister and to a second ¼ turn Swagelok ball valve (Valve #2—purge valve) used to isolate the purging equipment during actual sampling.
- The canister has a built-in valve that allows isolation of the canister during purging and leak-checking activities. On the other side of the purge valve (#2), a vacuum pump will be connected in order to induce vacuum for purging and shut-in testing.

### Leak detection

- Helium will be contained around the sampling apparatus and sampling pin to serve as a leak-check compound. Helium will be released into a small structure (shroud) that is placed over the sampling pin and sampling train.
- With the canister valve closed, a sample of the soil gas collected during purging (described below) will be contained in a Tedlar® bag.
- A field helium detector will be used to sample the air purged through the sampling train to verify the presence or absence of helium. A helium concentration greater than 10 percent of the concentration in the containment structure indicates that a leak is occurring.
- If a leak is detected, the sampling and purging train fittings will be tightened and the leak check will be repeated.
- The absence of helium during the purging process verifies the integrity of the sampling system before the sample is collected.
- The canister will also be analyzed for helium by the analytical laboratory as a quality assurance measure.

### Sampling

- After the sampling train is purged and no leaks are detected in the sampling train, close the valve leading to the vacuum pump (Valve #2—purge valve), open the valve leading to the

sampling pin (Valve #1—sample valve), and then open the valve on the canister to collect the sample over a 30-minute period or the duration of time required for the specific test.

- Record field data during the sampling on the soil vapor field sampling datasheet, including the sampling start and stop times, the initial and final canister vacuum readings, and weather conditions.
- The sample will be rejected if the initial canister pressure is not at least -25 inch of mercury or if the final canister pressure is greater than -0.1 inch of mercury. The final canister pressure is recommended at or near -5 inch of mercury.

### Data Recording

In a field log notebook and soil vapor field sampling datasheet, record the following:

- Project name, sample date, sampling location, canister serial number, initial vacuum reading, final pressure reading, and sampling time.
- Weather conditions during sampling (temperature, barometric pressure, humidity, sunny/cloud cover, wind).
- Date and amount of most recent prior rainfall.

### Abandonment of Sampling Points

- Temporary Borings: Abandon each borehole in accordance with local and state regulations/procedures. See SOPs 7 and 8 for borehole abandonment procedures. The abandonment procedure typically consists of filling the boring with granular bentonite and hydrating the bentonite with water. Match the surface completion to the surrounding materials.
- Subslab Vapor Pin: The subslab vapor pin will be properly decommissioned consistent with the attached Cox-Colvin procedure. The slab borehole will be filled with grout and/or concrete. Surface restoration may include a follow-up visit for final sanding and finish work to restore the floor slab, and associated coverings, to their original condition as required.



## Standard Operating Procedure

### Underground Utility Locates

SOP Number: 18

Date: 03/09/2021

Revision Number: 0.1

## Scope and Application

This standard operating procedure (SOP) describes the practices for locating underground utilities. Refer to the MFA health and safety plan (HASP) for additional information regarding communication procedures to be followed when an inadvertent utility strike occurs, as well as regarding methods for mitigating hazards during a utility strike.

## Equipment and Materials Required

The following materials are necessary for this procedure:

- Personal protective equipment (as specified in the HASP)
- Marking materials (e.g., marking paint, stakes, flags)
- Field documentation materials

## Methodology

When the project-specific sampling and analysis plan (SAP) specifies additional or different requirements for underground utility locates, it takes precedence over this SOP. In the absence of a SAP, the procedures in this SOP shall be used.

### Before Conducting Utility Locates:

- Ensure that the locate will be conducted reasonably soon before the excavation work begins, e.g., within 48 hours. There may be project-specific conditions, e.g., weather and/or ground features that could cause markings to fade, which would require scheduling of the excavation work sooner than 48 hours after the locate.
- Clearly define the boundary of the work and the locations of all proposed excavations. Prepare a map of the project area showing the excavation locations.
- Interview site managers/property owners and obtain plans or drawings, if available, showing on-site utilities.
- For project work that will not take place in the public right-of-way, ensure that the public rights-of-way nearest to the project are identified and communicated during the one-call notification.
- Identify the township and range of the project area. This information can be easily attained by a quick email to MFA's GIS Exchange.
- If feasible, conduct a site visit to identify site conditions that could cause fading or disruption of marking paint. Such conditions could include gravel or ground sensitive to erosion and high traffic.
- Check the weather forecast to assess the potential for snow or rain to make marking utilities difficult or cause the markings to fade.

## **One-Call Utility Notification:**

- If possible, initiate the one-call utility notification at least one week before the proposed work begins.
- Include a map or GPS coordinates when submitting the notification.
- Before conducting any excavation activities, confirm with each public utility that the utility locate has been completed.
- On remote or complicated sites, consider meeting public locators on site.
- Document the one-call ticket number and results in the project files.
- Provide the one-call ticket number to subcontractors who will be doing the excavations.

## **Private Utility Locate:**

- Conduct the private utility locate only after confirmation that the public utility locate has been completed and all public utilities have been marked and the results reviewed by MFA staff who will be overseeing the excavations.
- Meet the private locator on site and participate in the entire private utility locate. Be engaged in the process, ask questions, and take time to walk the site thoroughly with the locator.
- Bring a copy of the one-call utility ticket and results of the one-call utility locator to check against the utility markings on the ground.
- If possible, have a site/property representative knowledgeable of on-site utilities participate in the private utility locate.
- If paint alone may not suffice to ensure clear marking of utilities, add vertical markers such as stakes or flags.
- Visually assess the area of the proposed excavation(s) to identify features potentially indicative of buried utilities. Have the private utility locator examine each feature identified below to assess the presence of buried utilities.
  - Examine adjacent public rights-of-way where public utilities have been marked for evidence of utilities that may extend onto the project site.
  - Identify nearby light poles, telephone poles, electrical utility poles, or other overhead utility poles with wires or conductors that run from the overhead utility, down the pole, and into the ground.
  - Identify the location of gas meters, water meters, or other aboveground junction boxes for evidence of utilities extending from these features into the ground.
  - Examine asphalt and concrete ground surfaces for discontinuities in the surface indicative of utility installations. Discontinuities may include recent patches of asphalt or concrete inlaid within older concrete or asphalt surfaces.
  - Identify manholes and catch basins indicative of buried storm or sanitary sewer pipes. Open manholes to examine the orientation of associated pipes to assess whether the utilities may be present near proposed excavations.
  - Identify tank ports and vent pipes.

- Identify irrigation systems and associated features such as valve boxes and controllers.
- Identify any other signs indicating the presence of buried utilities.
- Be wary of utility marks that suddenly begin or dead end.

### Preparing to Perform Subsurface Activities after a Locate:

- Ensure that the markings are still visible when the work begins.
- Adjust locations, as needed, to avoid identified utilities, or use alternative methods such as nonmechanical excavation means (i.e., manual excavation or air-knifing) to a minimum depth of 5 feet.

**Table**  
**APWA UNIFORM COLOR CODE**

	WHITE—Proposed Excavation
	PINK—Temporary Survey Markings
	RED—Electric Power Lines, Cables, Conduit and Lighting Cables
	YELLOW—Gas, Oil, Steam, Petroleum or Gaseous Materials
	ORANGE—Communication, Alarm or Signal Lines, Cables or Conduit
	BLUE—Potable Water
	PURPLE—Reclaimed Water, Irrigation and Slurry Lines
	GREEN—Sewers and Drain Lines
Source: Uniform Color Codes, ANSI Standard Z535.1. American Public Works Association. Revised 1999.	

# Appendix B

---

## Photograph Log



MAUL  
FOSTER  
ALONGI



MAUL  
FOSTER  
ALONGI

# Photograph Log

Project Name: Allen Street Study Area  
Project Number: M0785.32.001  
Location: 1420 to 1540 SW Allen Street, Corvallis, Oregon

## Photo No. 1.

### Description

Wells SVW-01 at 1420  
SW Allen Street. View  
facing north.



## Photo No. 2.

### Description

Wells SVW-02 at 1420  
SW Allen Street. View  
facing north.





MAUL  
FOSTER  
ALONGI

# Photograph Log

Project Name: Allen Street Study Area  
Project Number: M0785.32.001  
Location: 1420 to 1540 SW Allen Street, Corvallis, Oregon

## Photo No. 3.

### Description

Wells SVW-05 at 1460  
SW Allen Street. View  
facing west.



## Photo No. 4.

### Description

Wells SVW-06 at 1460  
SW Allen Street. View  
facing south.





MAUL  
FOSTER  
ALONGI

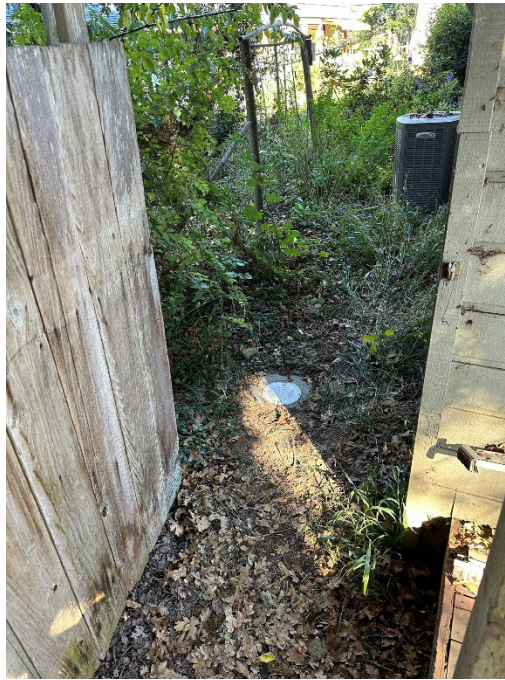
# Photograph Log

Project Name: Allen Street Study Area  
Project Number: M0785.32.001  
Location: 1420 to 1540 SW Allen Street, Corvallis, Oregon

## Photo No. 5.

### Description

Wells SVW-07 at 1480 SW Allen Street. View facing east.



## Photo No. 6.

### Description

Wells SVW-08 at 1480 SW Allen Street. View facing northwest.





MAUL  
FOSTER  
ALONGI

# Photograph Log

Project Name: Allen Street Study Area  
Project Number: M0785.32.001  
Location: 1420 to 1540 SW Allen Street, Corvallis, Oregon

## Photo No. 7.

### Description

Wells SVW-09 at 1520  
SW Allen Street. View  
facing west.



## Photo No. 8.

### Description

Wells SVW-10 at 1520  
SW Allen Street. View  
facing north.





# Photograph Log

**Project Name:** Allen Street Study Area  
**Project Number:** M0785.32.001  
**Location:** 1420 to 1540 SW Allen Street, Corvallis, Oregon

## Photo No. 9.

### Description

Wells SVW-11 at 1540 SW Allen Street. View facing east.



## Photo No. 10.

### Description

Wells SVW-12 at 1540 SW Allen Street. View facing west.





MAUL  
FOSTER  
ALONGI

# Photograph Log

Project Name: Allen Street Study Area  
Project Number: M0785.32.001  
Location: 1420 to 1540 SW Allen Street, Corvallis, Oregon

## Photo No. 11.

### Description

Drilling TSV-01 at 1540  
SW Allen Street. View  
facing northeast.



## Photo No. 12.

### Description

Drilling TSV-02 at 1540  
SW Allen Street. View  
facing southeast.



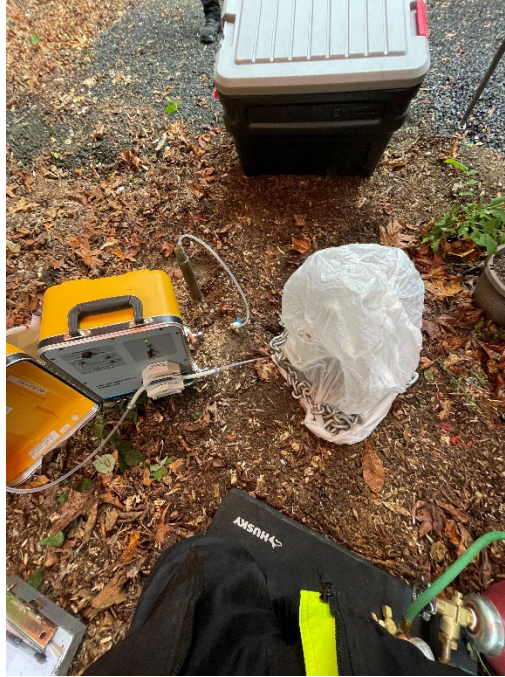
# Photograph Log

Project Name: Allen Street Study Area  
Project Number: M0785.32.001  
Location: 1420 to 1540 SW Allen Street, Corvallis, Oregon

**Photo No. 13.**

**Description**

Sampling soil vapor at  
TSV-01.



**Photo No. 14.**

**Description**

Sampling soil vapor at  
TSV-02.



# Appendix C

---

## Field Sampling Data Sheets



MAUL  
FOSTER  
ALONGI

**Soil Vapor Field Sampling Data Sheet**  
**Project: M0785.32.001**  
**Client: Oregon Department of Environmental Quality**  
**Location: 1420-1540 SW Allen Street, Corvallis, Oregon**



Sample ID	Sample Date	Initial Vaccum ("Hg)	Shut-in Test	SUMMA Canister No.	Manifold No.	Sample Size/Rate	Purge Time		Helium Concentration		Purge		Sample Time		Sample Vaccum	
							Begin	End	Outdoor Ambient Air (ppm)	Under Shroud (%)	Purge Volume (L)	Helium Concentration in Tedlar Bag	Begin	End	Initial ("Hg)	Final ("Hg)
TSV-01S	10/4/2024	-28	✓	22986	011529	1L	12:15	12:22	0	56.1	1	1,425 ppm	12:29	12:32	-30	-5
TSV-01D	10/4/2024	-29	✓	022416	009604	1L	10:42	10:45	0	58.0	1	3,780 ppm	11:39	11:42	-29	-5
TSV-02S	10/4/2024	-28	✓	021883	021697	1L	14:00	14:20	0	56.1	1	3.2%	14:21	14:26	-28	-5
TSV-02D	10/4/2024	-30	✓	024803	024989	1L	13:00	13:10	0	54.1	1	6.8%	13:37	13:42	-30	-5
SVW-01S	10/7/2024	-28	✓	028149	022647	1L	11:23	11:27	0	40.3	1	0	11:27	11:31	-28	-5
SVW-01D	10/7/2024	-28	✓	023442	021093	1L	11:30	11:34	0	48.6	1	250 ppm	11:41	11:46	-28	-5
SVW-02S	10/7/2024	-28	✓	021923	020341	1L	9:55	9:59	0	49.5	1	7,800 ppm	10:15	10:20	-28	-5
SVW-02D	10/7/2024	-28	✓	015134	010367	1L	10:38	10:42	0	42.8	1	225 ppm	10:44	10:49	-28	-5
SVW-05S	10/7/2024	-28	✓	023183	012063	1L	14:16	14:20	0	48.5	1	0	14:22	14:27	-28	-5
SVW-05D	10/7/2024	-28	✓	014962	009440	1L	14:31	14:35	0	48.2	1	3,750 ppm	14:36	14:44	-28	-5
SVW-06S	10/7/2024	-28	✓	013782	022653	1L	14:59	15:03	0	48.1	1	0	15:04	15:09	-28	-5
SVW-07S	10/7/2024	-28	✓	015778	010164	1L	13:10	13:14	0	48.8	1	0	13:16	13:20	-28	-5
SVW-08S	10/7/2024	-28	✓	015214	022676	1L	12:46	12:50	0	48.6	1	0	12:51	12:56	-28	-4
SVW-09S	10/8/2024	-28	✓	008518	009077	1L	14:26	14:30	0	42.8	1	6,950 ppm	14:32	14:37	-28	-5
SVW-09D	10/8/2024	-28	✓	023259	020007	1L	14:41	14:45	0	48.5	1	1,050 ppm	14:47	14:52	-28	-5
SVW-10S	10/8/2024	-28	✓	023844	024996	1L	13:44	13:48	0	46.9	1	550 ppm	13:50	13:55	-28	-5
SVW-10D	10/8/2024	-28	✓	022867	005672	1L	13:20	13:24	0	48.2	1	2,780 ppm	13:26	13:30	-28	-4
SVW-11S	10/8/2024	-28	✓	013139	011920	1L	10:21	10:25	0	48.8	1	0	10:26	10:31	-28	-5
SVW-11D	10/8/2024	-28	✓	022940	007842	1L	10:50	10:54	0	42.4	1	0	10:55	11:01	-28	-5
SVW-12S	10/8/2024	-28	✓	028409	022649	1L	11:26	11:30	0	45.7	1	0	11:31	11:36	-28	-5
SVW-12D	10/8/2024	-28	✓	022196	022674	1L	12:00	12:04	0	44.2	1	1,575 ppm	12:06	12:12	-28	-5

**Notes**  
"Hg= Inches of mercury  
ID= identification  
L= liter  
No.= number  
ppm= parts per million  
%= percent



# Well Development Field Form

MAUL  
FOSTER  
ALONGI

Project No.: M0785.32.001	Date: 10/9/2024
Project Location: 1420-1540 SW Allen Street, Corvallis, OR	Well ID: MW-03
Project Name: DEQ Allen Street Study Area	Initial DTB: 30.00 feet      Final DTB: 30.00 feet
MFA Staff Name: C. Anderson	Initial DTW: 16.67 feet      Final DTW: 16.70 feet
Development Method: Surge and purge	Well Casing Vol.: 2.17 gallons
Total Water Purged: 16.3 gallons	Casing Diameter: 2 inches

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Time	Cumltv. Purge Vol. (gal)	Pump Rate (L/min)	Turbidity (NTUs)	pH	Temp. (°C)	Conductivity (uS/cm)	DO (mg/L)	ORP (mV)	DTW (ft)	Comments
14:45	3.1	0.7	498	7.31	14.9	526.5	0.20	-9.5	16.79	
14:57	5.3	0.7	233	7.30	14.8	507.8	0.19	-34.0	16.80	
15:09	7.5	0.7	86.2	7.30	14.8	524.5	0.11	-50.5	16.80	
15:21	9.7	0.7	40.3	7.29	14.8	521.4	0.12	-62.2	16.80	
15:33	11.9	0.7	22.0	7.30	14.7	520.1	0.10	-68.2	16.80	
15:45	14.1	0.7	20.8	7.30	14.7	520.3	0.09	-73.0	16.80	
15:57	16.3	0.7	21.7	7.30	14.7	520.1	0.09	-73.7	16.80	

**Notes:**

- Depths are relative to ft below top of casing.
- °C = degrees Celsius.
- cumltv. = cumulative.
- DO = dissolved oxygen.
- DTB = depth to bottom.
- DTW = depth to water.
- ft = feet.
- gal = gallon.
- L/min = liters per minute.
- mg/L = milligrams per liter.
- mV = millivolts.
- NTUs = nephelometric turbidity units.
- ORP = oxygen reduction potential.
- vol. = volume.
- uS/cm = microsiemens per centimeter.



# Well Development Field Form

MAUL  
FOSTER  
ALONGI

Project No.: M0785.32.001	Date: 10/9/2024
Project Location: 1420-1540 SW Allen Street, Corvallis, OR	Well ID: MW-06
Project Name: DEQ Allen Street Study Area	Initial DTB: 32.10 feet      Final DTB: 32.10 feet
MFA Staff Name: C. Anderson	Initial DTW: 22.99 feet      Final DTW: 23.00 feet
Development Method: Surge and purge	Well Casing Vol.: 1.48 gallons
Total Water Purged: 16.3 gallons	Casing Diameter: 2 inches

(0.75" = 0.023 gal/ft) (1" = 0.041 gal/ft) (1.5" = 0.092 gal/ft) (2" = 0.163 gal/ft) (3" = 0.367 gal/ft) (4" = 0.653 gal/ft) (6" = 1.469 gal/ft) (8" = 2.611 gal/ft)

Time	Cumltv. Purge Vol. (gal)	Pump Rate (L/min)	Turbidity (NTUs)	pH	Temp. (°C)	Conductivity (uS/cm)	DO (mg/L)	ORP (mV)	DTW (ft)	Comments
11:00	3.7	0.5	>1100	6.38	14.7	227.7	1.76	231.0	23.03	
11:11	5.1	0.5	903	6.42	14.0	234.6	1.58	211.7	23.05	
11:22	6.5	0.5	370	6.51	14.0	260.3	1.24	198.6	23.05	
11:33	7.9	0.5	303	6.62	14.0	299.9	0.85	184.1	23.05	
11:44	9.3	0.5	93.0	6.55	13.9	273.4	1.02	171.3	23.05	
11:55	10.7	0.5	43.3	6.57	13.9	273.9	0.97	164.2	23.05	
12:06	12.1	0.5	29.6	6.57	13.9	272	0.99	161.0	23.05	
12:17	13.5	0.5	21.1	6.57	13.9	273.2	0.99	161.5	23.05	
12:28	14.9	0.5	20.1	6.57	14.0	276.1	0.98	162.5	23.05	
12:39	16.3	0.5	21.6	6.57	14.0	276.0	0.99	165.2	23.05	

**Notes:**

Depths are relative to ft below top of casing.

°C = degrees Celsius.

cumltv. = cumulative.

DO = dissolved oxygen.

DTB = depth to bottom.

DTW = depth to water.

ft = feet.

gal = gallon.

L/min = liters per minute.

mg/L = milligrams per liter.

mV = millivolts.

NTUs = nephelometric turbidity units.

ORP = oxygen reduction potential.

vol. = volume.

uS/cm = microsiemens per centimeter.

# Groundwater Field Sampling Data Sheet



Project Information												
Project No.		Client Name		Project Name		Sampling Event		Sampler(s)				
M0785.32.001		Oregon DEQ		Allen Street Study Area		October 2024		C. Anderson				
Well Information												
Location ID	Well Type		Monument Type		Depth Measuring Point		Well Diameter (in)	Screen Interval (ft)	Sample Depth (ft)			
MW-03	Monitoring		Flush-mount		Top of Casing		2.0	19-29	24.0			
Hydrology/Level Measurements												
Date	Time	Depth to Bottom (ft)	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Water Column (ft)	Well Casing Volume (gal)	0.75" = 0.023 gal/ft 1" = 0.041 gal/ft 1.5" = 0.092 gal/ft 2" = 0.163 gal/ft 3" = 0.367 gal/ft 4" = 0.653 gal/ft 6" = 1.469 gal/ft 8" = 2.611 gal/ft				
		DTB	DTP	DTW	DTW - DTP	DTB - DTW	(gal/ft x water column)					
10/09/2024	14:07	30.00		16.67		13.33	2.17					
Water Quality Data												
Purge Method		Peristaltic Pump		Purge/Sampling Methods: peristaltic pump, submersible pump, vacuum pump, inertia pump, dedicated pump, disposable bailer, bladder pump, other								
Purge Start Time		15:57		ideally < 0.3 ft drawdown	± 0.1	± 3%	± 3%			± 10% if > 0.5	± 10	< 5 or ± 10% if > 5
Time	Cumulative Purge Volume	Flowrate	Water Level	pH	Temperature	Conductivity	Dissolved Oxygen			ORP	Turbidity	
	gal	L/min	ft	SU	degrees C	uS/cm	mg/L			mV	NTU	
16:00	0.6	0.7	16.80	7.34	14.9	457.3	0.09			-83.8	32.2	
16:03	1.1	0.7	16.80	7.35	15.0	459.8	0.09			-86.2	35.3	
16:06	1.7	0.7	16.80	7.34	15.0	460.1	0.09	-87.0	35.2			
Last row of water quality data are considered final field parameters unless otherwise noted.						Sample Information						
Water Quality Observations (clarity, tint, odor, sheen, etc.)		Clear, colorless		Sampling Method		Peristaltic Pump						
				Sample Name		MW-03						
				Sample Date	10/09/2024	Sample Time	16:06					
				Container Type	Preservative	Filtered (Y/N)	N	No. Containers	3			
General Comments												
						VOA		N		3		
						Amber glass						
						Poly						
						Total No. Containers:		3				

# Groundwater Field Sampling Data Sheet



Project Information											
Project No.	Client Name	Project Name	Sampling Event	Sampler(s)							
M0785.32.001	Oregon DEQ	Allen Street Study Area	October 2024	C. Anderson							
Well Information											
Location ID	Well Type	Monument Type	Depth Measuring Point	Well Diameter (in)	Screen Interval (ft)	Sample Depth (ft)					
MW-06	Monitoring	Flush-mount	Top of Casing	2.0	22-32	27.5					
Hydrology/Level Measurements											
Date	Time	Depth to Bottom (ft)	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Water Column (ft)	Well Casing Volume (gal)	0.75" = 0.023 gal/ft 1" = 0.041 gal/ft 1.5" = 0.092 gal/ft 2" = 0.163 gal/ft 3" = 0.367 gal/ft 4" = 0.653 gal/ft 6" = 1.469 gal/ft 8" = 2.611 gal/ft			
		DTB	DTP	DTW	DTW - DTP	DTB - DTW	(gal/ft x water column)				
10/09/2024	10:25	32.25		22.99		9.26	1.51				
Water Quality Data											
Purge Method	Peristaltic Pump		Purge/Sampling Methods: peristaltic pump, submersible pump, vacuum pump, inertia pump, dedicated pump, disposable bailer, bladder pump, other								
Purge Start Time	12:39		ideally < 0.3 ft drawdown	± 0.1	± 3%	± 3%	± 10% if > 0.5			± 10	< 5 or ± 10% if > 5
Time	Cumulative Purge Volume	Flowrate	Water Level	pH	Temperature	Conductivity	Dissolved Oxygen			ORP	Turbidity
	gal	L/min	ft	SU	degrees C	uS/cm	mg/L			mV	NTU
12:42	0.4	0.5	23.05	6.40	15.0	276.4	1.56			160.3	27.4
12:45	0.8	0.5	23.05	6.41	15.1	274.5	1.54			160.9	26.0
12:48	1.2	0.5	23.05	6.41	15.3	273.4	1.51	161.9	26.5		
Last row of water quality data are considered final field parameters unless otherwise noted.						Sample Information					
Water Quality Observations <i>(clarity, tint, odor, sheen, etc.)</i>	Clear, colorless					Sampling Method	Peristaltic Pump				
						Sample Name	MW-06				
						Sample Date	10/09/2024	Sample Time	12:48		
						Container Type	Preservative	Filtered (Y/N)	N	No. Containers	6
General Comments						VOA		N	6		
Field duplicate MW-06-DUP collected.						Amber glass					
						Poly					
						Total No. Containers:				6	

# Appendix D

---

## Laboratory Analytical Reports



MAUL  
FOSTER  
ALONGI

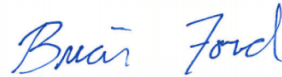
- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

## Oregon Dept. of Env. Quality - ODEQ

Sample Delivery Group: L1786383  
Samples Received: 10/08/2024  
Project Number:  
Description: Allen Street Study Area

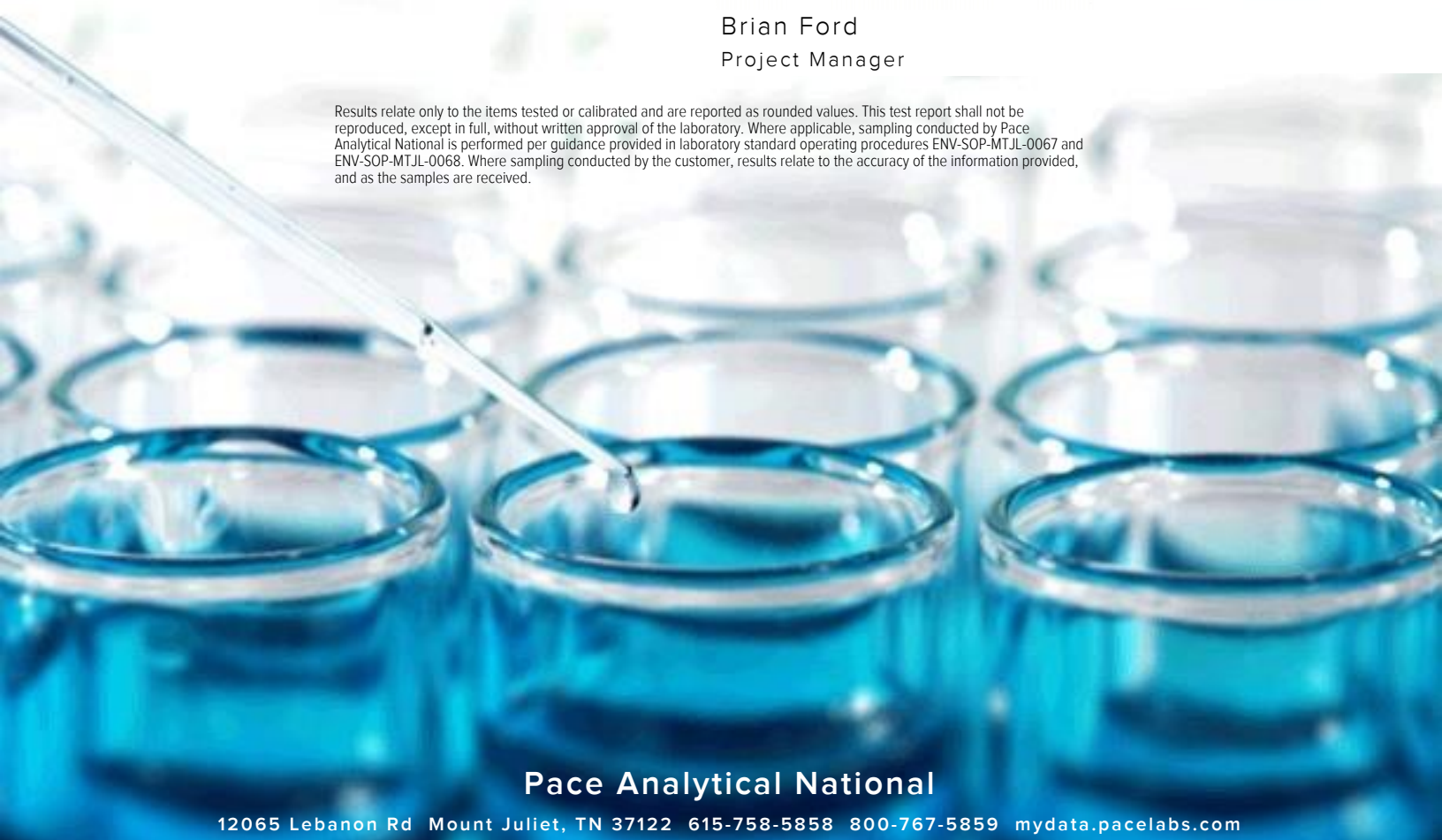
Report To: Sarah KINGERY  
165 E 7th Ave.  
Suite 100  
Eugene, OR 97401

Entire Report Reviewed By:



Brian Ford  
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 mydata.pacelabs.com

# TABLE OF CONTENTS

<b>Cp: Cover Page</b>	1	
<b>Tc: Table of Contents</b>	2	
<b>Ss: Sample Summary</b>	3	
<b>Cn: Case Narrative</b>	4	
<b>Sr: Sample Results</b>	5	
TSV-01D L1786383-01	5	
TSV-01S L1786383-02	7	
TSV-02D L1786383-03	9	
TSV-02S L1786383-04	11	
<b>Qc: Quality Control Summary</b>	13	
Volatile Organic Compounds (MS) by Method TO-15	13	
Organic Compounds (GC) by Method ASTM 1946	18	
<b>Gl: Glossary of Terms</b>	19	
<b>Al: Accreditations &amp; Locations</b>	20	
<b>Sc: Sample Chain of Custody</b>	21	

# SAMPLE SUMMARY

## TSV-01D L1786383-01 Air

Collected by: Sean Maloney  
 Collected date/time: 10/04/24 11:39  
 Received date/time: 10/08/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2377871	1	10/09/24 02:25	10/09/24 02:25	CRT	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG2380374	10	10/11/24 20:58	10/11/24 20:58	WDB	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG2378418	10	10/08/24 22:58	10/08/24 22:58	KHM	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

## TSV-01S L1786383-02 Air

Collected by: Sean Maloney  
 Collected date/time: 10/04/24 12:29  
 Received date/time: 10/08/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2377871	1	10/09/24 02:53	10/09/24 02:53	CRT	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG2380374	10	10/11/24 21:35	10/11/24 21:35	WDB	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG2378418	5	10/08/24 23:04	10/08/24 23:04	KHM	Mt. Juliet, TN

4 Cn

5 Sr

6 Qc

## TSV-02D L1786383-03 Air

Collected by: Sean Maloney  
 Collected date/time: 10/04/24 13:37  
 Received date/time: 10/08/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2377871	1	10/09/24 03:21	10/09/24 03:21	CRT	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG2380374	5	10/11/24 22:12	10/11/24 22:12	WDB	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG2378418	4	10/08/24 23:09	10/08/24 23:09	KHM	Mt. Juliet, TN

7 Gl

8 Al

9 Sc

## TSV-02S L1786383-04 Air

Collected by: Sean Maloney  
 Collected date/time: 10/04/24 14:21  
 Received date/time: 10/08/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2377871	1	10/09/24 03:50	10/09/24 03:50	CRT	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG2380374	10	10/11/24 22:49	10/11/24 22:49	WDB	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG2378418	5	10/08/24 23:16	10/08/24 23:16	KHM	Mt. Juliet, TN

# CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford  
Project Manager

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

## 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	12.5	29.7	144	342		10	WG2380374
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG2377871
Benzene	71-43-2	78.10	0.200	0.639	19.3	61.6		1	WG2377871
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG2377871
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG2377871
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG2377871
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG2377871
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG2377871
Carbon disulfide	75-15-0	76.10	0.400	1.24	ND	ND		1	WG2377871
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG2377871
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG2377871
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG2377871
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG2377871
Chloromethane	74-87-3	50.50	0.200	0.413	0.460	0.950		1	WG2377871
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG2377871
Cyclohexane	110-82-7	84.20	0.200	0.689	2.25	7.75		1	WG2377871
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG2377871
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG2377871
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG2377871
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG2377871
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG2377871
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG2377871
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG2377871
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG2377871
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG2377871
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG2377871
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG2377871
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG2377871
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG2377871
1,4-Dioxane	123-91-1	88.10	0.630	2.27	ND	ND		1	WG2377871
Ethanol	64-17-5	46.10	25.0	47.1	288	543		10	WG2380374
Ethylbenzene	100-41-4	106	0.200	0.867	1.74	7.54		1	WG2377871
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG2377871
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	ND	ND		1	WG2377871
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.334	1.65		1	WG2377871
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG2377871
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG2377871
Heptane	142-82-5	100	0.200	0.818	19.8	81.0		1	WG2377871
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG2377871
n-Hexane	110-54-3	86.20	0.630	2.22	25.3	89.2		1	WG2377871
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG2377871
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG2377871
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG2377871
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	16.1	47.5		1	WG2377871
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG2377871
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG2377871
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG2377871
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG2377871
2-Propanol	67-63-0	60.10	1.25	3.07	1.58	3.88		1	WG2377871
Propene	115-07-1	42.10	1.25	2.15	11.2	19.3		1	WG2377871
n-Propylbenzene	103-65-1	120	0.200	0.982	ND	ND		1	WG2377871
Styrene	100-42-5	104	0.400	1.70	ND	ND		1	WG2377871
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG2377871
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG2377871
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	66.0	195		1	WG2377871
Toluene	108-88-3	92.10	0.500	1.88	47.1	177		1	WG2377871

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	<a href="#">WG2377871</a>
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	<a href="#">WG2377871</a>
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	<a href="#">WG2377871</a>
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	<a href="#">WG2377871</a>
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.670	3.29		1	<a href="#">WG2377871</a>
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.216	1.06		1	<a href="#">WG2377871</a>
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	14.4	67.3		1	<a href="#">WG2377871</a>
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	<a href="#">WG2377871</a>
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	<a href="#">WG2377871</a>
Vinyl acetate	108-05-4	86.10	0.630	2.22	ND	ND		1	<a href="#">WG2377871</a>
m&p-Xylene	179601-23-1	106	0.400	1.73	5.13	22.2		1	<a href="#">WG2377871</a>
o-Xylene	95-47-6	106	0.200	0.867	1.72	7.46		1	<a href="#">WG2377871</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	251	1040		1	<a href="#">WG2377871</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		98.2				<a href="#">WG2377871</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		97.2				<a href="#">WG2380374</a>

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

Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		1.00	11.4		10	<a href="#">WG2378418</a>

## 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	27.6	65.6		1	WG2377871
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG2377871
Benzene	71-43-2	78.10	0.200	0.639	0.376	1.20		1	WG2377871
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG2377871
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG2377871
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG2377871
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG2377871
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG2377871
Carbon disulfide	75-15-0	76.10	0.400	1.24	ND	ND		1	WG2377871
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG2377871
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG2377871
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG2377871
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG2377871
Chloromethane	74-87-3	50.50	0.200	0.413	0.542	1.12		1	WG2377871
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG2377871
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG2377871
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG2377871
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG2377871
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG2377871
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG2377871
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG2377871
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG2377871
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG2377871
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG2377871
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG2377871
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG2377871
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG2377871
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG2377871
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG2377871
1,4-Dioxane	123-91-1	88.10	0.630	2.27	ND	ND		1	WG2377871
Ethanol	64-17-5	46.10	25.0	47.1	421	794		10	WG2380374
Ethylbenzene	100-41-4	106	0.200	0.867	0.587	2.54		1	WG2377871
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.938	4.60		1	WG2377871
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	ND	ND		1	WG2377871
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.443	2.19		1	WG2377871
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG2377871
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG2377871
Heptane	142-82-5	100	0.200	0.818	0.438	1.79		1	WG2377871
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG2377871
n-Hexane	110-54-3	86.20	0.630	2.22	ND	ND		1	WG2377871
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG2377871
Methylene Chloride	75-09-2	84.90	0.200	0.694	0.400	1.39		1	WG2377871
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG2377871
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	4.21	12.4		1	WG2377871
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG2377871
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG2377871
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG2377871
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG2377871
2-Propanol	67-63-0	60.10	1.25	3.07	1.73	4.25		1	WG2377871
Propene	115-07-1	42.10	1.25	2.15	9.28	16.0		1	WG2377871
n-Propylbenzene	103-65-1	120	0.200	0.982	0.611	3.00		1	WG2377871
Styrene	100-42-5	104	0.400	1.70	ND	ND		1	WG2377871
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG2377871
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG2377871
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	0.793	2.34		1	WG2377871
Toluene	108-88-3	92.10	0.500	1.88	2.45	9.23		1	WG2377871

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	<a href="#">WG2377871</a>
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	<a href="#">WG2377871</a>
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	<a href="#">WG2377871</a>
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	<a href="#">WG2377871</a>
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	4.99	24.5		1	<a href="#">WG2377871</a>
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	1.39	6.82		1	<a href="#">WG2377871</a>
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	<a href="#">WG2377871</a>
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	<a href="#">WG2377871</a>
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	<a href="#">WG2377871</a>
Vinyl acetate	108-05-4	86.10	0.630	2.22	0.720	2.54		1	<a href="#">WG2377871</a>
m&p-Xylene	179601-23-1	106	0.400	1.73	2.73	11.8		1	<a href="#">WG2377871</a>
o-Xylene	95-47-6	106	0.200	0.867	1.53	6.63		1	<a href="#">WG2377871</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	<a href="#">WG2377871</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		95.9				<a href="#">WG2377871</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		97.2				<a href="#">WG2380374</a>

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

Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.500	6.41		5	<a href="#">WG2378418</a>

## 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	36.2	86.0		1	WG2377871
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG2377871
Benzene	71-43-2	78.10	0.200	0.639	0.788	2.52		1	WG2377871
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG2377871
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG2377871
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG2377871
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG2377871
1,3-Butadiene	106-99-0	54.10	2.00	4.43	2.45	5.42		1	WG2377871
Carbon disulfide	75-15-0	76.10	0.400	1.24	ND	ND		1	WG2377871
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG2377871
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG2377871
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG2377871
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG2377871
Chloromethane	74-87-3	50.50	0.200	0.413	0.631	1.30		1	WG2377871
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG2377871
Cyclohexane	110-82-7	84.20	0.200	0.689	0.432	1.49		1	WG2377871
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG2377871
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG2377871
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG2377871
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG2377871
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG2377871
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG2377871
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG2377871
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG2377871
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG2377871
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG2377871
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG2377871
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG2377871
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG2377871
1,4-Dioxane	123-91-1	88.10	0.630	2.27	ND	ND		1	WG2377871
Ethanol	64-17-5	46.10	12.5	23.6	241	454		5	WG2380374
Ethylbenzene	100-41-4	106	0.200	0.867	2.03	8.80		1	WG2377871
4-Ethyltoluene	622-96-8	120	0.200	0.982	1.08	5.30		1	WG2377871
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	ND	1.12		1	WG2377871
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.451	2.23		1	WG2377871
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG2377871
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG2377871
Heptane	142-82-5	100	0.200	0.818	0.716	2.93		1	WG2377871
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG2377871
n-Hexane	110-54-3	86.20	0.630	2.22	1.35	4.76		1	WG2377871
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG2377871
Methylene Chloride	75-09-2	84.90	0.200	0.694	0.286	0.993		1	WG2377871
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG2377871
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	8.45	24.9		1	WG2377871
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG2377871
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG2377871
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG2377871
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG2377871
2-Propanol	67-63-0	60.10	1.25	3.07	2.33	5.73		1	WG2377871
Propene	115-07-1	42.10	1.25	2.15	31.5	54.2		1	WG2377871
n-Propylbenzene	103-65-1	120	0.200	0.982	0.824	4.04		1	WG2377871
Styrene	100-42-5	104	0.400	1.70	ND	ND		1	WG2377871
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG2377871
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG2377871
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	6.90	20.3		1	WG2377871
Toluene	108-88-3	92.10	0.500	1.88	5.04	19.0		1	WG2377871

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	<a href="#">WG2377871</a>
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	<a href="#">WG2377871</a>
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	<a href="#">WG2377871</a>
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	<a href="#">WG2377871</a>
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	4.11	20.2		1	<a href="#">WG2377871</a>
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	1.29	6.33		1	<a href="#">WG2377871</a>
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	<a href="#">WG2377871</a>
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	<a href="#">WG2377871</a>
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	<a href="#">WG2377871</a>
Vinyl acetate	108-05-4	86.10	0.630	2.22	1.42	5.00		1	<a href="#">WG2377871</a>
m&p-Xylene	179601-23-1	106	0.400	1.73	8.59	37.2		1	<a href="#">WG2377871</a>
o-Xylene	95-47-6	106	0.200	0.867	4.20	18.2		1	<a href="#">WG2377871</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	<a href="#">WG2377871</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		97.1				<a href="#">WG2377871</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		97.0				<a href="#">WG2380374</a>

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

Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.400	3.30		4	<a href="#">WG2378418</a>

## 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	12.5	29.7	130	309		10	<a href="#">WG2380374</a>
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	<a href="#">WG2377871</a>
Benzene	71-43-2	78.10	0.200	0.639	11.9	38.0		1	<a href="#">WG2377871</a>
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	<a href="#">WG2377871</a>
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	<a href="#">WG2377871</a>
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	<a href="#">WG2377871</a>
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	<a href="#">WG2377871</a>
1,3-Butadiene	106-99-0	54.10	2.00	4.43	2.74	6.06		1	<a href="#">WG2377871</a>
Carbon disulfide	75-15-0	76.10	0.400	1.24	0.548	1.71		1	<a href="#">WG2377871</a>
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	<a href="#">WG2377871</a>
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	<a href="#">WG2377871</a>
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	<a href="#">WG2377871</a>
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	<a href="#">WG2377871</a>
Chloromethane	74-87-3	50.50	0.200	0.413	0.649	1.34		1	<a href="#">WG2377871</a>
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	<a href="#">WG2377871</a>
Cyclohexane	110-82-7	84.20	0.200	0.689	0.887	3.05		1	<a href="#">WG2377871</a>
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	<a href="#">WG2377871</a>
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	<a href="#">WG2377871</a>
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2377871</a>
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2377871</a>
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	<a href="#">WG2377871</a>
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	<a href="#">WG2377871</a>
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	<a href="#">WG2377871</a>
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2377871</a>
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2377871</a>
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2377871</a>
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	<a href="#">WG2377871</a>
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	<a href="#">WG2377871</a>
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	<a href="#">WG2377871</a>
1,4-Dioxane	123-91-1	88.10	0.630	2.27	ND	ND		1	<a href="#">WG2377871</a>
Ethanol	64-17-5	46.10	25.0	47.1	287	541		10	<a href="#">WG2380374</a>
Ethylbenzene	100-41-4	106	0.200	0.867	12.7	55.1		1	<a href="#">WG2377871</a>
4-Ethyltoluene	622-96-8	120	0.200	0.982	2.13	10.5		1	<a href="#">WG2377871</a>
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	ND	ND		1	<a href="#">WG2377871</a>
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.408	2.02		1	<a href="#">WG2377871</a>
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	<a href="#">WG2377871</a>
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	<a href="#">WG2377871</a>
Heptane	142-82-5	100	0.200	0.818	14.7	60.1		1	<a href="#">WG2377871</a>
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	<a href="#">WG2377871</a>
n-Hexane	110-54-3	86.20	0.630	2.22	9.44	33.3		1	<a href="#">WG2377871</a>
Isopropylbenzene	98-82-8	120.20	0.200	0.983	0.643	3.16		1	<a href="#">WG2377871</a>
Methylene Chloride	75-09-2	84.90	0.200	0.694	0.256	0.889		1	<a href="#">WG2377871</a>
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	<a href="#">WG2377871</a>
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	21.0	61.9		1	<a href="#">WG2377871</a>
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	<a href="#">WG2377871</a>
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	<a href="#">WG2377871</a>
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	<a href="#">WG2377871</a>
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	<a href="#">WG2377871</a>
2-Propanol	67-63-0	60.10	1.25	3.07	2.38	5.85		1	<a href="#">WG2377871</a>
Propene	115-07-1	42.10	1.25	2.15	23.3	40.1		1	<a href="#">WG2377871</a>
n-Propylbenzene	103-65-1	120	0.200	0.982	1.95	9.57		1	<a href="#">WG2377871</a>
Styrene	100-42-5	104	0.400	1.70	ND	ND		1	<a href="#">WG2377871</a>
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	<a href="#">WG2377871</a>
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	<a href="#">WG2377871</a>
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	28.9	85.2		1	<a href="#">WG2377871</a>
Toluene	108-88-3	92.10	5.00	18.8	90.7	342		10	<a href="#">WG2380374</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	<a href="#">WG2377871</a>
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	<a href="#">WG2377871</a>
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	<a href="#">WG2377871</a>
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	<a href="#">WG2377871</a>
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	5.64	27.7		1	<a href="#">WG2377871</a>
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	2.31	11.3		1	<a href="#">WG2377871</a>
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	4.79	22.4		1	<a href="#">WG2377871</a>
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	<a href="#">WG2377871</a>
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	<a href="#">WG2377871</a>
Vinyl acetate	108-05-4	86.10	0.630	2.22	ND	ND		1	<a href="#">WG2377871</a>
m&p-Xylene	179601-23-1	106	0.400	1.73	42.5	184		1	<a href="#">WG2377871</a>
o-Xylene	95-47-6	106	0.200	0.867	14.7	63.7		1	<a href="#">WG2377871</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	394	1630		1	<a href="#">WG2377871</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		98.8				<a href="#">WG2377871</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		96.8				<a href="#">WG2380374</a>

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

Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.500	8.17		5	<a href="#">WG2378418</a>

Method Blank (MB)

(MB) R4129895-3 10/08/24 09:52

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	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	0.400
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	0.630
Ethylbenzene	U		0.0835	0.200
4-Ethyltoluene	U		0.0783	0.200
Trichlorofluoromethane	U		0.0819	0.200
Dichlorodifluoromethane	U		0.137	0.200
1,1,2-Trichlorotrifluoroethane	U		0.0793	0.200
1,2-Dichlorotetrafluoroethane	U		0.0890	0.200
Heptane	U		0.104	0.200
Hexachloro-1,3-butadiene	U		0.105	0.630
n-Hexane	U		0.206	0.630
Isopropylbenzene	U		0.0777	0.200

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R4129895-3 10/08/24 09:52

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
Methylene Chloride	U		0.0979	0.200
Methyl Butyl Ketone	U		0.133	1.25
2-Butanone (MEK)	U		0.0814	1.25
4-Methyl-2-pentanone (MIBK)	U		0.0765	1.25
Methyl methacrylate	U		0.0876	0.200
MTBE	U		0.0647	0.200
Naphthalene	U		0.350	0.630
2-Propanol	U		0.264	1.25
Propene	U		0.0932	1.25
n-Propylbenzene	U		0.0773	0.200
Styrene	U		0.0788	0.400
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	0.630
m&p-Xylene	U		0.135	0.400
o-Xylene	U		0.0828	0.200
TPH (GC/MS) Low Fraction	U		39.7	200
(S) 1,4-Bromofluorobenzene	96.3			60.0-140

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

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

(LCS) R4129895-1 10/08/24 08:55 • (LCSD) R4129895-2 10/08/24 09:24

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppbv	ppbv	ppbv	%	%	%			%	%
Acetone	3.75	4.10	4.30	109	115	70.0-130			4.76	25
Allyl chloride	3.75	4.43	4.60	118	123	70.0-130			3.77	25
Benzene	3.75	4.16	4.10	111	109	70.0-130			1.45	25
Benzyl Chloride	3.75	3.99	3.92	106	105	70.0-152			1.77	25

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

(LCS) R4129895-1 10/08/24 08:55 • (LCSD) R4129895-2 10/08/24 09:24

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	4.12	4.12	110	110	70.0-130			0.000	25
Bromoform	3.75	3.73	3.75	99.5	100	70.0-130			0.535	25
Bromomethane	3.75	4.15	4.32	111	115	70.0-130			4.01	25
1,3-Butadiene	3.75	4.30	4.16	115	111	70.0-130			3.31	25
Carbon disulfide	7.50	8.73	8.91	116	119	70.0-130			2.04	25
Carbon tetrachloride	3.75	4.17	4.03	111	107	70.0-130			3.41	25
Chlorobenzene	3.75	4.23	4.14	113	110	70.0-130			2.15	25
Chloroethane	3.75	4.33	4.32	115	115	70.0-130			0.231	25
Chloroform	3.75	4.17	4.09	111	109	70.0-130			1.94	25
Chloromethane	3.75	4.35	4.31	116	115	70.0-130			0.924	25
2-Chlorotoluene	3.75	4.18	4.16	111	111	70.0-130			0.480	25
Cyclohexane	3.75	4.26	4.14	114	110	70.0-130			2.86	25
Dibromochloromethane	3.75	4.03	4.02	107	107	70.0-130			0.248	25
1,2-Dibromoethane	3.75	4.28	4.21	114	112	70.0-130			1.65	25
1,2-Dichlorobenzene	3.75	4.13	4.20	110	112	70.0-130			1.68	25
1,3-Dichlorobenzene	3.75	4.21	4.20	112	112	70.0-130			0.238	25
1,4-Dichlorobenzene	3.75	4.17	4.20	111	112	70.0-130			0.717	25
1,2-Dichloroethane	3.75	4.21	4.06	112	108	70.0-130			3.63	25
1,1-Dichloroethane	3.75	4.26	4.10	114	109	70.0-130			3.83	25
1,1-Dichloroethene	3.75	4.29	4.29	114	114	70.0-130			0.000	25
cis-1,2-Dichloroethene	3.75	4.22	4.08	113	109	70.0-130			3.37	25
trans-1,2-Dichloroethene	3.75	4.24	4.14	113	110	70.0-130			2.39	25
1,2-Dichloropropane	3.75	4.35	4.27	116	114	70.0-130			1.86	25
cis-1,3-Dichloropropene	3.75	4.14	4.26	110	114	70.0-130			2.86	25
trans-1,3-Dichloropropene	3.75	4.27	4.13	114	110	70.0-130			3.33	25
1,4-Dioxane	3.75	4.20	4.10	112	109	70.0-140			2.41	25
Ethylbenzene	3.75	4.10	4.14	109	110	70.0-130			0.971	25
4-Ethyltoluene	3.75	4.16	4.18	111	111	70.0-130			0.480	25
Trichlorofluoromethane	3.75	4.12	4.12	110	110	70.0-130			0.000	25
Dichlorodifluoromethane	3.75	4.13	4.16	110	111	64.0-139			0.724	25
1,1,2-Trichlorotrifluoroethane	3.75	4.27	4.35	114	116	70.0-130			1.86	25
1,2-Dichlorotetrafluoroethane	3.75	4.24	4.20	113	112	70.0-130			0.948	25
Heptane	3.75	4.10	4.03	109	107	70.0-130			1.72	25
Hexachloro-1,3-butadiene	3.75	3.95	3.88	105	103	70.0-151			1.79	25
n-Hexane	3.75	4.19	3.99	112	106	70.0-130			4.89	25
Isopropylbenzene	3.75	4.18	4.16	111	111	70.0-130			0.480	25
Methylene Chloride	3.75	4.33	4.45	115	119	70.0-130			2.73	25
Methyl Butyl Ketone	3.75	4.31	4.29	115	114	70.0-149			0.465	25
2-Butanone (MEK)	3.75	4.27	4.15	114	111	70.0-130			2.85	25
4-Methyl-2-pentanone (MIBK)	3.75	4.42	4.50	118	120	70.0-139			1.79	25

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

(LCS) R4129895-1 10/08/24 08:55 • (LCSD) R4129895-2 10/08/24 09:24

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Methyl methacrylate	3.75	4.27	4.31	114	115	70.0-130			0.932	25
MTBE	3.75	4.12	4.10	110	109	70.0-130			0.487	25
Naphthalene	3.75	4.33	4.27	115	114	70.0-159			1.40	25
2-Propanol	3.75	4.28	4.43	114	118	70.0-139			3.44	25
Propene	3.75	4.01	3.91	107	104	64.0-144			2.53	25
n-Propylbenzene	3.75	4.24	4.29	113	114	70.0-130			1.17	25
Styrene	7.50	8.56	8.57	114	114	70.0-130			0.117	25
1,1,2,2-Tetrachloroethane	3.75	4.38	4.33	117	115	70.0-130			1.15	25
Tetrachloroethylene	3.75	4.07	4.16	109	111	70.0-130			2.19	25
Tetrahydrofuran	3.75	4.16	4.24	111	113	70.0-137			1.90	25
Toluene	3.75	4.22	4.16	113	111	70.0-130			1.43	25
1,2,4-Trichlorobenzene	3.75	4.23	4.04	113	108	70.0-160			4.59	25
1,1,1-Trichloroethane	3.75	4.08	3.99	109	106	70.0-130			2.23	25
1,1,2-Trichloroethane	3.75	4.27	4.25	114	113	70.0-130			0.469	25
Trichloroethylene	3.75	4.11	4.18	110	111	70.0-130			1.69	25
1,2,4-Trimethylbenzene	3.75	4.14	4.14	110	110	70.0-130			0.000	25
1,3,5-Trimethylbenzene	3.75	4.09	4.08	109	109	70.0-130			0.245	25
2,2,4-Trimethylpentane	3.75	3.07	3.12	81.9	83.2	70.0-130			1.62	25
Vinyl chloride	3.75	4.37	4.30	117	115	70.0-130			1.61	25
Vinyl Bromide	3.75	4.20	4.20	112	112	70.0-130			0.000	25
Vinyl acetate	3.75	4.52	4.34	121	116	70.0-130			4.06	25
m&p-Xylene	7.50	8.23	8.13	110	108	70.0-130			1.22	25
o-Xylene	3.75	4.18	4.21	111	112	70.0-130			0.715	25
TPH (GC/MS) Low Fraction	188	196	193	104	103	70.0-130			1.54	25
(S) 1,4-Bromofluorobenzene				97.2	96.9	60.0-140				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

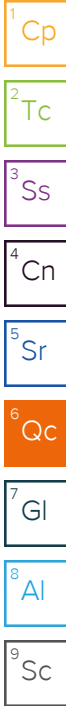
(MB) R4131548-3 10/11/24 10:25

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
Acetone	U		0.584	1.25
Ethanol	U		0.265	2.50
Toluene	U		0.0870	0.500
(S) 1,4-Bromofluorobenzene	93.9			60.0-140

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

(LCS) R4131548-1 10/11/24 09:08 • (LCSD) R4131548-2 10/11/24 09:47

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppbv	ppbv	ppbv	%	%	%			%	%
Acetone	3.75	3.85	3.85	103	103	70.0-130			0.000	25
Ethanol	3.75	3.75	3.70	100	98.7	55.0-148			1.34	25
Toluene	3.75	3.42	3.37	91.2	89.9	70.0-130			1.47	25
(S) 1,4-Bromofluorobenzene				95.0	94.9	60.0-140				



Method Blank (MB)

(MB) R4130199-3 10/08/24 20:19

Analyte	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Helium	U		0.0259	0.100

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

(LCS) R4130199-1 10/08/24 20:13 • (LCSD) R4130199-2 10/08/24 20:16

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD	RPD Limits
Helium	2.50	2.57	2.56	103	102	70.0-130			0.390	25

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

# 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.

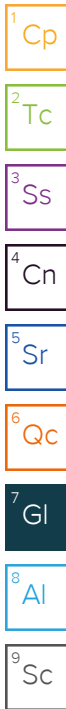
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. 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

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.



# ACCREDITATIONS & LOCATIONS

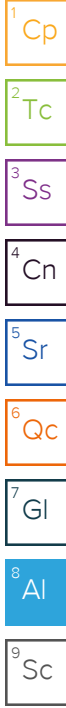
## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.



<b>Agency, Authorized Purchaser or Agent:</b> Oregon DEQ	<b>Contract Laboratory Name:</b> ESC	<b>Lab Selection Criteria:</b> <input type="checkbox"/> Proximity (if TAT < 48 hrs) <input type="checkbox"/> Prior work on same project <input checked="" type="checkbox"/> Cost (for anticipated analyses) <input type="checkbox"/> Other labs disqualified or unable to perform requested services <input type="checkbox"/> Emergency work	<b>Turn Around Time:</b> <input checked="" type="checkbox"/> 10 days (std.) <input type="checkbox"/> 5 days <input type="checkbox"/> 72 hours <input type="checkbox"/> 48 hours <input type="checkbox"/> 24 hours <input type="checkbox"/> Other
<b>Send Lab Report To:</b> Sarah Kingery Address: 165 E 7 <sup>th</sup> Avenue, Suite 100 Eugene, OR 97401 Tel. #: 541-321-3687 E-mail: sarah.kingery@deq.oregon.gov	<b>Lab Batch #:</b> <b>Invoice To:</b> ODEQ/Business Office Address: 700 NE Multnomah St, Suite 600 Portland, OR 97232 Tel. #: 503-229-5696		

**Project Name:** Allen Street Study Area

**Sampler Name:** Sean Maloney

Sample ID#	Canister #	Flow Cont. #	Collection		Canister Pressure/Vacuum		VOCs by TO-15	Helium by ASTM 1946	Comments
			Date	Time	Initial	Final			
TSV-01D	22416	9604	10/4/24	1139	-27	-5	X	X	61
TSV-01S	22986	11529	10/4/24	1229	-30	-5	X	X	62
TSV-02D	24803	24989	10/4/24	1337	-30	-5	X	X	63
TSV-02S	21883	21687	10/4/24	1421	-28	-5	X	X	64

Sample Receipt Checklist  
 COC Seal Present/Intact:  N  
 COC Signed/Accurate:  N Size: 4 1L 6L 1.4L  
 Bottles arrive intact:  N Taps Color: G W P B  
 Correct bottles used:  N Tubing  Shunt

Please email results to: [ddomenighini@maulfoster.com](mailto:ddomenighini@maulfoster.com) and [sarah.kingery@deq.oregon.gov](mailto:sarah.kingery@deq.oregon.gov)

Relinquished By: Sean Maloney	Agency/Agent: MFA	Received By: [Signature]	Agency/Agent: DACE
Signature: [Signature]	Time & Date: 10/7/24 11:05	Signature: [Signature]	Time & Date: 10-08-24
Relinquished By:	Agency/Agent:	Received By:	Agency/Agent:
Signature:	Time & Date:	Signature:	Time & Date:

THIS PURCHASE IS SUBMITTED PURSUANT TO STATE OF OREGON SOLICITATION #102-1098-07 AND PRICE AGREEMENT # 8903. THE PRICE AGREEMENT INCLUDING CONTRACT TERMS AND CONDITIONS AND SPECIAL CONTRACT TERMS AND CONDITIONS (T'S & C'S) CONTAINED IN THE PRICE AGREEMENT ARE HEREBY INCORPORATED BY REFERENCE AND SHALL APPLY TO THIS PURCHASE AND SHALL TAKE PRECEDENCE OVER ALL OTHER CONFLICTING T'S AND C'S, EXPRESS OR IMPLIED.

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

## Oregon Dept. of Env. Quality - ODEQ

Sample Delivery Group: L1787364  
Samples Received: 10/10/2024  
Project Number:  
Description: Allen Street Study Area

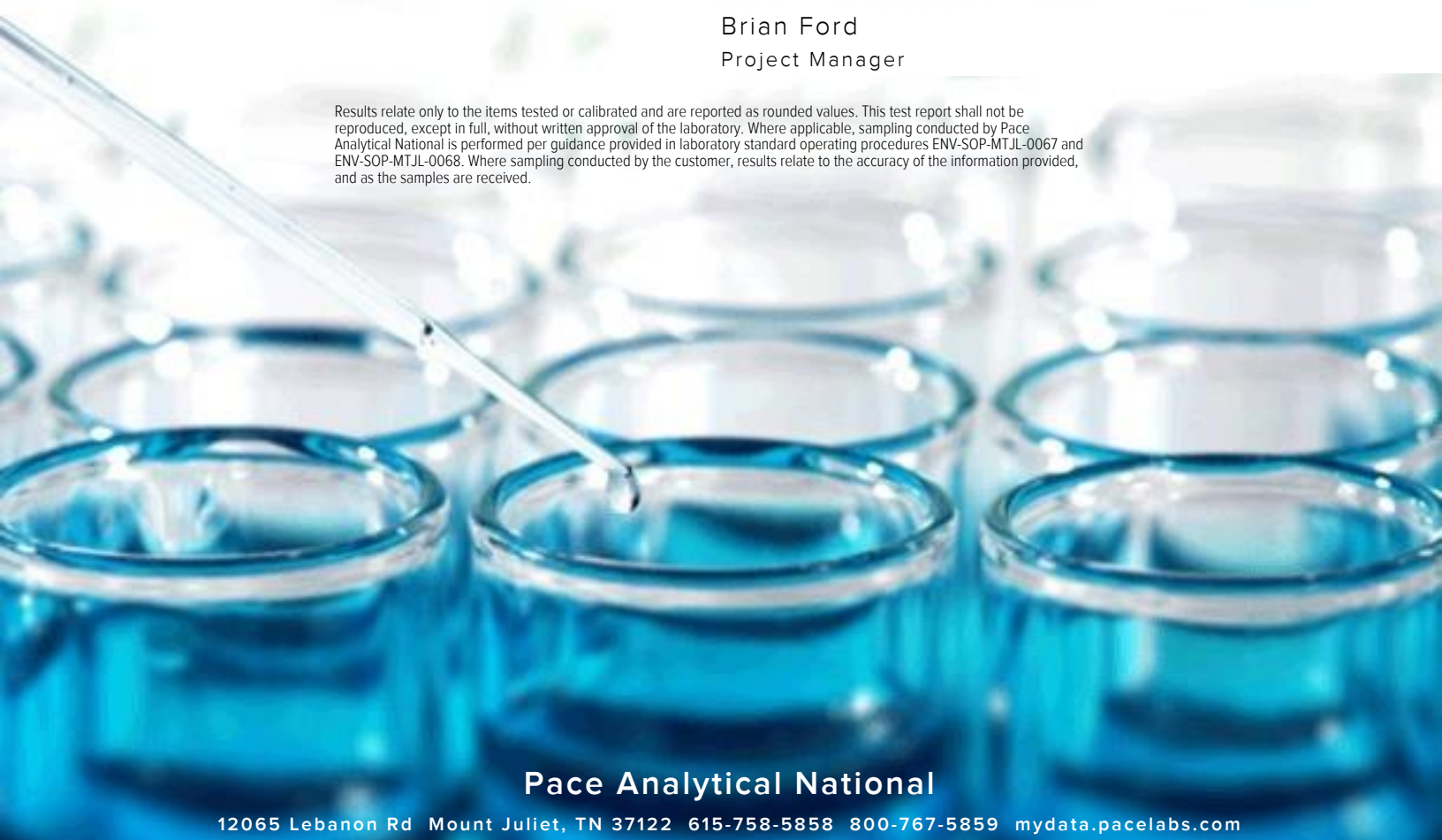
Report To: Sarah KINGERY  
165 E 7th Ave.  
Suite 100  
Eugene, OR 97401

Entire Report Reviewed By:



Brian Ford  
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.

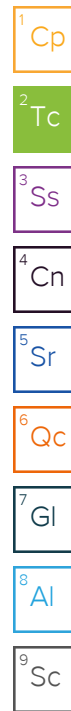


**Pace Analytical National**

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

# TABLE OF CONTENTS

<b>Cp: Cover Page</b>	<b>1</b>
<b>Tc: Table of Contents</b>	<b>2</b>
<b>Ss: Sample Summary</b>	<b>3</b>
<b>Cn: Case Narrative</b>	<b>6</b>
<b>Sr: Sample Results</b>	<b>7</b>
SVW-01S L1787364-01	7
SVW-01D L1787364-02	9
SVW-02S L1787364-03	11
SVW-02D L1787364-04	13
SVW-05S L1787364-05	15
SVW-05D L1787364-06	17
SVW-06S L1787364-07	19
SVW-07S L1787364-08	21
SVW-08S L1787364-09	23
SVW-09S L1787364-10	25
SVW-09D L1787364-11	27
SVW-10S L1787364-12	29
SVW-10D L1787364-13	31
SVW-11S L1787364-14	33
SVW-11D L1787364-15	35
SVW-12S L1787364-16	37
SVW-12D L1787364-17	39
<b>Qc: Quality Control Summary</b>	<b>41</b>
<b>Volatile Organic Compounds (MS) by Method TO-15</b>	<b>41</b>
<b>Organic Compounds (GC) by Method ASTM 1946</b>	<b>46</b>
<b>Gl: Glossary of Terms</b>	<b>47</b>
<b>Al: Accreditations &amp; Locations</b>	<b>48</b>
<b>Sc: Sample Chain of Custody</b>	<b>49</b>

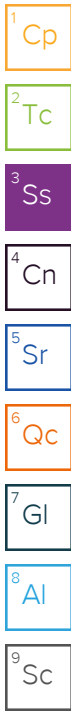


# SAMPLE SUMMARY

## SVW-01S L1787364-01 Air

Collected by Connor Anderson    Collected date/time 10/07/24 11:31    Received date/time 10/10/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2380403	1	10/11/24 17:13	10/11/24 17:13	DAH	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG2379949	1	10/10/24 18:49	10/10/24 18:49	KHM	Mt. Juliet, TN



## SVW-01D L1787364-02 Air

Collected by Connor Anderson    Collected date/time 10/07/24 11:46    Received date/time 10/10/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2380403	1	10/11/24 17:42	10/11/24 17:42	DAH	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG2381012	20	10/12/24 16:32	10/12/24 16:32	MBF	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG2379949	1	10/10/24 18:55	10/10/24 18:55	KHM	Mt. Juliet, TN

## SVW-02S L1787364-03 Air

Collected by Connor Anderson    Collected date/time 10/07/24 10:20    Received date/time 10/10/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2380403	1	10/11/24 18:10	10/11/24 18:10	DAH	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG2379949	1	10/10/24 18:59	10/10/24 18:59	KHM	Mt. Juliet, TN

## SVW-02D L1787364-04 Air

Collected by Connor Anderson    Collected date/time 10/07/24 10:49    Received date/time 10/10/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2380403	1	10/11/24 18:38	10/11/24 18:38	DAH	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG2381012	20	10/12/24 17:17	10/12/24 17:17	MBF	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG2379949	1	10/10/24 19:02	10/10/24 19:02	KHM	Mt. Juliet, TN

## SVW-05S L1787364-05 Air

Collected by Connor Anderson    Collected date/time 10/07/24 14:27    Received date/time 10/10/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2380403	1	10/11/24 19:06	10/11/24 19:06	DAH	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG2379949	1	10/10/24 19:05	10/10/24 19:05	KHM	Mt. Juliet, TN

## SVW-05D L1787364-06 Air

Collected by Connor Anderson    Collected date/time 10/07/24 14:44    Received date/time 10/10/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2380403	1	10/11/24 19:35	10/11/24 19:35	DAH	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG2381012	20	10/12/24 18:01	10/12/24 18:01	MBF	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG2379949	1	10/10/24 19:18	10/10/24 19:18	KHM	Mt. Juliet, TN

## SVW-06S L1787364-07 Air

Collected by Connor Anderson    Collected date/time 10/07/24 15:09    Received date/time 10/10/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2380403	1	10/11/24 20:03	10/11/24 20:03	DAH	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG2379949	1	10/10/24 19:22	10/10/24 19:22	KHM	Mt. Juliet, TN

# SAMPLE SUMMARY

## SVW-07S L1787364-08 Air

Collected by Connor Anderson    Collected date/time 10/07/24 13:20    Received date/time 10/10/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2380403	1	10/11/24 20:31	10/11/24 20:31	DAH	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG2379949	1	10/10/24 19:30	10/10/24 19:30	KHM	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## SVW-08S L1787364-09 Air

Collected by Connor Anderson    Collected date/time 10/07/24 12:56    Received date/time 10/10/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2380403	1	10/11/24 20:59	10/11/24 20:59	DAH	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG2379949	1	10/10/24 19:33	10/10/24 19:33	KHM	Mt. Juliet, TN

## SVW-09S L1787364-10 Air

Collected by Connor Anderson    Collected date/time 10/08/24 14:37    Received date/time 10/10/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2380403	1	10/11/24 21:29	10/11/24 21:29	DAH	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG2379949	1	10/10/24 19:40	10/10/24 19:40	KHM	Mt. Juliet, TN

## SVW-09D L1787364-11 Air

Collected by Connor Anderson    Collected date/time 10/08/24 14:52    Received date/time 10/10/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2380403	1	10/11/24 21:57	10/11/24 21:57	DAH	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG2379949	1	10/10/24 19:44	10/10/24 19:44	KHM	Mt. Juliet, TN

## SVW-10S L1787364-12 Air

Collected by Connor Anderson    Collected date/time 10/08/24 13:55    Received date/time 10/10/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2380403	1	10/11/24 22:25	10/11/24 22:25	DAH	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG2379949	1	10/10/24 21:36	10/10/24 21:36	KHM	Mt. Juliet, TN

## SVW-10D L1787364-13 Air

Collected by Connor Anderson    Collected date/time 10/08/24 13:30    Received date/time 10/10/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2380403	1	10/11/24 22:56	10/11/24 22:56	DAH	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG2381012	10	10/12/24 18:46	10/12/24 18:46	MBF	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG2379949	1	10/10/24 21:40	10/10/24 21:40	KHM	Mt. Juliet, TN

## SVW-11S L1787364-14 Air

Collected by Connor Anderson    Collected date/time 10/08/24 10:31    Received date/time 10/10/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2380403	1	10/11/24 23:24	10/11/24 23:24	DAH	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG2379949	1	10/10/24 21:46	10/10/24 21:46	KHM	Mt. Juliet, TN

# SAMPLE SUMMARY

## SVW-11D L1787364-15 Air

Collected by: Connor Anderson  
 Collected date/time: 10/08/24 11:01  
 Received date/time: 10/10/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2380403	1	10/11/24 23:54	10/11/24 23:54	DAH	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG2381012	10	10/12/24 19:31	10/12/24 19:31	MBF	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG2379949	1	10/10/24 21:50	10/10/24 21:50	KHM	Mt. Juliet, TN

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

## SVW-12S L1787364-16 Air

Collected by: Connor Anderson  
 Collected date/time: 10/08/24 11:36  
 Received date/time: 10/10/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2380403	1	10/12/24 00:22	10/12/24 00:22	DAH	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG2379949	1	10/10/24 21:54	10/10/24 21:54	KHM	Mt. Juliet, TN

## SVW-12D L1787364-17 Air

Collected by: Connor Anderson  
 Collected date/time: 10/08/24 12:12  
 Received date/time: 10/10/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2380403	1	10/12/24 00:51	10/12/24 00:51	DAH	Mt. Juliet, TN
Organic Compounds (GC) by Method ASTM 1946	WG2379949	1	10/10/24 21:58	10/10/24 21:58	KHM	Mt. Juliet, TN

# CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford  
Project Manager

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

## Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	4.73	11.2		1	<a href="#">WG2380403</a>
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	<a href="#">WG2380403</a>
Benzene	71-43-2	78.10	0.200	0.639	0.945	3.02		1	<a href="#">WG2380403</a>
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	<a href="#">WG2380403</a>
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	<a href="#">WG2380403</a>
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	<a href="#">WG2380403</a>
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	<a href="#">WG2380403</a>
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	<a href="#">WG2380403</a>
Carbon disulfide	75-15-0	76.10	0.400	1.24	6.20	19.3		1	<a href="#">WG2380403</a>
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	<a href="#">WG2380403</a>
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	<a href="#">WG2380403</a>
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	<a href="#">WG2380403</a>
Chloroform	67-66-3	119	0.200	0.973	0.244	1.19		1	<a href="#">WG2380403</a>
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	<a href="#">WG2380403</a>
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	<a href="#">WG2380403</a>
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	<a href="#">WG2380403</a>
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	<a href="#">WG2380403</a>
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	<a href="#">WG2380403</a>
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	<a href="#">WG2380403</a>
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	<a href="#">WG2380403</a>
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	<a href="#">WG2380403</a>
1,4-Dioxane	123-91-1	88.10	0.630	2.27	ND	ND		1	<a href="#">WG2380403</a>
Ethanol	64-17-5	46.10	2.50	4.71	ND	ND		1	<a href="#">WG2380403</a>
Ethylbenzene	100-41-4	106	0.200	0.867	0.225	0.975		1	<a href="#">WG2380403</a>
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.236	1.33		1	<a href="#">WG2380403</a>
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.496	2.45		1	<a href="#">WG2380403</a>
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	<a href="#">WG2380403</a>
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	<a href="#">WG2380403</a>
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	<a href="#">WG2380403</a>
n-Hexane	110-54-3	86.20	0.630	2.22	ND	ND		1	<a href="#">WG2380403</a>
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	<a href="#">WG2380403</a>
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	<a href="#">WG2380403</a>
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	<a href="#">WG2380403</a>
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	<a href="#">WG2380403</a>
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	<a href="#">WG2380403</a>
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	<a href="#">WG2380403</a>
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	<a href="#">WG2380403</a>
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	<a href="#">WG2380403</a>
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	<a href="#">WG2380403</a>
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	<a href="#">WG2380403</a>
n-Propylbenzene	103-65-1	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
Styrene	100-42-5	104	0.400	1.70	ND	ND		1	<a href="#">WG2380403</a>
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	<a href="#">WG2380403</a>
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	<a href="#">WG2380403</a>
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	<a href="#">WG2380403</a>
Toluene	108-88-3	92.10	0.500	1.88	1.58	5.95		1	<a href="#">WG2380403</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## 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
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	<a href="#">WG2380403</a>
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	<a href="#">WG2380403</a>
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.368	1.81		1	<a href="#">WG2380403</a>
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	0.365	1.71		1	<a href="#">WG2380403</a>
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	<a href="#">WG2380403</a>
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	<a href="#">WG2380403</a>
Vinyl acetate	108-05-4	86.10	0.630	2.22	ND	ND		1	<a href="#">WG2380403</a>
m&p-Xylene	179601-23-1	106	0.400	1.73	0.651	2.82		1	<a href="#">WG2380403</a>
o-Xylene	95-47-6	106	0.200	0.867	0.365	1.58		1	<a href="#">WG2380403</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	<a href="#">WG2380403</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		93.7				<a href="#">WG2380403</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

## Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	0.475		1	<a href="#">WG2379949</a>

8 Al

9 Sc

## Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	ND	ND		1	<a href="#">WG2380403</a>
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	<a href="#">WG2380403</a>
Benzene	71-43-2	78.10	0.200	0.639	2.27	7.25		1	<a href="#">WG2380403</a>
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	<a href="#">WG2380403</a>
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	<a href="#">WG2380403</a>
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	<a href="#">WG2380403</a>
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	<a href="#">WG2380403</a>
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	<a href="#">WG2380403</a>
Carbon disulfide	75-15-0	76.10	0.400	1.24	22.0	68.5		1	<a href="#">WG2380403</a>
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	<a href="#">WG2380403</a>
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	<a href="#">WG2380403</a>
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	<a href="#">WG2380403</a>
Chloroform	67-66-3	119	0.200	0.973	0.581	2.83		1	<a href="#">WG2380403</a>
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	<a href="#">WG2380403</a>
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	<a href="#">WG2380403</a>
Cyclohexane	110-82-7	84.20	0.200	0.689	3.45	11.9		1	<a href="#">WG2380403</a>
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	<a href="#">WG2380403</a>
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	<a href="#">WG2380403</a>
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	<a href="#">WG2380403</a>
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	<a href="#">WG2380403</a>
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	<a href="#">WG2380403</a>
1,4-Dioxane	123-91-1	88.10	0.630	2.27	ND	ND		1	<a href="#">WG2380403</a>
Ethanol	64-17-5	46.10	2.50	4.71	10.9	20.6		1	<a href="#">WG2380403</a>
Ethylbenzene	100-41-4	106	0.200	0.867	0.429	1.86		1	<a href="#">WG2380403</a>
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.356	2.00		1	<a href="#">WG2380403</a>
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.593	2.93		1	<a href="#">WG2380403</a>
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	<a href="#">WG2380403</a>
Heptane	142-82-5	100	0.200	0.818	1.69	6.91		1	<a href="#">WG2380403</a>
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	<a href="#">WG2380403</a>
n-Hexane	110-54-3	86.20	0.630	2.22	16.8	59.2		1	<a href="#">WG2380403</a>
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	<a href="#">WG2380403</a>
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	<a href="#">WG2380403</a>
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	<a href="#">WG2380403</a>
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	<a href="#">WG2380403</a>
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	<a href="#">WG2380403</a>
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	<a href="#">WG2380403</a>
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	<a href="#">WG2380403</a>
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	<a href="#">WG2380403</a>
2-Propanol	67-63-0	60.10	1.25	3.07	4.64	11.4		1	<a href="#">WG2380403</a>
Propene	115-07-1	42.10	25.0	43.0	1600	2760		20	<a href="#">WG2381012</a>
n-Propylbenzene	103-65-1	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
Styrene	100-42-5	104	0.400	1.70	ND	ND		1	<a href="#">WG2380403</a>
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	<a href="#">WG2380403</a>
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	<a href="#">WG2380403</a>
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	<a href="#">WG2380403</a>
Toluene	108-88-3	92.10	0.500	1.88	3.73	14.1		1	<a href="#">WG2380403</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## 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
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	<a href="#">WG2380403</a>
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	<a href="#">WG2380403</a>
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.708	3.47		1	<a href="#">WG2380403</a>
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	<a href="#">WG2380403</a>
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	<a href="#">WG2380403</a>
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	<a href="#">WG2380403</a>
Vinyl acetate	108-05-4	86.10	0.630	2.22	ND	ND		1	<a href="#">WG2380403</a>
m&p-Xylene	179601-23-1	106	0.400	1.73	1.23	5.33		1	<a href="#">WG2380403</a>
o-Xylene	95-47-6	106	0.200	0.867	0.787	3.41		1	<a href="#">WG2380403</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	213	880		1	<a href="#">WG2380403</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		98.2				<a href="#">WG2380403</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		93.8				<a href="#">WG2381012</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	<a href="#">WG2379949</a>

## 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	14.0	33.3		1	WG2380403
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG2380403
Benzene	71-43-2	78.10	0.200	0.639	0.583	1.86		1	WG2380403
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG2380403
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG2380403
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG2380403
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG2380403
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG2380403
Carbon disulfide	75-15-0	76.10	0.400	1.24	3.60	11.2		1	WG2380403
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG2380403
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG2380403
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG2380403
Chloroform	67-66-3	119	0.200	0.973	0.524	2.55		1	WG2380403
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	WG2380403
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG2380403
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG2380403
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG2380403
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG2380403
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG2380403
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG2380403
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG2380403
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG2380403
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG2380403
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG2380403
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG2380403
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG2380403
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG2380403
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG2380403
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG2380403
1,4-Dioxane	123-91-1	88.10	0.630	2.27	ND	ND		1	WG2380403
Ethanol	64-17-5	46.10	2.50	4.71	3.62	6.83	B	1	WG2380403
Ethylbenzene	100-41-4	106	0.200	0.867	0.324	1.40		1	WG2380403
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG2380403
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.215	1.21		1	WG2380403
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.491	2.43		1	WG2380403
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG2380403
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG2380403
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	WG2380403
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG2380403
n-Hexane	110-54-3	86.20	0.630	2.22	ND	ND		1	WG2380403
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG2380403
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG2380403
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG2380403
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG2380403
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG2380403
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG2380403
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG2380403
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG2380403
2-Propanol	67-63-0	60.10	1.25	3.07	1.30	3.20		1	WG2380403
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	WG2380403
n-Propylbenzene	103-65-1	120	0.200	0.982	ND	ND		1	WG2380403
Styrene	100-42-5	104	0.400	1.70	ND	ND		1	WG2380403
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG2380403
Tetrachloroethylene	127-18-4	166	0.200	1.36	0.297	2.02		1	WG2380403
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG2380403
Toluene	108-88-3	92.10	0.500	1.88	1.82	6.86		1	WG2380403

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## 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
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	<a href="#">WG2380403</a>
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	<a href="#">WG2380403</a>
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.429	2.11		1	<a href="#">WG2380403</a>
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	<a href="#">WG2380403</a>
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	<a href="#">WG2380403</a>
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	<a href="#">WG2380403</a>
Vinyl acetate	108-05-4	86.10	0.630	2.22	ND	ND		1	<a href="#">WG2380403</a>
m&p-Xylene	179601-23-1	106	0.400	1.73	1.02	4.42		1	<a href="#">WG2380403</a>
o-Xylene	95-47-6	106	0.200	0.867	0.613	2.66		1	<a href="#">WG2380403</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	<a href="#">WG2380403</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		95.1				<a href="#">WG2380403</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

## Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	0.403		1	<a href="#">WG2379949</a>

8 Al

9 Sc

## Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	ND	ND		1	<a href="#">WG2380403</a>
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	<a href="#">WG2380403</a>
Benzene	71-43-2	78.10	0.200	0.639	2.50	7.99		1	<a href="#">WG2380403</a>
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	<a href="#">WG2380403</a>
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	<a href="#">WG2380403</a>
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	<a href="#">WG2380403</a>
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	<a href="#">WG2380403</a>
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	<a href="#">WG2380403</a>
Carbon disulfide	75-15-0	76.10	0.400	1.24	22.9	71.3		1	<a href="#">WG2380403</a>
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	<a href="#">WG2380403</a>
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	<a href="#">WG2380403</a>
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	<a href="#">WG2380403</a>
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	<a href="#">WG2380403</a>
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	<a href="#">WG2380403</a>
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	<a href="#">WG2380403</a>
Cyclohexane	110-82-7	84.20	0.200	0.689	2.08	7.16		1	<a href="#">WG2380403</a>
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	<a href="#">WG2380403</a>
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	<a href="#">WG2380403</a>
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	<a href="#">WG2380403</a>
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	<a href="#">WG2380403</a>
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	<a href="#">WG2380403</a>
1,4-Dioxane	123-91-1	88.10	0.630	2.27	ND	ND		1	<a href="#">WG2380403</a>
Ethanol	64-17-5	46.10	2.50	4.71	5.78	10.9		1	<a href="#">WG2380403</a>
Ethylbenzene	100-41-4	106	0.200	0.867	0.285	1.24		1	<a href="#">WG2380403</a>
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.366	2.06		1	<a href="#">WG2380403</a>
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.546	2.70		1	<a href="#">WG2380403</a>
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	<a href="#">WG2380403</a>
Heptane	142-82-5	100	0.200	0.818	0.599	2.45		1	<a href="#">WG2380403</a>
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	<a href="#">WG2380403</a>
n-Hexane	110-54-3	86.20	0.630	2.22	9.12	32.2		1	<a href="#">WG2380403</a>
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	<a href="#">WG2380403</a>
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	<a href="#">WG2380403</a>
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	<a href="#">WG2380403</a>
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	<a href="#">WG2380403</a>
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	<a href="#">WG2380403</a>
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	<a href="#">WG2380403</a>
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	<a href="#">WG2380403</a>
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	<a href="#">WG2380403</a>
2-Propanol	67-63-0	60.10	1.25	3.07	2.31	5.68		1	<a href="#">WG2380403</a>
Propene	115-07-1	42.10	25.0	43.0	854	1470		20	<a href="#">WG2381012</a>
n-Propylbenzene	103-65-1	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
Styrene	100-42-5	104	0.400	1.70	ND	ND		1	<a href="#">WG2380403</a>
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	<a href="#">WG2380403</a>
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	<a href="#">WG2380403</a>
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	<a href="#">WG2380403</a>
Toluene	108-88-3	92.10	0.500	1.88	2.01	7.57		1	<a href="#">WG2380403</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## 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
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	<a href="#">WG2380403</a>
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	<a href="#">WG2380403</a>
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.247	1.21		1	<a href="#">WG2380403</a>
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	<a href="#">WG2380403</a>
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	<a href="#">WG2380403</a>
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	<a href="#">WG2380403</a>
Vinyl acetate	108-05-4	86.10	0.630	2.22	ND	ND		1	<a href="#">WG2380403</a>
m&p-Xylene	179601-23-1	106	0.400	1.73	0.654	2.84		1	<a href="#">WG2380403</a>
o-Xylene	95-47-6	106	0.200	0.867	0.454	1.97		1	<a href="#">WG2380403</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	<a href="#">WG2380403</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		94.6				<a href="#">WG2380403</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		93.9				<a href="#">WG2381012</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	<a href="#">WG2379949</a>

## 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	60.7	144		1	<a href="#">WG2380403</a>
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	<a href="#">WG2380403</a>
Benzene	71-43-2	78.10	0.200	0.639	6.72	21.5		1	<a href="#">WG2380403</a>
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	<a href="#">WG2380403</a>
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	<a href="#">WG2380403</a>
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	<a href="#">WG2380403</a>
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	<a href="#">WG2380403</a>
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	<a href="#">WG2380403</a>
Carbon disulfide	75-15-0	76.10	0.400	1.24	10.9	33.9		1	<a href="#">WG2380403</a>
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	<a href="#">WG2380403</a>
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	<a href="#">WG2380403</a>
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	<a href="#">WG2380403</a>
Chloroform	67-66-3	119	0.200	0.973	2.24	10.9		1	<a href="#">WG2380403</a>
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	<a href="#">WG2380403</a>
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	<a href="#">WG2380403</a>
Cyclohexane	110-82-7	84.20	0.200	0.689	0.457	1.57		1	<a href="#">WG2380403</a>
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	<a href="#">WG2380403</a>
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	<a href="#">WG2380403</a>
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	<a href="#">WG2380403</a>
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	<a href="#">WG2380403</a>
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	<a href="#">WG2380403</a>
1,4-Dioxane	123-91-1	88.10	0.630	2.27	ND	ND		1	<a href="#">WG2380403</a>
Ethanol	64-17-5	46.10	2.50	4.71	1220	2300	E	1	<a href="#">WG2380403</a>
Ethylbenzene	100-41-4	106	0.200	0.867	0.678	2.94		1	<a href="#">WG2380403</a>
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.259	1.27		1	<a href="#">WG2380403</a>
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	ND	ND		1	<a href="#">WG2380403</a>
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.438	2.17		1	<a href="#">WG2380403</a>
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	<a href="#">WG2380403</a>
Heptane	142-82-5	100	0.200	0.818	2.87	11.7		1	<a href="#">WG2380403</a>
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	<a href="#">WG2380403</a>
n-Hexane	110-54-3	86.20	0.630	2.22	2.16	7.62		1	<a href="#">WG2380403</a>
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	<a href="#">WG2380403</a>
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	<a href="#">WG2380403</a>
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	<a href="#">WG2380403</a>
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	5.80	17.1		1	<a href="#">WG2380403</a>
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	<a href="#">WG2380403</a>
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	<a href="#">WG2380403</a>
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	<a href="#">WG2380403</a>
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	<a href="#">WG2380403</a>
2-Propanol	67-63-0	60.10	1.25	3.07	51.9	128		1	<a href="#">WG2380403</a>
Propene	115-07-1	42.10	1.25	2.15	19.0	32.7		1	<a href="#">WG2380403</a>
n-Propylbenzene	103-65-1	120	0.200	0.982	0.268	1.32		1	<a href="#">WG2380403</a>
Styrene	100-42-5	104	0.400	1.70	ND	ND		1	<a href="#">WG2380403</a>
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	<a href="#">WG2380403</a>
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	<a href="#">WG2380403</a>
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	1.87	5.51		1	<a href="#">WG2380403</a>
Toluene	108-88-3	92.10	0.500	1.88	4.56	17.2		1	<a href="#">WG2380403</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## 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
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	<a href="#">WG2380403</a>
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	<a href="#">WG2380403</a>
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	1.37	6.72		1	<a href="#">WG2380403</a>
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.400	1.96		1	<a href="#">WG2380403</a>
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	<a href="#">WG2380403</a>
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	<a href="#">WG2380403</a>
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	<a href="#">WG2380403</a>
Vinyl acetate	108-05-4	86.10	0.630	2.22	ND	ND		1	<a href="#">WG2380403</a>
m&p-Xylene	179601-23-1	106	0.400	1.73	3.02	13.1		1	<a href="#">WG2380403</a>
o-Xylene	95-47-6	106	0.200	0.867	0.886	3.84		1	<a href="#">WG2380403</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	255	1050		1	<a href="#">WG2380403</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		94.6				<a href="#">WG2380403</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

## Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	0.265		1	<a href="#">WG2379949</a>

8 Al

9 Sc

## Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	ND	ND		1	<a href="#">WG2380403</a>
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	<a href="#">WG2380403</a>
Benzene	71-43-2	78.10	0.200	0.639	1.48	4.73		1	<a href="#">WG2380403</a>
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	<a href="#">WG2380403</a>
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	<a href="#">WG2380403</a>
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	<a href="#">WG2380403</a>
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	<a href="#">WG2380403</a>
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	<a href="#">WG2380403</a>
Carbon disulfide	75-15-0	76.10	0.400	1.24	7.41	23.1		1	<a href="#">WG2380403</a>
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	<a href="#">WG2380403</a>
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	<a href="#">WG2380403</a>
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	<a href="#">WG2380403</a>
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	<a href="#">WG2380403</a>
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	<a href="#">WG2380403</a>
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	<a href="#">WG2380403</a>
Cyclohexane	110-82-7	84.20	0.200	0.689	1.23	4.24		1	<a href="#">WG2380403</a>
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	<a href="#">WG2380403</a>
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	<a href="#">WG2380403</a>
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	<a href="#">WG2380403</a>
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	<a href="#">WG2380403</a>
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	<a href="#">WG2380403</a>
1,4-Dioxane	123-91-1	88.10	0.630	2.27	ND	ND		1	<a href="#">WG2380403</a>
Ethanol	64-17-5	46.10	2.50	4.71	4.87	9.18		1	<a href="#">WG2380403</a>
Ethylbenzene	100-41-4	106	0.200	0.867	0.392	1.70		1	<a href="#">WG2380403</a>
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	ND	ND		1	<a href="#">WG2380403</a>
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.485	2.40		1	<a href="#">WG2380403</a>
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	<a href="#">WG2380403</a>
Heptane	142-82-5	100	0.200	0.818	2.20	9.00		1	<a href="#">WG2380403</a>
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	<a href="#">WG2380403</a>
n-Hexane	110-54-3	86.20	0.630	2.22	26.6	93.8		1	<a href="#">WG2380403</a>
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	<a href="#">WG2380403</a>
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	<a href="#">WG2380403</a>
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	<a href="#">WG2380403</a>
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	<a href="#">WG2380403</a>
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	<a href="#">WG2380403</a>
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	<a href="#">WG2380403</a>
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	<a href="#">WG2380403</a>
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	<a href="#">WG2380403</a>
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	<a href="#">WG2380403</a>
Propene	115-07-1	42.10	25.0	43.0	806	1390		20	<a href="#">WG2381012</a>
n-Propylbenzene	103-65-1	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
Styrene	100-42-5	104	0.400	1.70	ND	ND		1	<a href="#">WG2380403</a>
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	<a href="#">WG2380403</a>
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	<a href="#">WG2380403</a>
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	<a href="#">WG2380403</a>
Toluene	108-88-3	92.10	0.500	1.88	1.68	6.33		1	<a href="#">WG2380403</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## 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
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	<a href="#">WG2380403</a>
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	<a href="#">WG2380403</a>
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.242	1.19		1	<a href="#">WG2380403</a>
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	<a href="#">WG2380403</a>
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	<a href="#">WG2380403</a>
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	<a href="#">WG2380403</a>
Vinyl acetate	108-05-4	86.10	0.630	2.22	ND	ND		1	<a href="#">WG2380403</a>
m&p-Xylene	179601-23-1	106	0.400	1.73	0.615	2.67		1	<a href="#">WG2380403</a>
o-Xylene	95-47-6	106	0.200	0.867	0.400	1.73		1	<a href="#">WG2380403</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	<a href="#">WG2380403</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		94.0				<a href="#">WG2380403</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		93.1				<a href="#">WG2381012</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	1.83		1	<a href="#">WG2379949</a>

## 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	9.62	22.9		1	WG2380403
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG2380403
Benzene	71-43-2	78.10	0.200	0.639	0.308	0.984		1	WG2380403
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG2380403
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG2380403
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG2380403
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG2380403
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG2380403
Carbon disulfide	75-15-0	76.10	0.400	1.24	ND	ND		1	WG2380403
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG2380403
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG2380403
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG2380403
Chloroform	67-66-3	119	0.200	0.973	0.265	1.29		1	WG2380403
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	WG2380403
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG2380403
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG2380403
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG2380403
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG2380403
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG2380403
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG2380403
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG2380403
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG2380403
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG2380403
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG2380403
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG2380403
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG2380403
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG2380403
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG2380403
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG2380403
1,4-Dioxane	123-91-1	88.10	0.630	2.27	ND	ND		1	WG2380403
Ethanol	64-17-5	46.10	2.50	4.71	4.19	7.90	B	1	WG2380403
Ethylbenzene	100-41-4	106	0.200	0.867	1.62	7.02		1	WG2380403
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.748	3.67		1	WG2380403
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	ND	ND		1	WG2380403
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.435	2.15		1	WG2380403
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG2380403
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG2380403
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	WG2380403
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG2380403
n-Hexane	110-54-3	86.20	0.630	2.22	ND	ND		1	WG2380403
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG2380403
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG2380403
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG2380403
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG2380403
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG2380403
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG2380403
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG2380403
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG2380403
2-Propanol	67-63-0	60.10	1.25	3.07	1.25	3.07		1	WG2380403
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	WG2380403
n-Propylbenzene	103-65-1	120	0.200	0.982	ND	ND		1	WG2380403
Styrene	100-42-5	104	0.400	1.70	ND	ND		1	WG2380403
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG2380403
Tetrachloroethylene	127-18-4	166	0.200	1.36	0.351	2.38		1	WG2380403
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	0.897	2.65		1	WG2380403
Toluene	108-88-3	92.10	0.500	1.88	9.36	35.3		1	WG2380403

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	<a href="#">WG2380403</a>
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	<a href="#">WG2380403</a>
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	1.09	5.35		1	<a href="#">WG2380403</a>
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.452	2.22		1	<a href="#">WG2380403</a>
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	<a href="#">WG2380403</a>
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	<a href="#">WG2380403</a>
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	<a href="#">WG2380403</a>
Vinyl acetate	108-05-4	86.10	0.630	2.22	ND	ND		1	<a href="#">WG2380403</a>
m&p-Xylene	179601-23-1	106	0.400	1.73	7.80	33.8		1	<a href="#">WG2380403</a>
o-Xylene	95-47-6	106	0.200	0.867	3.39	14.7		1	<a href="#">WG2380403</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	<a href="#">WG2380403</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		94.6				<a href="#">WG2380403</a>

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	<a href="#">WG2379949</a>

## Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	4.72	11.2		1	<a href="#">WG2380403</a>
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	<a href="#">WG2380403</a>
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	<a href="#">WG2380403</a>
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	<a href="#">WG2380403</a>
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	<a href="#">WG2380403</a>
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	<a href="#">WG2380403</a>
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	<a href="#">WG2380403</a>
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	<a href="#">WG2380403</a>
Carbon disulfide	75-15-0	76.10	0.400	1.24	ND	ND		1	<a href="#">WG2380403</a>
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	<a href="#">WG2380403</a>
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	<a href="#">WG2380403</a>
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	<a href="#">WG2380403</a>
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	<a href="#">WG2380403</a>
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	<a href="#">WG2380403</a>
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	<a href="#">WG2380403</a>
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	<a href="#">WG2380403</a>
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	<a href="#">WG2380403</a>
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	<a href="#">WG2380403</a>
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	<a href="#">WG2380403</a>
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	<a href="#">WG2380403</a>
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	<a href="#">WG2380403</a>
1,4-Dioxane	123-91-1	88.10	0.630	2.27	ND	ND		1	<a href="#">WG2380403</a>
Ethanol	64-17-5	46.10	2.50	4.71	ND	ND		1	<a href="#">WG2380403</a>
Ethylbenzene	100-41-4	106	0.200	0.867	ND	ND		1	<a href="#">WG2380403</a>
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	ND	ND		1	<a href="#">WG2380403</a>
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.510	2.52		1	<a href="#">WG2380403</a>
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	<a href="#">WG2380403</a>
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	<a href="#">WG2380403</a>
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	<a href="#">WG2380403</a>
n-Hexane	110-54-3	86.20	0.630	2.22	ND	ND		1	<a href="#">WG2380403</a>
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	<a href="#">WG2380403</a>
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	<a href="#">WG2380403</a>
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	<a href="#">WG2380403</a>
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	<a href="#">WG2380403</a>
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	<a href="#">WG2380403</a>
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	<a href="#">WG2380403</a>
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	<a href="#">WG2380403</a>
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	<a href="#">WG2380403</a>
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	<a href="#">WG2380403</a>
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	<a href="#">WG2380403</a>
n-Propylbenzene	103-65-1	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
Styrene	100-42-5	104	0.400	1.70	ND	ND		1	<a href="#">WG2380403</a>
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	<a href="#">WG2380403</a>
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	<a href="#">WG2380403</a>
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	<a href="#">WG2380403</a>
Toluene	108-88-3	92.10	0.500	1.88	ND	ND		1	<a href="#">WG2380403</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## 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
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	<a href="#">WG2380403</a>
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	<a href="#">WG2380403</a>
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	<a href="#">WG2380403</a>
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	<a href="#">WG2380403</a>
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	<a href="#">WG2380403</a>
Vinyl acetate	108-05-4	86.10	0.630	2.22	ND	ND		1	<a href="#">WG2380403</a>
m&p-Xylene	179601-23-1	106	0.400	1.73	ND	ND		1	<a href="#">WG2380403</a>
o-Xylene	95-47-6	106	0.200	0.867	ND	ND		1	<a href="#">WG2380403</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	<a href="#">WG2380403</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		94.1				<a href="#">WG2380403</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

## Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	<a href="#">WG2379949</a>

8 Al

9 Sc

## 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	28.0	66.5		1	WG2380403
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG2380403
Benzene	71-43-2	78.10	0.200	0.639	0.247	0.789		1	WG2380403
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG2380403
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG2380403
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG2380403
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG2380403
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG2380403
Carbon disulfide	75-15-0	76.10	0.400	1.24	ND	ND		1	WG2380403
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG2380403
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG2380403
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG2380403
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG2380403
Chloromethane	74-87-3	50.50	0.200	0.413	0.434	0.896		1	WG2380403
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG2380403
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG2380403
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG2380403
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG2380403
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG2380403
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG2380403
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG2380403
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG2380403
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG2380403
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG2380403
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG2380403
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG2380403
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG2380403
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG2380403
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG2380403
1,4-Dioxane	123-91-1	88.10	0.630	2.27	ND	ND		1	WG2380403
Ethanol	64-17-5	46.10	2.50	4.71	23.3	43.9		1	WG2380403
Ethylbenzene	100-41-4	106	0.200	0.867	0.344	1.49		1	WG2380403
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.208	1.02		1	WG2380403
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	ND	ND		1	WG2380403
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.498	2.46		1	WG2380403
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG2380403
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG2380403
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	WG2380403
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG2380403
n-Hexane	110-54-3	86.20	0.630	2.22	8.85	31.2		1	WG2380403
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG2380403
Methylene Chloride	75-09-2	84.90	0.200	0.694	8.53	29.6		1	WG2380403
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG2380403
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG2380403
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG2380403
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG2380403
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG2380403
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG2380403
2-Propanol	67-63-0	60.10	1.25	3.07	8.06	19.8		1	WG2380403
Propene	115-07-1	42.10	1.25	2.15	91.8	158		1	WG2380403
n-Propylbenzene	103-65-1	120	0.200	0.982	ND	ND		1	WG2380403
Styrene	100-42-5	104	0.400	1.70	ND	ND		1	WG2380403
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG2380403
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG2380403
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG2380403
Toluene	108-88-3	92.10	0.500	1.88	1.89	7.12		1	WG2380403

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## 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
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	<a href="#">WG2380403</a>
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	<a href="#">WG2380403</a>
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.900	4.42		1	<a href="#">WG2380403</a>
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.290	1.42		1	<a href="#">WG2380403</a>
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	<a href="#">WG2380403</a>
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	<a href="#">WG2380403</a>
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	<a href="#">WG2380403</a>
Vinyl acetate	108-05-4	86.10	0.630	2.22	ND	ND		1	<a href="#">WG2380403</a>
m&p-Xylene	179601-23-1	106	0.400	1.73	1.43	6.20		1	<a href="#">WG2380403</a>
o-Xylene	95-47-6	106	0.200	0.867	0.681	2.95		1	<a href="#">WG2380403</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	<a href="#">WG2380403</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		92.6				<a href="#">WG2380403</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

## Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	<a href="#">WG2379949</a>

8 Al

9 Sc

## 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	14.2	33.7		1	<a href="#">WG2380403</a>
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	<a href="#">WG2380403</a>
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	<a href="#">WG2380403</a>
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	<a href="#">WG2380403</a>
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	<a href="#">WG2380403</a>
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	<a href="#">WG2380403</a>
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	<a href="#">WG2380403</a>
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	<a href="#">WG2380403</a>
Carbon disulfide	75-15-0	76.10	0.400	1.24	ND	ND		1	<a href="#">WG2380403</a>
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	<a href="#">WG2380403</a>
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	<a href="#">WG2380403</a>
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	<a href="#">WG2380403</a>
Chloroform	67-66-3	119	0.200	0.973	0.221	1.08		1	<a href="#">WG2380403</a>
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	<a href="#">WG2380403</a>
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	<a href="#">WG2380403</a>
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	<a href="#">WG2380403</a>
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	<a href="#">WG2380403</a>
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	<a href="#">WG2380403</a>
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	<a href="#">WG2380403</a>
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	<a href="#">WG2380403</a>
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	<a href="#">WG2380403</a>
1,4-Dioxane	123-91-1	88.10	0.630	2.27	ND	ND		1	<a href="#">WG2380403</a>
Ethanol	64-17-5	46.10	2.50	4.71	5.37	10.1		1	<a href="#">WG2380403</a>
Ethylbenzene	100-41-4	106	0.200	0.867	ND	ND		1	<a href="#">WG2380403</a>
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	ND	ND		1	<a href="#">WG2380403</a>
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.497	2.46		1	<a href="#">WG2380403</a>
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	<a href="#">WG2380403</a>
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	<a href="#">WG2380403</a>
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	<a href="#">WG2380403</a>
n-Hexane	110-54-3	86.20	0.630	2.22	ND	ND		1	<a href="#">WG2380403</a>
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	<a href="#">WG2380403</a>
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	<a href="#">WG2380403</a>
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	<a href="#">WG2380403</a>
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	<a href="#">WG2380403</a>
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	<a href="#">WG2380403</a>
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	<a href="#">WG2380403</a>
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	<a href="#">WG2380403</a>
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	<a href="#">WG2380403</a>
2-Propanol	67-63-0	60.10	1.25	3.07	3.02	7.42		1	<a href="#">WG2380403</a>
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	<a href="#">WG2380403</a>
n-Propylbenzene	103-65-1	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
Styrene	100-42-5	104	0.400	1.70	ND	ND		1	<a href="#">WG2380403</a>
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	<a href="#">WG2380403</a>
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	<a href="#">WG2380403</a>
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	<a href="#">WG2380403</a>
Toluene	108-88-3	92.10	0.500	1.88	0.571	2.15		1	<a href="#">WG2380403</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## 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
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	<a href="#">WG2380403</a>
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	<a href="#">WG2380403</a>
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	<a href="#">WG2380403</a>
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	<a href="#">WG2380403</a>
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	<a href="#">WG2380403</a>
Vinyl acetate	108-05-4	86.10	0.630	2.22	ND	ND		1	<a href="#">WG2380403</a>
m&p-Xylene	179601-23-1	106	0.400	1.73	ND	ND		1	<a href="#">WG2380403</a>
o-Xylene	95-47-6	106	0.200	0.867	ND	ND		1	<a href="#">WG2380403</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	<a href="#">WG2380403</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		93.8				<a href="#">WG2380403</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

## Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	0.416		1	<a href="#">WG2379949</a>

8 Al

9 Sc

## Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	ND	ND		1	<a href="#">WG2380403</a>
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	<a href="#">WG2380403</a>
Benzene	71-43-2	78.10	0.200	0.639	1.28	4.09		1	<a href="#">WG2380403</a>
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	<a href="#">WG2380403</a>
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	<a href="#">WG2380403</a>
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	<a href="#">WG2380403</a>
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	<a href="#">WG2380403</a>
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	<a href="#">WG2380403</a>
Carbon disulfide	75-15-0	76.10	0.400	1.24	22.0	68.5		1	<a href="#">WG2380403</a>
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	<a href="#">WG2380403</a>
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	<a href="#">WG2380403</a>
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	<a href="#">WG2380403</a>
Chloroform	67-66-3	119	0.200	0.973	0.910	4.43		1	<a href="#">WG2380403</a>
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	<a href="#">WG2380403</a>
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	<a href="#">WG2380403</a>
Cyclohexane	110-82-7	84.20	0.200	0.689	1.60	5.51		1	<a href="#">WG2380403</a>
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	<a href="#">WG2380403</a>
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	<a href="#">WG2380403</a>
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	<a href="#">WG2380403</a>
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	<a href="#">WG2380403</a>
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	<a href="#">WG2380403</a>
1,4-Dioxane	123-91-1	88.10	0.630	2.27	ND	ND		1	<a href="#">WG2380403</a>
Ethanol	64-17-5	46.10	2.50	4.71	ND	ND		1	<a href="#">WG2380403</a>
Ethylbenzene	100-41-4	106	0.200	0.867	ND	ND		1	<a href="#">WG2380403</a>
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	ND	ND		1	<a href="#">WG2380403</a>
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.539	2.67		1	<a href="#">WG2380403</a>
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	<a href="#">WG2380403</a>
Heptane	142-82-5	100	0.200	0.818	0.739	3.02		1	<a href="#">WG2380403</a>
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	<a href="#">WG2380403</a>
n-Hexane	110-54-3	86.20	0.630	2.22	10.4	36.7		1	<a href="#">WG2380403</a>
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	<a href="#">WG2380403</a>
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	<a href="#">WG2380403</a>
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	<a href="#">WG2380403</a>
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	<a href="#">WG2380403</a>
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	<a href="#">WG2380403</a>
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	<a href="#">WG2380403</a>
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	<a href="#">WG2380403</a>
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	<a href="#">WG2380403</a>
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	<a href="#">WG2380403</a>
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	<a href="#">WG2380403</a>
n-Propylbenzene	103-65-1	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
Styrene	100-42-5	104	0.400	1.70	ND	ND		1	<a href="#">WG2380403</a>
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	<a href="#">WG2380403</a>
Tetrachloroethylene	127-18-4	166	0.200	1.36	0.375	2.55		1	<a href="#">WG2380403</a>
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	<a href="#">WG2380403</a>
Toluene	108-88-3	92.10	0.500	1.88	1.34	5.05		1	<a href="#">WG2380403</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## 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
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	<a href="#">WG2380403</a>
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	<a href="#">WG2380403</a>
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	<a href="#">WG2380403</a>
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	<a href="#">WG2380403</a>
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	<a href="#">WG2380403</a>
Vinyl acetate	108-05-4	86.10	0.630	2.22	ND	ND		1	<a href="#">WG2380403</a>
m&p-Xylene	179601-23-1	106	0.400	1.73	0.447	1.94		1	<a href="#">WG2380403</a>
o-Xylene	95-47-6	106	0.200	0.867	ND	ND		1	<a href="#">WG2380403</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	<a href="#">WG2380403</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		94.2				<a href="#">WG2380403</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

## Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	ND		1	<a href="#">WG2379949</a>

8 Al

9 Sc

## 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	14.6	34.7		1	<a href="#">WG2380403</a>
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	<a href="#">WG2380403</a>
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	<a href="#">WG2380403</a>
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	<a href="#">WG2380403</a>
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	<a href="#">WG2380403</a>
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	<a href="#">WG2380403</a>
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	<a href="#">WG2380403</a>
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	<a href="#">WG2380403</a>
Carbon disulfide	75-15-0	76.10	0.400	1.24	6.36	19.8		1	<a href="#">WG2380403</a>
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	<a href="#">WG2380403</a>
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	<a href="#">WG2380403</a>
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	<a href="#">WG2380403</a>
Chloroform	67-66-3	119	0.200	0.973	0.468	2.28		1	<a href="#">WG2380403</a>
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	<a href="#">WG2380403</a>
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	<a href="#">WG2380403</a>
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	<a href="#">WG2380403</a>
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	<a href="#">WG2380403</a>
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	<a href="#">WG2380403</a>
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	<a href="#">WG2380403</a>
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	<a href="#">WG2380403</a>
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	<a href="#">WG2380403</a>
1,4-Dioxane	123-91-1	88.10	0.630	2.27	ND	ND		1	<a href="#">WG2380403</a>
Ethanol	64-17-5	46.10	2.50	4.71	3.40	6.41	B	1	<a href="#">WG2380403</a>
Ethylbenzene	100-41-4	106	0.200	0.867	0.203	0.880		1	<a href="#">WG2380403</a>
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	ND	ND		1	<a href="#">WG2380403</a>
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.478	2.36		1	<a href="#">WG2380403</a>
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	<a href="#">WG2380403</a>
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	<a href="#">WG2380403</a>
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	<a href="#">WG2380403</a>
n-Hexane	110-54-3	86.20	0.630	2.22	ND	ND		1	<a href="#">WG2380403</a>
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	<a href="#">WG2380403</a>
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	<a href="#">WG2380403</a>
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	<a href="#">WG2380403</a>
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	<a href="#">WG2380403</a>
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	<a href="#">WG2380403</a>
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	<a href="#">WG2380403</a>
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	<a href="#">WG2380403</a>
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	<a href="#">WG2380403</a>
2-Propanol	67-63-0	60.10	1.25	3.07	1.84	4.52		1	<a href="#">WG2380403</a>
Propene	115-07-1	42.10	1.25	2.15	14.1	24.3		1	<a href="#">WG2380403</a>
n-Propylbenzene	103-65-1	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
Styrene	100-42-5	104	0.400	1.70	ND	ND		1	<a href="#">WG2380403</a>
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	<a href="#">WG2380403</a>
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	<a href="#">WG2380403</a>
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	<a href="#">WG2380403</a>
Toluene	108-88-3	92.10	0.500	1.88	0.820	3.09		1	<a href="#">WG2380403</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## 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
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	<a href="#">WG2380403</a>
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	<a href="#">WG2380403</a>
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.291	1.43		1	<a href="#">WG2380403</a>
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	<a href="#">WG2380403</a>
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	<a href="#">WG2380403</a>
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	<a href="#">WG2380403</a>
Vinyl acetate	108-05-4	86.10	0.630	2.22	ND	ND		1	<a href="#">WG2380403</a>
m&p-Xylene	179601-23-1	106	0.400	1.73	0.512	2.22		1	<a href="#">WG2380403</a>
o-Xylene	95-47-6	106	0.200	0.867	0.316	1.37		1	<a href="#">WG2380403</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	<a href="#">WG2380403</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		94.8				<a href="#">WG2380403</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

## Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	0.172		1	<a href="#">WG2379949</a>

8 Al

9 Sc

## 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	19.8	47.1		1	<a href="#">WG2380403</a>
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	<a href="#">WG2380403</a>
Benzene	71-43-2	78.10	0.200	0.639	0.207	0.661		1	<a href="#">WG2380403</a>
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	<a href="#">WG2380403</a>
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	<a href="#">WG2380403</a>
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	<a href="#">WG2380403</a>
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	<a href="#">WG2380403</a>
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	<a href="#">WG2380403</a>
Carbon disulfide	75-15-0	76.10	0.400	1.24	0.739	2.30		1	<a href="#">WG2380403</a>
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	<a href="#">WG2380403</a>
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	<a href="#">WG2380403</a>
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	<a href="#">WG2380403</a>
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	<a href="#">WG2380403</a>
Chloromethane	74-87-3	50.50	0.200	0.413	0.530	1.09		1	<a href="#">WG2380403</a>
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	<a href="#">WG2380403</a>
Cyclohexane	110-82-7	84.20	0.200	0.689	0.417	1.44		1	<a href="#">WG2380403</a>
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	<a href="#">WG2380403</a>
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	<a href="#">WG2380403</a>
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	<a href="#">WG2380403</a>
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	<a href="#">WG2380403</a>
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	<a href="#">WG2380403</a>
1,4-Dioxane	123-91-1	88.10	0.630	2.27	ND	ND		1	<a href="#">WG2380403</a>
Ethanol	64-17-5	46.10	2.50	4.71	12.7	23.9		1	<a href="#">WG2380403</a>
Ethylbenzene	100-41-4	106	0.200	0.867	ND	ND		1	<a href="#">WG2380403</a>
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.230	1.29		1	<a href="#">WG2380403</a>
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.487	2.41		1	<a href="#">WG2380403</a>
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	<a href="#">WG2380403</a>
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	<a href="#">WG2380403</a>
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	<a href="#">WG2380403</a>
n-Hexane	110-54-3	86.20	0.630	2.22	3.05	10.8		1	<a href="#">WG2380403</a>
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	<a href="#">WG2380403</a>
Methylene Chloride	75-09-2	84.90	0.200	0.694	4.38	15.2		1	<a href="#">WG2380403</a>
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	<a href="#">WG2380403</a>
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	<a href="#">WG2380403</a>
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	<a href="#">WG2380403</a>
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	<a href="#">WG2380403</a>
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	<a href="#">WG2380403</a>
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	<a href="#">WG2380403</a>
2-Propanol	67-63-0	60.10	1.25	3.07	2.08	5.11		1	<a href="#">WG2380403</a>
Propene	115-07-1	42.10	12.5	21.5	160	276		10	<a href="#">WG2381012</a>
n-Propylbenzene	103-65-1	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
Styrene	100-42-5	104	0.400	1.70	ND	ND		1	<a href="#">WG2380403</a>
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	<a href="#">WG2380403</a>
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	<a href="#">WG2380403</a>
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	<a href="#">WG2380403</a>
Toluene	108-88-3	92.10	0.500	1.88	0.637	2.40		1	<a href="#">WG2380403</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## 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
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	<a href="#">WG2380403</a>
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	<a href="#">WG2380403</a>
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	<a href="#">WG2380403</a>
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	<a href="#">WG2380403</a>
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	<a href="#">WG2380403</a>
Vinyl acetate	108-05-4	86.10	0.630	2.22	ND	ND		1	<a href="#">WG2380403</a>
m&p-Xylene	179601-23-1	106	0.400	1.73	ND	ND		1	<a href="#">WG2380403</a>
o-Xylene	95-47-6	106	0.200	0.867	ND	ND		1	<a href="#">WG2380403</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	<a href="#">WG2380403</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		93.7				<a href="#">WG2380403</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		94.2				<a href="#">WG2381012</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	3.12		1	<a href="#">WG2379949</a>

## 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	9.04	21.5		1	<a href="#">WG2380403</a>
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	<a href="#">WG2380403</a>
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	<a href="#">WG2380403</a>
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	<a href="#">WG2380403</a>
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	<a href="#">WG2380403</a>
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	<a href="#">WG2380403</a>
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	<a href="#">WG2380403</a>
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	<a href="#">WG2380403</a>
Carbon disulfide	75-15-0	76.10	0.400	1.24	ND	ND		1	<a href="#">WG2380403</a>
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	<a href="#">WG2380403</a>
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	<a href="#">WG2380403</a>
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	<a href="#">WG2380403</a>
Chloroform	67-66-3	119	0.200	0.973	0.803	3.91		1	<a href="#">WG2380403</a>
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	<a href="#">WG2380403</a>
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	<a href="#">WG2380403</a>
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	<a href="#">WG2380403</a>
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	<a href="#">WG2380403</a>
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	<a href="#">WG2380403</a>
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	<a href="#">WG2380403</a>
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	<a href="#">WG2380403</a>
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	<a href="#">WG2380403</a>
1,4-Dioxane	123-91-1	88.10	0.630	2.27	ND	ND		1	<a href="#">WG2380403</a>
Ethanol	64-17-5	46.10	2.50	4.71	10.6	20.0		1	<a href="#">WG2380403</a>
Ethylbenzene	100-41-4	106	0.200	0.867	ND	ND		1	<a href="#">WG2380403</a>
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	ND	ND		1	<a href="#">WG2380403</a>
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.488	2.41		1	<a href="#">WG2380403</a>
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	<a href="#">WG2380403</a>
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	<a href="#">WG2380403</a>
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	<a href="#">WG2380403</a>
n-Hexane	110-54-3	86.20	0.630	2.22	ND	ND		1	<a href="#">WG2380403</a>
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	<a href="#">WG2380403</a>
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	<a href="#">WG2380403</a>
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	<a href="#">WG2380403</a>
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	<a href="#">WG2380403</a>
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	<a href="#">WG2380403</a>
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	<a href="#">WG2380403</a>
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	<a href="#">WG2380403</a>
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	<a href="#">WG2380403</a>
2-Propanol	67-63-0	60.10	1.25	3.07	2.48	6.10		1	<a href="#">WG2380403</a>
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	<a href="#">WG2380403</a>
n-Propylbenzene	103-65-1	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
Styrene	100-42-5	104	0.400	1.70	ND	ND		1	<a href="#">WG2380403</a>
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	<a href="#">WG2380403</a>
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	<a href="#">WG2380403</a>
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	<a href="#">WG2380403</a>
Toluene	108-88-3	92.10	0.500	1.88	ND	ND		1	<a href="#">WG2380403</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## 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
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	<a href="#">WG2380403</a>
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	<a href="#">WG2380403</a>
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.305	1.50		1	<a href="#">WG2380403</a>
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	<a href="#">WG2380403</a>
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	<a href="#">WG2380403</a>
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	<a href="#">WG2380403</a>
Vinyl acetate	108-05-4	86.10	0.630	2.22	ND	ND		1	<a href="#">WG2380403</a>
m&p-Xylene	179601-23-1	106	0.400	1.73	ND	ND		1	<a href="#">WG2380403</a>
o-Xylene	95-47-6	106	0.200	0.867	ND	ND		1	<a href="#">WG2380403</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	<a href="#">WG2380403</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		94.1				<a href="#">WG2380403</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

## Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	0.154		1	<a href="#">WG2379949</a>

8 Al

9 Sc

## 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	10.2	24.2		1	<a href="#">WG2380403</a>
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	<a href="#">WG2380403</a>
Benzene	71-43-2	78.10	0.200	0.639	0.277	0.885		1	<a href="#">WG2380403</a>
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	<a href="#">WG2380403</a>
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	<a href="#">WG2380403</a>
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	<a href="#">WG2380403</a>
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	<a href="#">WG2380403</a>
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	<a href="#">WG2380403</a>
Carbon disulfide	75-15-0	76.10	0.400	1.24	2.23	6.94		1	<a href="#">WG2380403</a>
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	<a href="#">WG2380403</a>
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	<a href="#">WG2380403</a>
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	<a href="#">WG2380403</a>
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	<a href="#">WG2380403</a>
Chloromethane	74-87-3	50.50	0.200	0.413	0.705	1.46		1	<a href="#">WG2380403</a>
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	<a href="#">WG2380403</a>
Cyclohexane	110-82-7	84.20	0.200	0.689	0.255	0.878		1	<a href="#">WG2380403</a>
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	<a href="#">WG2380403</a>
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	<a href="#">WG2380403</a>
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	<a href="#">WG2380403</a>
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	<a href="#">WG2380403</a>
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	<a href="#">WG2380403</a>
1,4-Dioxane	123-91-1	88.10	0.630	2.27	ND	ND		1	<a href="#">WG2380403</a>
Ethanol	64-17-5	46.10	2.50	4.71	3.29	6.20	B	1	<a href="#">WG2380403</a>
Ethylbenzene	100-41-4	106	0.200	0.867	ND	ND		1	<a href="#">WG2380403</a>
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.237	1.33		1	<a href="#">WG2380403</a>
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.514	2.54		1	<a href="#">WG2380403</a>
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	<a href="#">WG2380403</a>
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	<a href="#">WG2380403</a>
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	<a href="#">WG2380403</a>
n-Hexane	110-54-3	86.20	0.630	2.22	1.65	5.82		1	<a href="#">WG2380403</a>
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	<a href="#">WG2380403</a>
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	<a href="#">WG2380403</a>
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	<a href="#">WG2380403</a>
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	<a href="#">WG2380403</a>
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	<a href="#">WG2380403</a>
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	<a href="#">WG2380403</a>
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	<a href="#">WG2380403</a>
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	<a href="#">WG2380403</a>
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	<a href="#">WG2380403</a>
Propene	115-07-1	42.10	12.5	21.5	229	394		10	<a href="#">WG2381012</a>
n-Propylbenzene	103-65-1	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
Styrene	100-42-5	104	0.400	1.70	ND	ND		1	<a href="#">WG2380403</a>
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	<a href="#">WG2380403</a>
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	<a href="#">WG2380403</a>
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	<a href="#">WG2380403</a>
Toluene	108-88-3	92.10	0.500	1.88	ND	ND		1	<a href="#">WG2380403</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## 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
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	<a href="#">WG2380403</a>
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	<a href="#">WG2380403</a>
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	<a href="#">WG2380403</a>
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	<a href="#">WG2380403</a>
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	<a href="#">WG2380403</a>
Vinyl acetate	108-05-4	86.10	0.630	2.22	ND	ND		1	<a href="#">WG2380403</a>
m&p-Xylene	179601-23-1	106	0.400	1.73	ND	ND		1	<a href="#">WG2380403</a>
o-Xylene	95-47-6	106	0.200	0.867	ND	ND		1	<a href="#">WG2380403</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	<a href="#">WG2380403</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		93.5				<a href="#">WG2380403</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		92.8				<a href="#">WG2381012</a>

## Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	0.672		1	<a href="#">WG2379949</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	6.01	14.3		1	<a href="#">WG2380403</a>
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	<a href="#">WG2380403</a>
Benzene	71-43-2	78.10	0.200	0.639	0.255	0.815		1	<a href="#">WG2380403</a>
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	<a href="#">WG2380403</a>
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	<a href="#">WG2380403</a>
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	<a href="#">WG2380403</a>
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	<a href="#">WG2380403</a>
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	<a href="#">WG2380403</a>
Carbon disulfide	75-15-0	76.10	0.400	1.24	5.92	18.4		1	<a href="#">WG2380403</a>
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	<a href="#">WG2380403</a>
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	<a href="#">WG2380403</a>
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	<a href="#">WG2380403</a>
Chloroform	67-66-3	119	0.200	0.973	1.46	7.11		1	<a href="#">WG2380403</a>
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	<a href="#">WG2380403</a>
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	<a href="#">WG2380403</a>
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	<a href="#">WG2380403</a>
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	<a href="#">WG2380403</a>
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	<a href="#">WG2380403</a>
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	<a href="#">WG2380403</a>
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	<a href="#">WG2380403</a>
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	<a href="#">WG2380403</a>
1,4-Dioxane	123-91-1	88.10	0.630	2.27	ND	ND		1	<a href="#">WG2380403</a>
Ethanol	64-17-5	46.10	2.50	4.71	4.01	7.56	B	1	<a href="#">WG2380403</a>
Ethylbenzene	100-41-4	106	0.200	0.867	0.334	1.45		1	<a href="#">WG2380403</a>
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	ND	ND		1	<a href="#">WG2380403</a>
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.541	2.68		1	<a href="#">WG2380403</a>
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	<a href="#">WG2380403</a>
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	<a href="#">WG2380403</a>
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	<a href="#">WG2380403</a>
n-Hexane	110-54-3	86.20	0.630	2.22	ND	ND		1	<a href="#">WG2380403</a>
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	<a href="#">WG2380403</a>
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	<a href="#">WG2380403</a>
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	<a href="#">WG2380403</a>
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	<a href="#">WG2380403</a>
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	<a href="#">WG2380403</a>
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	<a href="#">WG2380403</a>
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	<a href="#">WG2380403</a>
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	<a href="#">WG2380403</a>
2-Propanol	67-63-0	60.10	1.25	3.07	2.88	7.08		1	<a href="#">WG2380403</a>
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	<a href="#">WG2380403</a>
n-Propylbenzene	103-65-1	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
Styrene	100-42-5	104	0.400	1.70	ND	ND		1	<a href="#">WG2380403</a>
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	<a href="#">WG2380403</a>
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	<a href="#">WG2380403</a>
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	<a href="#">WG2380403</a>
Toluene	108-88-3	92.10	0.500	1.88	ND	ND		1	<a href="#">WG2380403</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## 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
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	<a href="#">WG2380403</a>
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	<a href="#">WG2380403</a>
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	<a href="#">WG2380403</a>
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	<a href="#">WG2380403</a>
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	<a href="#">WG2380403</a>
Vinyl acetate	108-05-4	86.10	0.630	2.22	ND	ND		1	<a href="#">WG2380403</a>
m&p-Xylene	179601-23-1	106	0.400	1.73	0.499	2.16		1	<a href="#">WG2380403</a>
o-Xylene	95-47-6	106	0.200	0.867	0.324	1.40		1	<a href="#">WG2380403</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	<a href="#">WG2380403</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		93.6				<a href="#">WG2380403</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

## Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	0.126		1	<a href="#">WG2379949</a>

8 Al

9 Sc

## 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	8.25	19.6		1	<a href="#">WG2380403</a>
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	<a href="#">WG2380403</a>
Benzene	71-43-2	78.10	0.200	0.639	2.32	7.41		1	<a href="#">WG2380403</a>
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	<a href="#">WG2380403</a>
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	<a href="#">WG2380403</a>
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	<a href="#">WG2380403</a>
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	<a href="#">WG2380403</a>
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	<a href="#">WG2380403</a>
Carbon disulfide	75-15-0	76.10	0.400	1.24	18.8	58.5		1	<a href="#">WG2380403</a>
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	<a href="#">WG2380403</a>
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	<a href="#">WG2380403</a>
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	<a href="#">WG2380403</a>
Chloroform	67-66-3	119	0.200	0.973	5.40	26.3		1	<a href="#">WG2380403</a>
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	<a href="#">WG2380403</a>
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	<a href="#">WG2380403</a>
Cyclohexane	110-82-7	84.20	0.200	0.689	0.690	2.38		1	<a href="#">WG2380403</a>
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	<a href="#">WG2380403</a>
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	<a href="#">WG2380403</a>
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	<a href="#">WG2380403</a>
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	<a href="#">WG2380403</a>
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	<a href="#">WG2380403</a>
1,4-Dioxane	123-91-1	88.10	0.630	2.27	ND	ND		1	<a href="#">WG2380403</a>
Ethanol	64-17-5	46.10	2.50	4.71	3.24	6.11	B	1	<a href="#">WG2380403</a>
Ethylbenzene	100-41-4	106	0.200	0.867	0.277	1.20		1	<a href="#">WG2380403</a>
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.257	1.44		1	<a href="#">WG2380403</a>
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.508	2.51		1	<a href="#">WG2380403</a>
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	<a href="#">WG2380403</a>
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	<a href="#">WG2380403</a>
Heptane	142-82-5	100	0.200	0.818	0.233	0.953		1	<a href="#">WG2380403</a>
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	<a href="#">WG2380403</a>
n-Hexane	110-54-3	86.20	0.630	2.22	2.52	8.88		1	<a href="#">WG2380403</a>
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	<a href="#">WG2380403</a>
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	<a href="#">WG2380403</a>
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	<a href="#">WG2380403</a>
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	<a href="#">WG2380403</a>
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	<a href="#">WG2380403</a>
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	<a href="#">WG2380403</a>
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	<a href="#">WG2380403</a>
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	<a href="#">WG2380403</a>
2-Propanol	67-63-0	60.10	1.25	3.07	1.42	3.49		1	<a href="#">WG2380403</a>
Propene	115-07-1	42.10	1.25	2.15	47.0	80.9		1	<a href="#">WG2380403</a>
n-Propylbenzene	103-65-1	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
Styrene	100-42-5	104	0.400	1.70	ND	ND		1	<a href="#">WG2380403</a>
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	<a href="#">WG2380403</a>
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	<a href="#">WG2380403</a>
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	<a href="#">WG2380403</a>
Toluene	108-88-3	92.10	0.500	1.88	1.17	4.41		1	<a href="#">WG2380403</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

## 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
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	<a href="#">WG2380403</a>
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	<a href="#">WG2380403</a>
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	<a href="#">WG2380403</a>
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	<a href="#">WG2380403</a>
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	<a href="#">WG2380403</a>
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	<a href="#">WG2380403</a>
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	<a href="#">WG2380403</a>
Vinyl acetate	108-05-4	86.10	0.630	2.22	ND	ND		1	<a href="#">WG2380403</a>
m&p-Xylene	179601-23-1	106	0.400	1.73	ND	ND		1	<a href="#">WG2380403</a>
o-Xylene	95-47-6	106	0.200	0.867	0.325	1.41		1	<a href="#">WG2380403</a>
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	<a href="#">WG2380403</a>
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		94.7				<a href="#">WG2380403</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

## Organic Compounds (GC) by Method ASTM 1946

Analyte	CAS #	Mol. Wt.	RDL %	Result %	Qualifier	Dilution	Batch
Helium	7440-59-7		0.100	0.371		1	<a href="#">WG2379949</a>

8 Al

9 Sc

Method Blank (MB)

(MB) R4131873-3 10/11/24 09:59

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	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	0.400
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	0.630
Ethanol	0.420	U	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

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R4131873-3 10/11/24 09:59

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	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	U		0.0932	1.25
n-Propylbenzene	U		0.0773	0.200
Styrene	U		0.0788	0.400
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	0.630
m&p-Xylene	U		0.135	0.400
o-Xylene	U		0.0828	0.200
TPH (GC/MS) Low Fraction	U		39.7	200
(S) 1,4-Bromofluorobenzene	92.2			60.0-140

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R4131873-1 10/11/24 09:02 • (LCSD) R4131873-2 10/11/24 09:31

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppbv	ppbv	ppbv	%	%	%			%	%
Acetone	3.75	4.53	4.58	121	122	70.0-130			1.10	25
Allyl chloride	3.75	4.56	4.63	122	123	70.0-130			1.52	25
Benzene	3.75	4.17	4.19	111	112	70.0-130			0.478	25

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

(LCS) R4131873-1 10/11/24 09:02 • (LCSD) R4131873-2 10/11/24 09:31

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzyl Chloride	3.75	3.52	3.43	93.9	91.5	70.0-152			2.59	25
Bromodichloromethane	3.75	4.14	4.11	110	110	70.0-130			0.727	25
Bromoform	3.75	3.68	3.55	98.1	94.7	70.0-130			3.60	25
Bromomethane	3.75	4.35	4.47	116	119	70.0-130			2.72	25
1,3-Butadiene	3.75	4.45	4.51	119	120	70.0-130			1.34	25
Carbon disulfide	7.50	8.86	8.82	118	118	70.0-130			0.452	25
Carbon tetrachloride	3.75	4.04	4.01	108	107	70.0-130			0.745	25
Chlorobenzene	3.75	4.13	4.10	110	109	70.0-130			0.729	25
Chloroethane	3.75	4.60	4.65	123	124	70.0-130			1.08	25
Chloroform	3.75	4.21	4.19	112	112	70.0-130			0.476	25
Chloromethane	3.75	4.77	4.83	127	129	70.0-130			1.25	25
2-Chlorotoluene	3.75	4.20	4.08	112	109	70.0-130			2.90	25
Cyclohexane	3.75	4.07	4.10	109	109	70.0-130			0.734	25
Dibromochloromethane	3.75	3.98	3.91	106	104	70.0-130			1.77	25
1,2-Dibromoethane	3.75	4.24	4.18	113	111	70.0-130			1.43	25
1,2-Dichlorobenzene	3.75	4.21	4.18	112	111	70.0-130			0.715	25
1,3-Dichlorobenzene	3.75	4.16	4.09	111	109	70.0-130			1.70	25
1,4-Dichlorobenzene	3.75	4.17	4.14	111	110	70.0-130			0.722	25
1,2-Dichloroethane	3.75	4.25	4.18	113	111	70.0-130			1.66	25
1,1-Dichloroethane	3.75	4.26	4.24	114	113	70.0-130			0.471	25
1,1-Dichloroethene	3.75	4.41	4.46	118	119	70.0-130			1.13	25
cis-1,2-Dichloroethene	3.75	4.15	4.20	111	112	70.0-130			1.20	25
trans-1,2-Dichloroethene	3.75	4.29	4.27	114	114	70.0-130			0.467	25
1,2-Dichloropropane	3.75	4.41	4.38	118	117	70.0-130			0.683	25
cis-1,3-Dichloropropene	3.75	4.06	4.03	108	107	70.0-130			0.742	25
trans-1,3-Dichloropropene	3.75	4.00	3.88	107	103	70.0-130			3.05	25
1,4-Dioxane	3.75	3.89	4.03	104	107	70.0-140			3.54	25
Ethanol	3.75	4.37	4.23	117	113	55.0-148			3.26	25
Ethylbenzene	3.75	4.12	4.05	110	108	70.0-130			1.71	25
4-Ethyltoluene	3.75	4.19	4.12	112	110	70.0-130			1.68	25
Trichlorofluoromethane	3.75	4.18	4.25	111	113	70.0-130			1.66	25
Dichlorodifluoromethane	3.75	4.38	4.39	117	117	64.0-139			0.228	25
1,1,2-Trichlorotrifluoroethane	3.75	4.31	4.42	115	118	70.0-130			2.52	25
1,2-Dichlorotetrafluoroethane	3.75	4.41	4.49	118	120	70.0-130			1.80	25
Heptane	3.75	4.19	4.17	112	111	70.0-130			0.478	25
Hexachloro-1,3-butadiene	3.75	3.90	3.81	104	102	70.0-151			2.33	25
n-Hexane	3.75	4.14	4.08	110	109	70.0-130			1.46	25
Isopropylbenzene	3.75	4.19	4.08	112	109	70.0-130			2.66	25
Methylene Chloride	3.75	4.50	4.51	120	120	70.0-130			0.222	25
Methyl Butyl Ketone	3.75	4.20	4.22	112	113	70.0-149			0.475	25

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

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

(LCS) R4131873-1 10/11/24 09:02 • (LCSD) R4131873-2 10/11/24 09:31

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
2-Butanone (MEK)	3.75	4.02	4.26	107	114	70.0-130			5.80	25
4-Methyl-2-pentanone (MIBK)	3.75	4.56	4.45	122	119	70.0-139			2.44	25
Methyl methacrylate	3.75	4.23	4.19	113	112	70.0-130			0.950	25
MTBE	3.75	3.92	3.96	105	106	70.0-130			1.02	25
Naphthalene	3.75	3.92	3.86	105	103	70.0-159			1.54	25
2-Propanol	3.75	4.50	4.40	120	117	70.0-139			2.25	25
Propene	3.75	4.10	4.10	109	109	64.0-144			0.000	25
n-Propylbenzene	3.75	4.29	4.25	114	113	70.0-130			0.937	25
Styrene	7.50	8.56	8.42	114	112	70.0-130			1.65	25
1,1,2,2-Tetrachloroethane	3.75	4.53	4.48	121	119	70.0-130			1.11	25
Tetrachloroethylene	3.75	4.04	4.00	108	107	70.0-130			0.995	25
Tetrahydrofuran	3.75	4.15	4.19	111	112	70.0-137			0.959	25
Toluene	3.75	4.08	4.10	109	109	70.0-130			0.489	25
1,2,4-Trichlorobenzene	3.75	3.66	3.59	97.6	95.7	70.0-160			1.93	25
1,1,1-Trichloroethane	3.75	3.96	4.07	106	109	70.0-130			2.74	25
1,1,2-Trichloroethane	3.75	4.32	4.26	115	114	70.0-130			1.40	25
Trichloroethylene	3.75	4.12	4.09	110	109	70.0-130			0.731	25
1,2,4-Trimethylbenzene	3.75	4.12	4.11	110	110	70.0-130			0.243	25
1,3,5-Trimethylbenzene	3.75	4.09	4.03	109	107	70.0-130			1.48	25
2,2,4-Trimethylpentane	3.75	3.12	3.16	83.2	84.3	70.0-130			1.27	25
Vinyl chloride	3.75	4.62	4.64	123	124	70.0-130			0.432	25
Vinyl Bromide	3.75	4.29	4.30	114	115	70.0-130			0.233	25
Vinyl acetate	3.75	4.29	4.20	114	112	70.0-130			2.12	25
m&p-Xylene	7.50	8.08	8.01	108	107	70.0-130			0.870	25
o-Xylene	3.75	4.23	4.20	113	112	70.0-130			0.712	25
TPH (GC/MS) Low Fraction	188	189	190	101	101	70.0-130			0.528	25
(S) 1,4-Bromofluorobenzene				97.6	96.1	60.0-140				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R4132289-3 10/12/24 09:17

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
Propene	U		0.0932	1.25
<i>(S) 1,4-Bromofluorobenzene</i>	94.9			60.0-140

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

(LCS) R4132289-1 10/12/24 07:41 • (LCSD) R4132289-2 10/12/24 08:31

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppbv	ppbv	ppbv	%	%	%			%	%
Propene	3.75	3.93	3.90	105	104	64.0-144			0.766	25
<i>(S) 1,4-Bromofluorobenzene</i>				95.4	93.9	60.0-140				

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

Method Blank (MB)

(MB) R4131267-3 10/10/24 18:30

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) R4131267-1 10/10/24 17:36 • (LCSD) R4131267-2 10/10/24 18:25

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Helium	2.50	2.42	2.27	96.8	90.8	70.0-130			6.40	25

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

# GLOSSARY OF TERMS

## Guide to Reading and Understanding Your Laboratory Report

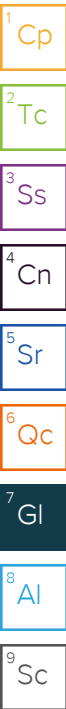
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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
B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.



# ACCREDITATIONS & LOCATIONS

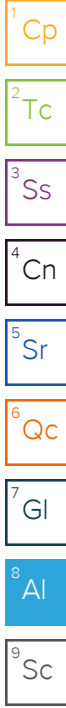
## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.



State of Oregon Chain of Custody

<b>Agency, Authorized Purchaser or Agent:</b> Oregon DEQ	<b>Contract Laboratory Name:</b> ESC	<b>Lab Selection Criteria:</b> <input type="checkbox"/> Proximity (if TAT < 48 hrs) <input type="checkbox"/> Prior work on same project <input checked="" type="checkbox"/> Cost (for anticipated analyses) <input type="checkbox"/> Other labs disqualified or unable to perform requested services <input type="checkbox"/> Emergency work	<b>Turn Around Time:</b> <input checked="" type="checkbox"/> 10 days (std.) <input type="checkbox"/> 5 days <input type="checkbox"/> 72 hours <input type="checkbox"/> 48 hours <input type="checkbox"/> 24 hours <input type="checkbox"/> Other
<b>Send Lab Report To:</b> Sarah Kingery Address: 165 E 7 <sup>th</sup> Avenue, Suite 100 Eugene, OR 97401 Tel. #: 541-321-3687 E-mail: sarah.kingery@deq.oregon.gov	<b>Lab Batch #:</b> <b>Invoice To:</b> ODEQ/Business Office Address: 700 NE Multnomah St, Suite 600 Portland, OR 97232 Tel. #: 503-229-5696		

Project Name: Allen Street Study Area

Sampler Name: Connor Anderson

Sample ID#	Canister #	Flow Cont. #	Collection		Canister Pressure/Vacuum		VOCs by TO-15	Helium by ASTM 1946	Comments
			Date	Time	Initial	Final			
SVW-01S	028149	022647	10/7/24	11:31	-28	-5	X	X	L1787364-01
SVW-01D	023442	021093	10/7/24	11:46	-28	-5	X	X	02
SVW-02S	021923	020341	10/7/24	10:20	-28	-5	X	X	03
SVW-02D	015134	010367	10/7/24	10:49	-28	-5	X	X	04
SVW-05S	023183	012063	10/7/24	14:27	-28	-5	X	X	05
SVW-05D	014962	009440	10/7/24	14:44	-28	-5	X	X	06
SVW-06S	013782	022653	10/7/24	15:09	-28	-5	X	X	07
SVW-07S	015778	010164	10/7/24	13:20	-28	-5	X	X	08
SVW-08S	015214	022676	10/7/24	12:56	-28	-4	X	X	09
SVW-09S	008518	009072	10/8/24	14:37	-28	-5	X	X	10

Please email results to: ddomenighini@maulfoster.com and sarah.kingery@deq.oregon.gov

Relinquished By: Connor Anderson	Agency/Agent: MFA	Received By:	Agency/Agent:
Signature: <i>[Signature]</i>	Time & Date: 10/8/24, 17:15	Signature:	Time & Date:
Relinquished By:	Agency/Agent:	Received By:	Agency/Agent:
Signature:	Time & Date:	Signature: <i>[Signature]</i>	Time & Date: 10/10/24 0900

THIS PACKAGE IS SUBMITTED TO THE STATE OF OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY FOR ANALYSIS UNDER THE CHAIN OF CUSTODY PROCEDURES. THIS PACKAGE IS THE PROPERTY OF THE STATE OF OREGON AND WILL BE RETURNED TO YOU UPON REQUEST.

Sample Receipt Checklist

COC Seal Present/Intact:  Y  N  
 COC Signed/Accurate:  Y  N Size:  1L  6L  1.4L  
 Bottles arrive intact:  Y  N Tag Color: G  W  P  B  
 Correct bottles used:  Y  N Tubing  Shunt

Unused: 3 T/P#: P110Y100

#102-1098-07 AND PRICE AGREEMENT # 8903. THE PRICE AGREEMENT INCLUDING CONTRACT TERMS CONTAINED IN THE PRICE AGREEMENT ARE HEREBY INCORPORATED BY REFERENCE AND SHALL APPLY TO ALL T'S AND C'S, EXPRESS OR IMPLIED.

State of Oregon Chain of Custody

<b>Agency, Authorized Purchaser or Agent:</b> Oregon DEQ	<b>Contract Laboratory Name:</b> ESC	<b>Lab Selection Criteria:</b> <input type="checkbox"/> Proximity (if TAT < 48 hrs) <input type="checkbox"/> Prior work on same project <input checked="" type="checkbox"/> Cost (for anticipated analyses) <input type="checkbox"/> Other labs disqualified or unable to perform requested services <input type="checkbox"/> Emergency work	<b>Turn Around Time:</b> <input checked="" type="checkbox"/> 10 days (std.) <input type="checkbox"/> 5 days <input type="checkbox"/> 72 hours <input type="checkbox"/> 48 hours <input type="checkbox"/> 24 hours <input type="checkbox"/> Other
<b>Send Lab Report To:</b> Sarah Kingery Address: 165 E 7 <sup>th</sup> Avenue, Suite 100 Eugene, OR 97401 Tel. #: 541-321-3687 E-mail: <a href="mailto:sarah.kingery@deq.oregon.gov">sarah.kingery@deq.oregon.gov</a>	<b>Lab Batch #:</b> <b>Invoice To:</b> ODEQ/Business Office Address: 700 NE Multnomah St, Suite 600 Portland, OR 97232 Tel. #: 503-229-5696		

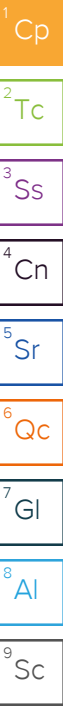
<b>Project Name:</b> Allen Street Study Area	<b>Sample Preservative</b>	
Sampler Name: <i>Connor Anderson</i>		

Sample ID#	Canister #	Flow Cont. #	Collection		Canister Pressure/Vacuum		VOCs by TO-15	Helium by ASTM 1946	Comments
			Date	Time	Initial	Final			
SVW-09D	023259	020007	10/8/24	14:52	-28	-5	X	X	L 17 87364-11
SVW-10S	023844	024996	10/8/24	13:55	-28	-5	X	X	12
SVW-10D	022867	005672	10/8/24	13:30	-28	-4	X	X	13
SVW-11S	013139	011920	10/8/24	10:31	-28	-5	X	X	14
SVW-11D	022940	007842	10/8/24	11:01	-28	-5	X	X	15
SVW-12S	028409	022649	10/8/24	11:36	-28	-5	X	X	16
SVW-12D	022196	022674	10/8/24	12:12	-28	-5	X	X	17

Please email results to: [dmenighini@maulfoster.com](mailto:dmenighini@maulfoster.com) and [sarah.kingery@deq.oregon.gov](mailto:sarah.kingery@deq.oregon.gov)

Relinquished By: <i>Connor Anderson</i>	Agency/Agent: <i>MFA</i>	Received By:	Agency/Agent:
Signature: <i>[Signature]</i>	Time & Date: <i>10/8/24, 17:15</i>	Signature:	Time & Date:
Relinquished By:	Agency/Agent:	Received By:	Agency/Agent:
Signature:	Time & Date:	Signature: <i>[Signature]</i>	Time & Date: <i>10/10/24 0900</i>

THIS PURCHASE IS SUBMITTED PURSUANT TO STATE OF OREGON SOLICITATION #102-1098-07 AND PRICE AGREEMENT # 8903. THE PRICE AGREEMENT INCLUDING CONTRACT TERMS AND CONDITIONS AND SPECIAL CONTRACT TERMS AND CONDITIONS (T'S & C'S) CONTAINED IN THE PRICE AGREEMENT ARE HEREBY INCORPORATED BY REFERENCE AND SHALL APPLY TO THIS PURCHASE AND SHALL TAKE PRECEDENCE OVER ALL OTHER CONFLICTING T'S AND C'S, EXPRESS OR IMPLIED.



## Oregon Dept. of Env. Quality - ODEQ

Sample Delivery Group: L1788181  
Samples Received: 10/11/2024  
Project Number:  
Description: Allen Street Study Area

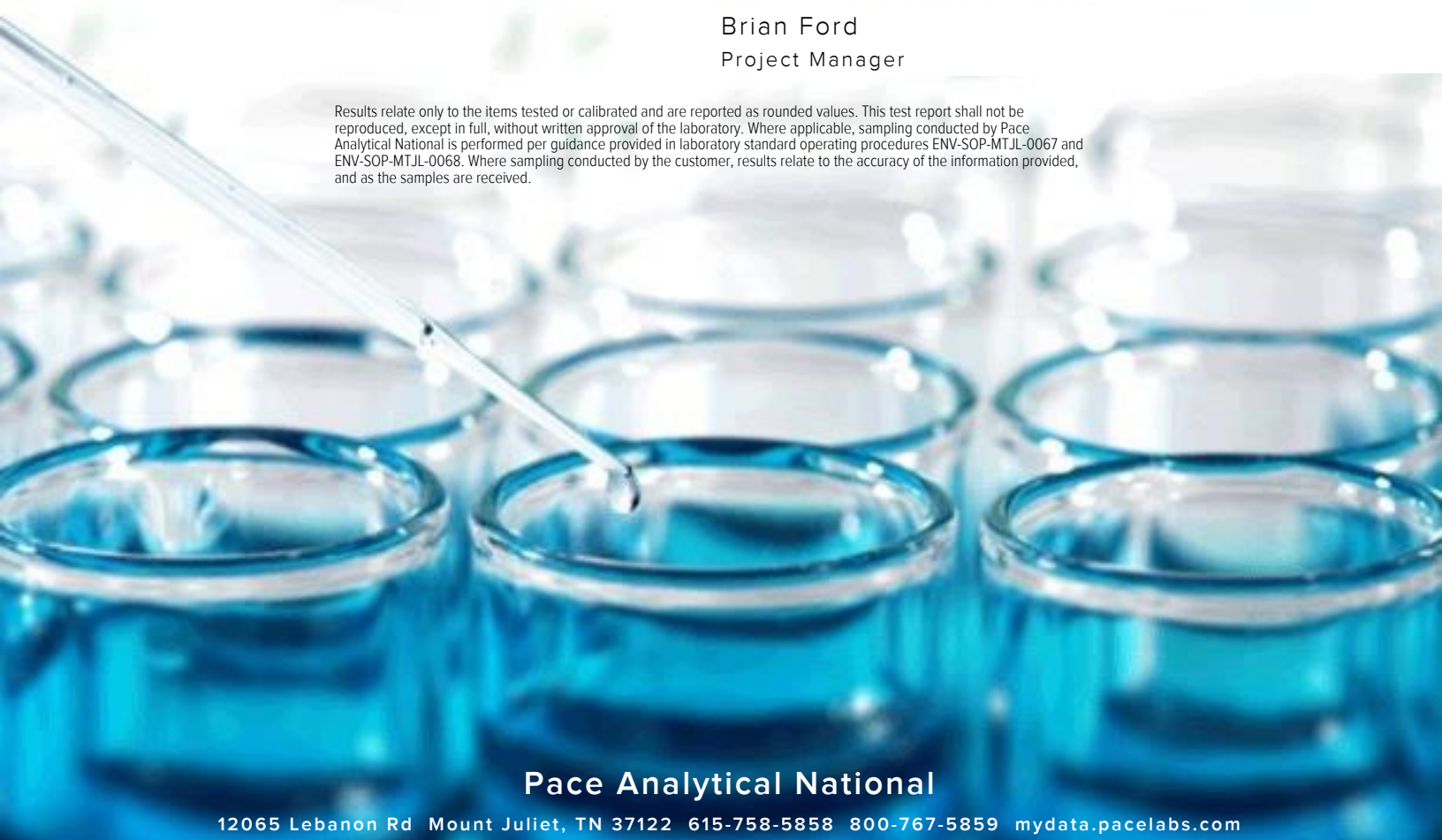
Report To: Sarah KINGERY  
165 E 7th Ave.  
Suite 100  
Eugene, OR 97401

Entire Report Reviewed By:



Brian Ford  
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 mydata.pacelabs.com

# TABLE OF CONTENTS

<b>Cp: Cover Page</b>	<b>1</b>	<b>1</b> Cp
<b>Tc: Table of Contents</b>	<b>2</b>	
<b>Ss: Sample Summary</b>	<b>3</b>	<b>2</b> Tc
<b>Cn: Case Narrative</b>	<b>4</b>	
<b>Sr: Sample Results</b>	<b>5</b>	<b>3</b> Ss
<b>MW-03 L1788181-01</b>	<b>5</b>	
<b>MW-06 L1788181-02</b>	<b>7</b>	<b>4</b> Cn
<b>MW-06-DUP L1788181-03</b>	<b>9</b>	<b>5</b> Sr
<b>TRIP BLANK L1788181-04</b>	<b>11</b>	
<b>Qc: Quality Control Summary</b>	<b>13</b>	<b>6</b> Qc
<b>Volatile Organic Compounds (GC/MS) by Method 8260D</b>	<b>13</b>	
<b>Gl: Glossary of Terms</b>	<b>17</b>	<b>7</b> Gl
<b>Al: Accreditations &amp; Locations</b>	<b>18</b>	<b>8</b> Al
<b>Sc: Sample Chain of Custody</b>	<b>19</b>	<b>9</b> Sc

# SAMPLE SUMMARY

## MW-03 L1788181-01 GW

Collected by Connor Anderson    Collected date/time 10/09/24 16:06    Received date/time 10/11/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2386860	1	10/22/24 11:53	10/22/24 11:53	JAH	Mt. Juliet, TN

1 Cp

2 Tc

## MW-06 L1788181-02 GW

Collected by Connor Anderson    Collected date/time 10/09/24 12:48    Received date/time 10/11/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2386860	1	10/22/24 12:14	10/22/24 12:14	JAH	Mt. Juliet, TN

3 Ss

4 Cn

5 Sr

## MW-06-DUP L1788181-03 GW

Collected by Connor Anderson    Collected date/time 10/09/24 12:48    Received date/time 10/11/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2386860	1	10/22/24 12:35	10/22/24 12:35	JAH	Mt. Juliet, TN

6 Qc

7 Gl

8 Al

## TRIP BLANK L1788181-04 GW

Collected by Connor Anderson    Collected date/time 10/09/24 00:00    Received date/time 10/11/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2386860	1	10/22/24 10:28	10/22/24 10:28	JAH	Mt. Juliet, TN

9 Sc

# CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford  
Project Manager

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

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	10/22/2024 11:53	WG2386860
Acrolein	U		2.54	50.0	1	10/22/2024 11:53	WG2386860
Acrylonitrile	U		0.671	10.0	1	10/22/2024 11:53	WG2386860
Benzene	U		0.0941	1.00	1	10/22/2024 11:53	WG2386860
Bromobenzene	U		0.118	1.00	1	10/22/2024 11:53	WG2386860
Bromodichloromethane	U		0.136	1.00	1	10/22/2024 11:53	WG2386860
Bromoform	U		0.129	1.00	1	10/22/2024 11:53	WG2386860
Bromomethane	U	C3	0.605	5.00	1	10/22/2024 11:53	WG2386860
n-Butylbenzene	U		0.157	1.00	1	10/22/2024 11:53	WG2386860
sec-Butylbenzene	U		0.125	1.00	1	10/22/2024 11:53	WG2386860
tert-Butylbenzene	U		0.127	1.00	1	10/22/2024 11:53	WG2386860
Carbon disulfide	U		0.0962	1.00	1	10/22/2024 11:53	WG2386860
Carbon tetrachloride	U		0.128	1.00	1	10/22/2024 11:53	WG2386860
Chlorobenzene	U		0.116	1.00	1	10/22/2024 11:53	WG2386860
Chlorodibromomethane	U		0.140	1.00	1	10/22/2024 11:53	WG2386860
Chloroethane	U		0.192	5.00	1	10/22/2024 11:53	WG2386860
Chloroform	U		0.111	5.00	1	10/22/2024 11:53	WG2386860
Chloromethane	U	C3	0.960	2.50	1	10/22/2024 11:53	WG2386860
2-Chlorotoluene	U		0.106	1.00	1	10/22/2024 11:53	WG2386860
4-Chlorotoluene	U		0.114	1.00	1	10/22/2024 11:53	WG2386860
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	10/22/2024 11:53	WG2386860
1,2-Dibromoethane	U		0.126	1.00	1	10/22/2024 11:53	WG2386860
Dibromomethane	U		0.122	1.00	1	10/22/2024 11:53	WG2386860
1,2-Dichlorobenzene	U		0.107	1.00	1	10/22/2024 11:53	WG2386860
1,3-Dichlorobenzene	U		0.110	1.00	1	10/22/2024 11:53	WG2386860
1,4-Dichlorobenzene	U		0.120	1.00	1	10/22/2024 11:53	WG2386860
Dichlorodifluoromethane	U		0.374	5.00	1	10/22/2024 11:53	WG2386860
1,1-Dichloroethane	U		0.100	1.00	1	10/22/2024 11:53	WG2386860
1,2-Dichloroethane	U		0.0819	1.00	1	10/22/2024 11:53	WG2386860
1,1-Dichloroethene	U		0.188	1.00	1	10/22/2024 11:53	WG2386860
cis-1,2-Dichloroethene	3.87		0.126	1.00	1	10/22/2024 11:53	WG2386860
trans-1,2-Dichloroethene	3.73		0.149	1.00	1	10/22/2024 11:53	WG2386860
1,2-Dichloropropane	U		0.149	1.00	1	10/22/2024 11:53	WG2386860
1,1-Dichloropropene	U		0.142	1.00	1	10/22/2024 11:53	WG2386860
1,3-Dichloropropane	U		0.110	1.00	1	10/22/2024 11:53	WG2386860
cis-1,3-Dichloropropene	U		0.111	1.00	1	10/22/2024 11:53	WG2386860
trans-1,3-Dichloropropene	U		0.118	1.00	1	10/22/2024 11:53	WG2386860
2,2-Dichloropropane	U		0.161	1.00	1	10/22/2024 11:53	WG2386860
Di-isopropyl ether	U		0.105	1.00	1	10/22/2024 11:53	WG2386860
Ethylbenzene	U		0.137	1.00	1	10/22/2024 11:53	WG2386860
Hexachloro-1,3-butadiene	U		0.337	1.00	1	10/22/2024 11:53	WG2386860
Isopropylbenzene	U		0.105	1.00	1	10/22/2024 11:53	WG2386860
p-Isopropyltoluene	U		0.120	1.00	1	10/22/2024 11:53	WG2386860
2-Butanone (MEK)	U		1.19	10.0	1	10/22/2024 11:53	WG2386860
Methylene Chloride	U		0.430	5.00	1	10/22/2024 11:53	WG2386860
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	10/22/2024 11:53	WG2386860
Methyl tert-butyl ether	U		0.101	1.00	1	10/22/2024 11:53	WG2386860
Naphthalene	U		1.00	5.00	1	10/22/2024 11:53	WG2386860
n-Propylbenzene	U		0.0993	1.00	1	10/22/2024 11:53	WG2386860
Styrene	U		0.118	1.00	1	10/22/2024 11:53	WG2386860
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	10/22/2024 11:53	WG2386860
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	10/22/2024 11:53	WG2386860
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	10/22/2024 11:53	WG2386860
Tetrachloroethene	U		0.300	1.00	1	10/22/2024 11:53	WG2386860
Toluene	U		0.278	1.00	1	10/22/2024 11:53	WG2386860
1,2,3-Trichlorobenzene	U		0.230	1.00	1	10/22/2024 11:53	WG2386860

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

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	U		0.481	1.00	1	10/22/2024 11:53	<a href="#">WG2386860</a>
1,1,1-Trichloroethane	U		0.149	1.00	1	10/22/2024 11:53	<a href="#">WG2386860</a>
1,1,2-Trichloroethane	U		0.158	1.00	1	10/22/2024 11:53	<a href="#">WG2386860</a>
Trichloroethene	5.76		0.190	1.00	1	10/22/2024 11:53	<a href="#">WG2386860</a>
Trichlorofluoromethane	U		0.160	5.00	1	10/22/2024 11:53	<a href="#">WG2386860</a>
1,2,3-Trichloropropane	U		0.237	2.50	1	10/22/2024 11:53	<a href="#">WG2386860</a>
1,2,4-Trimethylbenzene	U		0.322	1.00	1	10/22/2024 11:53	<a href="#">WG2386860</a>
1,2,3-Trimethylbenzene	U		0.104	1.00	1	10/22/2024 11:53	<a href="#">WG2386860</a>
1,3,5-Trimethylbenzene	U		0.104	1.00	1	10/22/2024 11:53	<a href="#">WG2386860</a>
Vinyl chloride	U		0.234	1.00	1	10/22/2024 11:53	<a href="#">WG2386860</a>
Xylenes, Total	U		0.174	3.00	1	10/22/2024 11:53	<a href="#">WG2386860</a>
(S) Toluene-d8	109			80.0-120		10/22/2024 11:53	<a href="#">WG2386860</a>
(S) 4-Bromofluorobenzene	105			77.0-126		10/22/2024 11:53	<a href="#">WG2386860</a>
(S) 1,2-Dichloroethane-d4	106			70.0-130		10/22/2024 11:53	<a href="#">WG2386860</a>

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

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Acrolein	U		2.54	50.0	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Acrylonitrile	U		0.671	10.0	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Benzene	U		0.0941	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Bromobenzene	U		0.118	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Bromodichloromethane	U		0.136	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Bromoform	U		0.129	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Bromomethane	U	<a href="#">C3</a>	0.605	5.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
n-Butylbenzene	U		0.157	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
sec-Butylbenzene	U		0.125	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
tert-Butylbenzene	U		0.127	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Carbon disulfide	U		0.0962	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Carbon tetrachloride	U		0.128	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Chlorobenzene	U		0.116	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Chlorodibromomethane	U		0.140	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Chloroethane	U		0.192	5.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Chloroform	U		0.111	5.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Chloromethane	U	<a href="#">C3</a>	0.960	2.50	1	10/22/2024 12:14	<a href="#">WG2386860</a>
2-Chlorotoluene	U		0.106	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
4-Chlorotoluene	U		0.114	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
1,2-Dibromoethane	U		0.126	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Dibromomethane	U		0.122	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
1,2-Dichlorobenzene	U		0.107	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
1,3-Dichlorobenzene	U		0.110	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
1,4-Dichlorobenzene	U		0.120	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Dichlorodifluoromethane	U		0.374	5.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
1,1-Dichloroethane	U		0.100	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
1,2-Dichloroethane	U		0.0819	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
1,1-Dichloroethene	U		0.188	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
cis-1,2-Dichloroethene	2.31		0.126	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
trans-1,2-Dichloroethene	2.11		0.149	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
1,2-Dichloropropane	U		0.149	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
1,1-Dichloropropene	U		0.142	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
1,3-Dichloropropane	U		0.110	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
cis-1,3-Dichloropropene	U		0.111	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
trans-1,3-Dichloropropene	U		0.118	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
2,2-Dichloropropane	U		0.161	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Di-isopropyl ether	U		0.105	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Ethylbenzene	U		0.137	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Hexachloro-1,3-butadiene	U		0.337	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Isopropylbenzene	U		0.105	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
p-Isopropyltoluene	U		0.120	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
2-Butanone (MEK)	U		1.19	10.0	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Methylene Chloride	U		0.430	5.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Methyl tert-butyl ether	U		0.101	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Naphthalene	U		1.00	5.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
n-Propylbenzene	U		0.0993	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Styrene	U		0.118	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Tetrachloroethene	U		0.300	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Toluene	U		0.278	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
1,2,3-Trichlorobenzene	U		0.230	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	U		0.481	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
1,1,1-Trichloroethane	U		0.149	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
1,1,2-Trichloroethane	U		0.158	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Trichloroethene	4.48		0.190	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Trichlorofluoromethane	U		0.160	5.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
1,2,3-Trichloropropane	U		0.237	2.50	1	10/22/2024 12:14	<a href="#">WG2386860</a>
1,2,4-Trimethylbenzene	U		0.322	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
1,2,3-Trimethylbenzene	U		0.104	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
1,3,5-Trimethylbenzene	U		0.104	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Vinyl chloride	U		0.234	1.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
Xylenes, Total	U		0.174	3.00	1	10/22/2024 12:14	<a href="#">WG2386860</a>
(S) Toluene-d8	107			80.0-120		10/22/2024 12:14	<a href="#">WG2386860</a>
(S) 4-Bromofluorobenzene	104			77.0-126		10/22/2024 12:14	<a href="#">WG2386860</a>
(S) 1,2-Dichloroethane-d4	106			70.0-130		10/22/2024 12:14	<a href="#">WG2386860</a>

1  
Cp

2  
Tc

3  
Ss

4  
Cn

5  
Sr

6  
Qc

7  
Gl

8  
Al

9  
Sc

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Acrolein	U		2.54	50.0	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Acrylonitrile	U		0.671	10.0	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Benzene	U		0.0941	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Bromobenzene	U		0.118	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Bromodichloromethane	U		0.136	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Bromoform	U		0.129	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Bromomethane	U	C3	0.605	5.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
n-Butylbenzene	U		0.157	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
sec-Butylbenzene	U		0.125	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
tert-Butylbenzene	U		0.127	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Carbon disulfide	U		0.0962	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Carbon tetrachloride	U		0.128	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Chlorobenzene	U		0.116	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Chlorodibromomethane	U		0.140	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Chloroethane	U		0.192	5.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Chloroform	U		0.111	5.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Chloromethane	U	C3	0.960	2.50	1	10/22/2024 12:35	<a href="#">WG2386860</a>
2-Chlorotoluene	U		0.106	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
4-Chlorotoluene	U		0.114	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
1,2-Dibromoethane	U		0.126	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Dibromomethane	U		0.122	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
1,2-Dichlorobenzene	U		0.107	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
1,3-Dichlorobenzene	U		0.110	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
1,4-Dichlorobenzene	U		0.120	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Dichlorodifluoromethane	U		0.374	5.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
1,1-Dichloroethane	U		0.100	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
1,2-Dichloroethane	U		0.0819	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
1,1-Dichloroethene	U		0.188	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
cis-1,2-Dichloroethene	2.03		0.126	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
trans-1,2-Dichloroethene	1.96		0.149	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
1,2-Dichloropropane	U		0.149	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
1,1-Dichloropropene	U		0.142	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
1,3-Dichloropropane	U		0.110	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
cis-1,3-Dichloropropene	U		0.111	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
trans-1,3-Dichloropropene	U		0.118	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
2,2-Dichloropropane	U		0.161	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Di-isopropyl ether	U		0.105	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Ethylbenzene	U		0.137	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Hexachloro-1,3-butadiene	U		0.337	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Isopropylbenzene	U		0.105	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
p-Isopropyltoluene	U		0.120	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
2-Butanone (MEK)	U		1.19	10.0	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Methylene Chloride	U		0.430	5.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Methyl tert-butyl ether	U		0.101	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Naphthalene	U		1.00	5.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
n-Propylbenzene	U		0.0993	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Styrene	U		0.118	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Tetrachloroethene	U		0.300	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Toluene	U		0.278	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
1,2,3-Trichlorobenzene	U		0.230	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	U		0.481	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
1,1,1-Trichloroethane	U		0.149	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
1,1,2-Trichloroethane	U		0.158	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Trichloroethene	4.25		0.190	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Trichlorofluoromethane	U		0.160	5.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
1,2,3-Trichloropropane	U		0.237	2.50	1	10/22/2024 12:35	<a href="#">WG2386860</a>
1,2,4-Trimethylbenzene	U		0.322	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
1,2,3-Trimethylbenzene	U		0.104	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
1,3,5-Trimethylbenzene	U		0.104	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Vinyl chloride	U		0.234	1.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
Xylenes, Total	U		0.174	3.00	1	10/22/2024 12:35	<a href="#">WG2386860</a>
(S) Toluene-d8	107			80.0-120		10/22/2024 12:35	<a href="#">WG2386860</a>
(S) 4-Bromofluorobenzene	106			77.0-126		10/22/2024 12:35	<a href="#">WG2386860</a>
(S) 1,2-Dichloroethane-d4	106			70.0-130		10/22/2024 12:35	<a href="#">WG2386860</a>

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

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	11.5	J	11.3	50.0	1	10/22/2024 10:28	WG2386860
Acrolein	U		2.54	50.0	1	10/22/2024 10:28	WG2386860
Acrylonitrile	U		0.671	10.0	1	10/22/2024 10:28	WG2386860
Benzene	U		0.0941	1.00	1	10/22/2024 10:28	WG2386860
Bromobenzene	U		0.118	1.00	1	10/22/2024 10:28	WG2386860
Bromodichloromethane	U		0.136	1.00	1	10/22/2024 10:28	WG2386860
Bromoform	U		0.129	1.00	1	10/22/2024 10:28	WG2386860
Bromomethane	U	C3	0.605	5.00	1	10/22/2024 10:28	WG2386860
n-Butylbenzene	U		0.157	1.00	1	10/22/2024 10:28	WG2386860
sec-Butylbenzene	U		0.125	1.00	1	10/22/2024 10:28	WG2386860
tert-Butylbenzene	U		0.127	1.00	1	10/22/2024 10:28	WG2386860
Carbon disulfide	U		0.0962	1.00	1	10/22/2024 10:28	WG2386860
Carbon tetrachloride	U		0.128	1.00	1	10/22/2024 10:28	WG2386860
Chlorobenzene	U		0.116	1.00	1	10/22/2024 10:28	WG2386860
Chlorodibromomethane	U		0.140	1.00	1	10/22/2024 10:28	WG2386860
Chloroethane	U		0.192	5.00	1	10/22/2024 10:28	WG2386860
Chloroform	U		0.111	5.00	1	10/22/2024 10:28	WG2386860
Chloromethane	U	C3	0.960	2.50	1	10/22/2024 10:28	WG2386860
2-Chlorotoluene	U		0.106	1.00	1	10/22/2024 10:28	WG2386860
4-Chlorotoluene	U		0.114	1.00	1	10/22/2024 10:28	WG2386860
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	10/22/2024 10:28	WG2386860
1,2-Dibromoethane	U		0.126	1.00	1	10/22/2024 10:28	WG2386860
Dibromomethane	U		0.122	1.00	1	10/22/2024 10:28	WG2386860
1,2-Dichlorobenzene	U		0.107	1.00	1	10/22/2024 10:28	WG2386860
1,3-Dichlorobenzene	U		0.110	1.00	1	10/22/2024 10:28	WG2386860
1,4-Dichlorobenzene	U		0.120	1.00	1	10/22/2024 10:28	WG2386860
Dichlorodifluoromethane	U		0.374	5.00	1	10/22/2024 10:28	WG2386860
1,1-Dichloroethane	U		0.100	1.00	1	10/22/2024 10:28	WG2386860
1,2-Dichloroethane	U		0.0819	1.00	1	10/22/2024 10:28	WG2386860
1,1-Dichloroethene	U		0.188	1.00	1	10/22/2024 10:28	WG2386860
cis-1,2-Dichloroethene	U		0.126	1.00	1	10/22/2024 10:28	WG2386860
trans-1,2-Dichloroethene	U		0.149	1.00	1	10/22/2024 10:28	WG2386860
1,2-Dichloropropane	U		0.149	1.00	1	10/22/2024 10:28	WG2386860
1,1-Dichloropropene	U		0.142	1.00	1	10/22/2024 10:28	WG2386860
1,3-Dichloropropane	U		0.110	1.00	1	10/22/2024 10:28	WG2386860
cis-1,3-Dichloropropene	U		0.111	1.00	1	10/22/2024 10:28	WG2386860
trans-1,3-Dichloropropene	U		0.118	1.00	1	10/22/2024 10:28	WG2386860
2,2-Dichloropropane	U		0.161	1.00	1	10/22/2024 10:28	WG2386860
Di-isopropyl ether	U		0.105	1.00	1	10/22/2024 10:28	WG2386860
Ethylbenzene	U		0.137	1.00	1	10/22/2024 10:28	WG2386860
Hexachloro-1,3-butadiene	U		0.337	1.00	1	10/22/2024 10:28	WG2386860
Isopropylbenzene	U		0.105	1.00	1	10/22/2024 10:28	WG2386860
p-Isopropyltoluene	U		0.120	1.00	1	10/22/2024 10:28	WG2386860
2-Butanone (MEK)	U		1.19	10.0	1	10/22/2024 10:28	WG2386860
Methylene Chloride	U		0.430	5.00	1	10/22/2024 10:28	WG2386860
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	10/22/2024 10:28	WG2386860
Methyl tert-butyl ether	U		0.101	1.00	1	10/22/2024 10:28	WG2386860
Naphthalene	U		1.00	5.00	1	10/22/2024 10:28	WG2386860
n-Propylbenzene	U		0.0993	1.00	1	10/22/2024 10:28	WG2386860
Styrene	U		0.118	1.00	1	10/22/2024 10:28	WG2386860
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	10/22/2024 10:28	WG2386860
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	10/22/2024 10:28	WG2386860
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	10/22/2024 10:28	WG2386860
Tetrachloroethene	U		0.300	1.00	1	10/22/2024 10:28	WG2386860
Toluene	U		0.278	1.00	1	10/22/2024 10:28	WG2386860
1,2,3-Trichlorobenzene	U		0.230	1.00	1	10/22/2024 10:28	WG2386860

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2,4-Trichlorobenzene	U		0.481	1.00	1	10/22/2024 10:28	<a href="#">WG2386860</a>
1,1,1-Trichloroethane	U		0.149	1.00	1	10/22/2024 10:28	<a href="#">WG2386860</a>
1,1,2-Trichloroethane	U		0.158	1.00	1	10/22/2024 10:28	<a href="#">WG2386860</a>
Trichloroethene	U		0.190	1.00	1	10/22/2024 10:28	<a href="#">WG2386860</a>
Trichlorofluoromethane	U		0.160	5.00	1	10/22/2024 10:28	<a href="#">WG2386860</a>
1,2,3-Trichloropropane	U		0.237	2.50	1	10/22/2024 10:28	<a href="#">WG2386860</a>
1,2,4-Trimethylbenzene	U		0.322	1.00	1	10/22/2024 10:28	<a href="#">WG2386860</a>
1,2,3-Trimethylbenzene	U		0.104	1.00	1	10/22/2024 10:28	<a href="#">WG2386860</a>
1,3,5-Trimethylbenzene	U		0.104	1.00	1	10/22/2024 10:28	<a href="#">WG2386860</a>
Vinyl chloride	U		0.234	1.00	1	10/22/2024 10:28	<a href="#">WG2386860</a>
Xylenes, Total	U		0.174	3.00	1	10/22/2024 10:28	<a href="#">WG2386860</a>
(S) Toluene-d8	108			80.0-120		10/22/2024 10:28	<a href="#">WG2386860</a>
(S) 4-Bromofluorobenzene	105			77.0-126		10/22/2024 10:28	<a href="#">WG2386860</a>
(S) 1,2-Dichloroethane-d4	104			70.0-130		10/22/2024 10:28	<a href="#">WG2386860</a>

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

Method Blank (MB)

(MB) R4138867-3 10/22/24 08:35

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		11.3	50.0
Acrolein	U		2.54	50.0
Acrylonitrile	U		0.671	10.0
Benzene	U		0.0941	1.00
Bromobenzene	U		0.118	1.00
Bromodichloromethane	U		0.136	1.00
Bromoform	U		0.129	1.00
Bromomethane	U		0.605	5.00
n-Butylbenzene	U		0.157	1.00
sec-Butylbenzene	U		0.125	1.00
tert-Butylbenzene	U		0.127	1.00
Carbon disulfide	U		0.0962	1.00
Carbon tetrachloride	U		0.128	1.00
Chlorobenzene	U		0.116	1.00
Chlorodibromomethane	U		0.140	1.00
Chloroethane	U		0.192	5.00
Chloroform	U		0.111	5.00
Chloromethane	U		0.960	2.50
2-Chlorotoluene	U		0.106	1.00
4-Chlorotoluene	U		0.114	1.00
1,2-Dibromo-3-Chloropropane	U		0.276	5.00
1,2-Dibromoethane	U		0.126	1.00
Dibromomethane	U		0.122	1.00
1,2-Dichlorobenzene	U		0.107	1.00
1,3-Dichlorobenzene	U		0.110	1.00
1,4-Dichlorobenzene	U		0.120	1.00
Dichlorodifluoromethane	U		0.374	5.00
1,1-Dichloroethane	U		0.100	1.00
1,2-Dichloroethane	U		0.0819	1.00
1,1-Dichloroethene	U		0.188	1.00
cis-1,2-Dichloroethene	U		0.126	1.00
trans-1,2-Dichloroethene	U		0.149	1.00
1,2-Dichloropropane	U		0.149	1.00
1,1-Dichloropropene	U		0.142	1.00
1,3-Dichloropropane	U		0.110	1.00
cis-1,3-Dichloropropene	U		0.111	1.00
trans-1,3-Dichloropropene	U		0.118	1.00
2,2-Dichloropropane	U		0.161	1.00
Di-isopropyl ether	U		0.105	1.00
Ethylbenzene	U		0.137	1.00

<sup>1</sup>Cp

<sup>2</sup>Tc

<sup>3</sup>Ss

<sup>4</sup>Cn

<sup>5</sup>Sr

<sup>6</sup>Qc

<sup>7</sup>Gl

<sup>8</sup>Al

<sup>9</sup>Sc

Method Blank (MB)

(MB) R4138867-3 10/22/24 08:35

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Hexachloro-1,3-butadiene	U		0.337	1.00
Isopropylbenzene	U		0.105	1.00
p-Isopropyltoluene	U		0.120	1.00
2-Butanone (MEK)	U		1.19	10.0
Methylene Chloride	U		0.430	5.00
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0
Methyl tert-butyl ether	U		0.101	1.00
Naphthalene	U		1.00	5.00
n-Propylbenzene	U		0.0993	1.00
Styrene	U		0.118	1.00
1,1,1,2-Tetrachloroethane	U		0.147	1.00
1,1,2,2-Tetrachloroethane	U		0.133	1.00
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00
Tetrachloroethene	U		0.300	1.00
Toluene	U		0.278	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.481	1.00
1,1,1-Trichloroethane	U		0.149	1.00
1,1,2-Trichloroethane	U		0.158	1.00
Trichloroethene	U		0.190	1.00
Trichlorofluoromethane	U		0.160	5.00
1,2,3-Trichloropropane	U		0.237	2.50
1,2,4-Trimethylbenzene	U		0.322	1.00
1,2,3-Trimethylbenzene	U		0.104	1.00
1,3,5-Trimethylbenzene	U		0.104	1.00
Vinyl chloride	U		0.234	1.00
Xylenes, Total	U		0.174	3.00
(S) Toluene-d8	110			80.0-120
(S) 4-Bromofluorobenzene	104			77.0-126
(S) 1,2-Dichloroethane-d4	103			70.0-130

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

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

(LCS) R4138867-1 10/22/24 07:12 • (LCSD) R4138867-2 10/22/24 07:33

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Acetone	25.0	34.4	33.1	138	132	19.0-160	J	J	3.85	27
Acrolein	25.0	35.2	35.3	141	141	10.0-160	J	J	0.284	26
Acrylonitrile	25.0	33.4	32.6	134	130	55.0-149			2.42	20

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

(LCS) R4138867-1 10/22/24 07:12 • (LCSD) R4138867-2 10/22/24 07:33

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	4.92	4.82	98.4	96.4	70.0-123			2.05	20
Bromobenzene	5.00	4.41	4.36	88.2	87.2	73.0-121			1.14	20
Bromodichloromethane	5.00	4.59	4.52	91.8	90.4	75.0-120			1.54	20
Bromoform	5.00	4.41	4.31	88.2	86.2	68.0-132			2.29	20
Bromomethane	5.00	3.46	3.50	69.2	70.0	10.0-160	U	U	1.15	25
n-Butylbenzene	5.00	4.74	4.61	94.8	92.2	73.0-125			2.78	20
sec-Butylbenzene	5.00	4.84	4.76	96.8	95.2	75.0-125			1.67	20
tert-Butylbenzene	5.00	4.83	4.81	96.6	96.2	76.0-124			0.415	20
Carbon disulfide	5.00	4.32	4.22	86.4	84.4	61.0-128			2.34	20
Carbon tetrachloride	5.00	5.39	5.14	108	103	68.0-126			4.75	20
Chlorobenzene	5.00	5.18	5.08	104	102	80.0-121			1.95	20
Chlorodibromomethane	5.00	4.55	4.46	91.0	89.2	77.0-125			2.00	20
Chloroethane	5.00	5.50	5.61	110	112	47.0-150			1.98	20
Chloroform	5.00	4.75	4.76	95.0	95.2	73.0-120	U	U	0.210	20
Chloromethane	5.00	3.83	4.09	76.6	81.8	41.0-142			6.57	20
2-Chlorotoluene	5.00	4.60	4.66	92.0	93.2	76.0-123			1.30	20
4-Chlorotoluene	5.00	4.63	4.47	92.6	89.4	75.0-122			3.52	20
1,2-Dibromo-3-Chloropropane	5.00	5.48	5.42	110	108	58.0-134			1.10	20
1,2-Dibromoethane	5.00	4.97	4.82	99.4	96.4	80.0-122			3.06	20
Dibromomethane	5.00	5.15	4.89	103	97.8	80.0-120			5.18	20
1,2-Dichlorobenzene	5.00	4.77	4.74	95.4	94.8	79.0-121			0.631	20
1,3-Dichlorobenzene	5.00	4.75	4.64	95.0	92.8	79.0-120			2.34	20
1,4-Dichlorobenzene	5.00	4.75	4.69	95.0	93.8	79.0-120			1.27	20
Dichlorodifluoromethane	5.00	4.30	5.13	86.0	103	51.0-149	U		17.6	20
1,1-Dichloroethane	5.00	4.92	4.82	98.4	96.4	70.0-126			2.05	20
1,2-Dichloroethane	5.00	4.68	4.48	93.6	89.6	70.0-128			4.37	20
1,1-Dichloroethene	5.00	4.62	4.80	92.4	96.0	71.0-124			3.82	20
cis-1,2-Dichloroethene	5.00	4.96	4.79	99.2	95.8	73.0-120			3.49	20
trans-1,2-Dichloroethene	5.00	5.04	4.72	101	94.4	73.0-120			6.56	20
1,2-Dichloropropane	5.00	4.90	4.89	98.0	97.8	77.0-125			0.204	20
1,1-Dichloropropene	5.00	5.14	5.04	103	101	74.0-126			1.96	20
1,3-Dichloropropane	5.00	5.10	5.01	102	100	80.0-120			1.78	20
cis-1,3-Dichloropropene	5.00	4.64	4.58	92.8	91.6	80.0-123			1.30	20
trans-1,3-Dichloropropene	5.00	4.49	4.46	89.8	89.2	78.0-124			0.670	20
2,2-Dichloropropane	5.00	4.57	4.71	91.4	94.2	58.0-130			3.02	20
Di-isopropyl ether	5.00	4.85	4.74	97.0	94.8	58.0-138			2.29	20
Ethylbenzene	5.00	4.94	4.90	98.8	98.0	79.0-123			0.813	20
Hexachloro-1,3-butadiene	5.00	5.05	5.16	101	103	54.0-138			2.15	20
Isopropylbenzene	5.00	5.00	4.85	100	97.0	76.0-127			3.05	20
p-Isopropyltoluene	5.00	4.89	4.87	97.8	97.4	76.0-125			0.410	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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

(LCS) R4138867-1 10/22/24 07:12 • (LCSD) R4138867-2 10/22/24 07:33

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2-Butanone (MEK)	25.0	34.3	33.3	137	133	44.0-160			2.96	20
Methylene Chloride	5.00	4.87	4.78	97.4	95.6	67.0-120	↓	↓	1.87	20
4-Methyl-2-pentanone (MIBK)	25.0	31.2	30.4	125	122	68.0-142			2.60	20
Methyl tert-butyl ether	5.00	4.87	4.59	97.4	91.8	68.0-125			5.92	20
Naphthalene	5.00	5.00	4.99	100	99.8	54.0-135	↓	↓	0.200	20
n-Propylbenzene	5.00	4.57	4.63	91.4	92.6	77.0-124			1.30	20
Styrene	5.00	4.69	4.55	93.8	91.0	73.0-130			3.03	20
1,1,1,2-Tetrachloroethane	5.00	4.56	4.69	91.2	93.8	75.0-125			2.81	20
1,1,2,2-Tetrachloroethane	5.00	4.81	4.88	96.2	97.6	65.0-130			1.44	20
1,1,2-Trichlorotrifluoroethane	5.00	5.45	5.51	109	110	69.0-132			1.09	20
Tetrachloroethene	5.00	5.30	5.16	106	103	72.0-132			2.68	20
Toluene	5.00	5.22	5.07	104	101	79.0-120			2.92	20
1,2,3-Trichlorobenzene	5.00	4.54	4.67	90.8	93.4	50.0-138			2.82	20
1,2,4-Trichlorobenzene	5.00	4.61	4.51	92.2	90.2	57.0-137			2.19	20
1,1,1-Trichloroethane	5.00	4.65	4.68	93.0	93.6	73.0-124			0.643	20
1,1,2-Trichloroethane	5.00	4.65	4.64	93.0	92.8	80.0-120			0.215	20
Trichloroethene	5.00	5.83	5.62	117	112	78.0-124			3.67	20
Trichlorofluoromethane	5.00	5.13	5.15	103	103	59.0-147			0.389	20
1,2,3-Trichloropropane	5.00	5.42	5.19	108	104	73.0-130			4.34	20
1,2,4-Trimethylbenzene	5.00	4.81	4.71	96.2	94.2	76.0-121			2.10	20
1,2,3-Trimethylbenzene	5.00	4.74	4.62	94.8	92.4	77.0-120			2.56	20
1,3,5-Trimethylbenzene	5.00	4.64	4.68	92.8	93.6	76.0-122			0.858	20
Vinyl chloride	5.00	4.64	4.85	92.8	97.0	67.0-131			4.43	20
Xylenes, Total	15.0	14.8	14.8	98.7	98.7	79.0-123			0.000	20
(S) Toluene-d8				107	108	80.0-120				
(S) 4-Bromofluorobenzene				103	102	77.0-126				
(S) 1,2-Dichloroethane-d4				104	104	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

# 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.
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
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.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 GI

8 AI

9 Sc

# 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 <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina <sup>1</sup>	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky <sup>1,6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	AI30792	Tennessee <sup>1,4</sup>	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas <sup>5</sup>	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 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold <sup>6</sup> 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.

<sup>1</sup> Cp

<sup>2</sup> Tc

<sup>3</sup> Ss

<sup>4</sup> Cn

<sup>5</sup> Sr

<sup>6</sup> Qc

<sup>7</sup> Gl

<sup>8</sup> Al

<sup>9</sup> Sc

State of Oregon Chain of Custody

<b>Agency, Authorized Purchaser or Agent:</b> Oregon DEQ	<b>Contract Laboratory Name:</b> ESC	<b>Lab Selection Criteria:</b> <input type="checkbox"/> Proximity (if TAT < 48 hrs) <input type="checkbox"/> Prior work on same project <input checked="" type="checkbox"/> Cost (for anticipated analyses) <input type="checkbox"/> Other labs disqualified or unable to perform requested services <input type="checkbox"/> Emergency work	<b>Turn Around Time:</b> <input checked="" type="checkbox"/> 10 days (std.) <input type="checkbox"/> 5 days <input type="checkbox"/> 72 hours <input type="checkbox"/> 48 hours <input type="checkbox"/> 24 hours <input type="checkbox"/> Other
<b>Send Lab Report To:</b> Sarah Kingery Address: 165 E 7 <sup>th</sup> Avenue, Suite 100 Eugene, OR 97104 Tel. #: 541-321-3687 E-mail: sarah.kingery@deq.oregon.gov	<b>Lab Batch #:</b> <b>Invoice To:</b> ODEQ/Business Office Address: 700 NE Multnomah St, Suite 600 Portland, OR 97232 Tel. #: 503-229-5696		

<b>Project Name:</b> Allen Street Study Area	<b>Sample Preservative</b>
Sampler Name: Connor Anderson	

Sample ID#	Collection Date/Time	Matrix	Number of Containers	VOCs by EPA 8260								Comments
MW-03	10/9/24, 1606	GW	3	X								- 01
MW-06	10/9/24, 1248	GW	3	X								- 02
MW-06 - DUP	10/9/24, 1248	GW	3	X								- 03
Trip Blank	10/9/24			X								- 04

Please email results to [ddomenighini@maulfoster.com](mailto:ddomenighini@maulfoster.com) and [sarah.kingery@deq.oregon.gov](mailto:sarah.kingery@deq.oregon.gov) 4072 9192 8026 13D A9  
1.1 + 0.3 = 1.4

Relinquished By: Connor Anderson	Agency/Agent: MFA	Received By: Robert Rounfree	Agency/Agent: Pale
Signature: [Signature]	Time & Date: 10/10/24, 1252	Signature: [Signature]	Time & Date: 10/10/24 0900
Relinquished By:	Agency/Agent:	Received By:	Agency/Agent:
Signature:	Time & Date:	Signature:	Time & Date:

THIS PURCHASE IS SUBMITTED PURSUANT TO STATE OF OREGON SOLICITATION #102-1098-07 AND PRICE AGREEMENT # 8903. THE PRICE AGREEMENT INCLUDING CONTRACT TERMS AND CONDITIONS AND SPECIAL CONTRACT TERMS AND CONDITIONS (T'S & C'S) CONTAINED IN THE PRICE AGREEMENT ARE HEREBY INCORPORATED BY REFERENCE AND SHALL APPLY TO THIS PURCHASE. PRECEDENCE OVER ALL OTHER CONFLICTING T'S AND C'S, EXPRESS OR IMPLIED.

Sample Receipt Checklist

COC Seal Present/Intact:  Y  N *10/11* If Applicable

COC Signed/Accurate:  Y  N

Bottles arrive intact:  Y  N

Collect bottles used:  Y  N

Sufficient volume sent:  Y  N

RA Screen <0.5 mR/hr:  Y  N

VOL Zero Headspace:  Y  N

Pres. Correct/Check:  Y  N

# Appendix E

---

## Data Validation Memorandum



MAUL  
FOSTER  
ALONGI

# Data Validation Memorandum

Project No. M0785.32.001 | October 31, 2024 | Oregon Department of Environmental Quality

Maul Foster & Alongi, Inc. (MFA), conducted an independent Stage 2A review of the quality of analytical results for groundwater and soil vapor samples collected in October 2024 at the Allen Street Study Area located at 1420 to 1540 SW Allen Street in Corvallis, Oregon.

Pace Analytical National Center for Testing and Innovation (Pace-N) performed the analyses. MFA reviewed Pace-N report numbers L1786383, L1787364, and L1788181. The analyses performed and the samples analyzed are listed in the following tables.

Analysis	Reference
Helium	ASTM D1946
Volatile organic compounds (groundwater)	EPA 8260D
Volatile organic compounds (soil vapor)	EPA TO-15

### Notes

ASTM = ASTM International.

EPA = U.S. Environmental Protection Agency.

TO = toxic organics.

Samples Analyzed			
Report L1786383	Report L1787364		Report L188181
TSV-01D	SVW-01S	SVW-09S	MW-03
TSV-01S	SVW-01D	SVW-09D	MW-06
TSV-02D	SVW-02S	SVW-10S	MW-06-DUP
TSV-02S	SVW-02D	SVW-10D	TRIP BLANK
--	SVW-05S	SVW-11S	--
--	SVW-05D	SVW-11D	---
--	SVW-06S	SVW-12S	--
--	SVW-07S	SVW-12D	--
--	SVW-08S	--	--

## Data Validation Procedures

Analytical results were evaluated according to applicable sections of U.S. Environmental Protection Agency (EPA) guidelines for data review (EPA 2020) and appropriate laboratory- and method-specific guidelines (EPA 1986, Pace 2024).

Data validation procedures were modified, as appropriate, to accommodate quality control requirements for methods that EPA data review guidelines do not specifically address (e.g., ASTM International [ASTM] Method D1946).

Based on the data quality assurance/quality control review described herein, the data, with the appropriate final data qualifiers assigned, are considered acceptable for their intended use. Final data qualifiers represent qualifiers originating from the laboratory and accepted by the reviewer, and data qualifiers assigned by the reviewer during validation.

Final data qualifiers:

- J = result is estimated.
- R = result is rejected. The analyte may or may not be present in the sample.
- U = result is non-detect at the method detection limit (MDL) or reporting limit (MRL).
- UJ = result is non-detect with an estimated MDL or MRL.

## General Qualifications

According to report L1787364, the EPA Method TO-15 ethanol result for sample SVW-05S exceeded the upper instrument calibration range. The reviewer qualified the result with J as shown in the following table.

Report	Sample	Analyte	Original Result (ug/m <sup>3</sup> )	Qualified Result (ug/m <sup>3</sup> )
L1787364	SVW-05S	Ethanol	2,300	2,300 J

### Notes

J = result is estimated.

ug/m<sup>3</sup> = micrograms per cubic meter.

According to report L1788181, the EPA Method 8260D bromomethane and chloromethane results for all project samples and the trip blank sample were non-detect and flagged by Pace-N as estimated due to association with a continuing calibration verification standard with low recovery. Pace-N also noted that reporting limit sensitivity was confirmed. The reviewer qualified the associated sample results with UJ, as indicated in the following table:

Report	Sample	Analyte	Original Result (ug/L)	Qualified Result (ug/L)
L1788181	MW-03	Bromomethane	0.605 U	0.605 UJ
		Chloromethane	0.960 U	0.960 UJ
	MW-06	Bromomethane	0.605 U	0.605 UJ
		Chloromethane	0.960 U	0.960 UJ
	MW-06-DUP	Bromomethane	0.605 U	0.605 UJ
		Chloromethane	0.960 U	0.960 UJ
	TRIP BLANK	Bromomethane	0.605 U	0.605 UJ
		Chloromethane	0.960 U	0.960 UJ

### Notes

ug/L = micrograms per liter.

U = result is non-detect at the method detection limit.

UJ = result is non-detect with an estimated method detection limit.

## Sample Conditions

### Sample Custody

Sample custody was appropriately documented on the COC forms accompanying the reports, with the following exceptions:

According to the COC form provided with report L1786383, a sample receipt time was not recorded by Pace-N on the COC form. According to the COC form provided with report L1787364, a signature

was provided for sample receipt, but the company name and sample receiving name portion of the form was not completed by Pace-N.

The reviewer confirmed that the gap in custody on the chain-of-custody (COC) forms accompanying reports L1786383, L1787364, and L1788181 is due to shipment via a third-party service.

### Holding Times

Extractions and analyses were performed within the recommended holding times.

### Preservation and Sample Storage

The reviewer confirmed that soil vapor samples were collected under a helium shroud to detect leaks in the collection system. According to reports L1786383 and L1787364, most soil vapor samples had ASTM Method D1946 helium detections. Helium results are shown in the following table, along with the associated helium shroud concentrations obtained from field sampling data sheets.

Report	Sample	ASTM D1946 Helium Result (%)	Helium Shroud Concentration (%)
L1786383	TSV-01D	11.4	58.0
	TSV-01S	6.41	56.1
	TSV-02D	3.30	54.1
	TSV-02S	8.17	56.1
L1787364	SVW-01S	0.475	40.3
	SVW-01D	ND	48.6
	SVW-02S	0.403	49.5
	SVW-02D	ND	42.8
	SVW-05S	0.265	48.5
	SVW-05D	1.83	48.2
	SVW-06S	ND	48.1
	SVW-07S	ND	48.8
	SVW-08S	ND	48.6
	SVW-09S	0.416	42.8
	SVW-09D	ND	48.5
	SVW-10S	0.172	46.9
	SVW-10D	3.12	48.2
	SVW-11S	0.154	48.8
	SVW-11D	0.672	42.4
	SVW-12S	0.126	45.7
SVW-12D	0.371	44.2	

**Note**

ASTM = ASTM International.

ND = non-detect.

The concentrations of ASTM Method D1946 helium were compared with the measured shroud concentrations. The reviewer considered ASTM Method D1946 helium results greater than 5 percent of the shroud concentration significant; the associated sample results were not representative of soil vapor and therefore the reviewer qualified these results with R as rejected. ASTM Method D1946 helium results that were detected but less than 5 percent of the shroud concentration were

correlated to a low impact to sample quality. The reviewer qualified detected results associated with these lower helium detections with J and qualified non-detect results with UJ. Samples that were non-detect for helium by ASTM Method D1946 did not require qualification.

Report	Samples	Analysis	Original Results	Qualification
L1786383	TSV-01D TSV-01S TSV-02D TSV-02S	EPA TO-15	Detected	R
	Non-detect		R	
L1787364	SVW-01S SVW-02S SVW-05S SVW-05D SVW-09S SVW-10S SVW-11S SVW-11D SVW-12S SVW-12D	EPA TO-15	Detected	J
	Non-detect		UJ	
	Detected		R	
	Non-detect		R	
	SVW-10D			

**Notes**

- EPA = U.S. Environmental Protection Agency.
- J = result is estimated.
- R = result is rejected. The analyte may or may not be present in the sample.
- TO = toxic organics.
- UJ = result is non-detect with an estimated method reporting limit.

## Reporting Limits

The laboratory evaluated groundwater results to MDLs and soil vapor results to MRLs, which were labeled as reporting detection limits. Samples that required dilutions because of high analyte concentrations, matrix interferences, and/or dilutions necessary for preparation and/or analysis were reported with raised MDLs and/or MRLs.

## Blank Results

### Method Blanks

Laboratory method blanks are used to evaluate whether laboratory contamination was introduced during sample preparation and analysis. Laboratory method blank analyses were performed at the required frequencies, in accordance with laboratory- and method-specific requirements. Where an analyte was detected in a sample above the MRL and in the associated laboratory method blank below the MRL, and the sample result was less than five times the laboratory method blank concentration, the sample result was qualified by the reviewer with J as estimated. Sample results greater than five times the laboratory method blank concentration did not require qualification.

According to report L1787634, the EPA Method TO-15 batch WG2380403 laboratory method blank had a detection of ethanol below the MRL at 0.420 micrograms per cubic meter. All associated samples had ethanol results that were either non-detect or were detected above the MRL and greater than five times the laboratory method blank concentration. No qualification was required.

All remaining laboratory method blank results were non-detect to MRLs.

### **Trip Blanks**

Trip blanks are used to evaluate whether volatile organic compound contamination was introduced during shipping and field handling procedures.

A trip blank (TRIP BLANK) was submitted with the sample delivery group L1788181 for EPA Method 8260D analysis.

The trip blank had a detection of acetone between the MDL and MRL at 11.5 micrograms per liter. The associated samples were non-detect for acetone; thus, qualification was not required. The remaining trip blank results were non-detect to MRLs.

### **Laboratory Control Sample and Laboratory Control Sample Duplicate Results**

Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) results are used to evaluate laboratory precision and accuracy. All LCSs and LCSDs were prepared and analyzed at the required frequency, in accordance with laboratory- and method-specific requirements.

According to report L1788181, the EPA Method 8260D batch WG2386860 LCS and LCSD results for acetone, acrolein, bromomethane, chloroform, methylene chloride, and naphthalene, and the LCS result for dichlorodifluoromethane were flagged by the laboratory as estimated because they were detected below the MRL. The LCS and LCSD results had acceptable percent recovery; thus, no qualification was required.

All remaining LCS and LCSD results were within acceptance limits for percent recovery and relative percent difference (RPD).

### **Laboratory Duplicate Results**

Laboratory duplicate results are used to evaluate laboratory precision and sample homogeneity. Laboratory duplicate samples were not reported for EPA Method 8260D, EPA Method TO-15 and ASTM Method D1946; batch precision was evaluated with LCS and LCSD RPD results.

### **Matrix Spike and Matrix Spike Duplicate Results**

Matrix spike (MS) and matrix spike duplicate (MSD) results are used to evaluate laboratory precision, accuracy, and the effect of the sample matrix on sample preparation and target analyte recovery. MS and MSD are not required for EPA Method 8260D, EPA Method TO-15 and ASTM Method D1946 and were not reported by Pace-N; laboratory precision was evaluated by LCS and LCSD results.

### **Surrogate Results**

Surrogate results are used to evaluate laboratory performance of target organic compounds for individual samples.

All surrogate results were within percent recovery acceptance limits.

### **Field Duplicate Results**

Field duplicate results are used to evaluate field precision and sample homogeneity. No field duplicate samples were submitted for analysis.

## Data Package

The data package was reviewed for transcription errors, omissions, and anomalies.

None were found.

## References

EPA. 1986. *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*. EPA publication SW-846. 3rd ed. U.S. Environmental Protection Agency. Final updates I (1993), II (1995), IIA (1994), IIB (1995), III (1997), IIIA (1999), IIIB (2005), IV (2008), V (2015), VI phase I (2017), VI phase II (2018), VI phase III (2019), VII phase I (2019), and VII phase II (2020).

EPA. 2020. *National Functional Guidelines for Organic Superfund Methods Data Review*. EPA 540-R-20-005. U.S. Environmental Protection Agency, Office of Superfund Remediation and Technology Innovation: Washington, DC. November.

Pace-N. 2024. *Quality Manual*. Version 04. Pace Analytical Services, LLC: Mt. Juliet, TN. March 7.