SUPPLEMENTAL ENVIRONMENTAL SITE INVESTIGATION

Property Identification:

LUST #26-90-0001
BINGHAM CONSTRUCTION
3939 NW ST HELENS ROAD
PORTLAND, OREGON 97210

Prepared For:

JAY POIZER

Prepared By:

ALPHA ENVIRONMENTAL SERVICES, INC.
11080 SW ALLEN BLVD. SUITE 100
BEAVERTON, OREGON 97005
TEL (503) 292-5346 FAX (503) 203-1516
WWW.ALPHAENVIRONMENTAL.NET

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1.0 INTRODUCTION

On behalf of Jay Poizer, Alpha Environmental Services, Inc (Alpha) has prepared this Supplemental Environmental Site Assessment Report to present the results of the recent site testing. The purpose of the investigation was to fully delineate remaining soil contamination, assess groundwater conditions migrating in the downgradient direction toward St. Helens Road and determine if a vapor intrusion condition exists in the building.

The August 2024 investigation included seven soil borings and indicated gasoline detections in several borings with a maximum detection of 4,040 parts per million (ppm). The full extent of contamination was delineated in all directions except to the north. Groundwater impacts are unknown at this time. Additional assessment was recommended.

The December 2024 investigation included 4 borings (2 soil and 2 groundwater) and indicated gasoline detections in several borings with a maximum detection of 4,370 parts per million (ppm). The remaining soil delineation was completed to the north. Groundwater sampling in the downgradient direction indicates potential groundwater impacts are restricted to the site. Sub-slab soil vapor testing indicated Total Petroleum Hydrocarbons (TPH) slightly exceeded the occupation risk RBCs. Additional soil vapor sampling was recommended.

1.1 Site Description

The Property consists of one Tax Lot R315807 located in Township 1 North, Range 1 East, Section 19, Willamette Meridian. The parcels have a total of 1.19-acres. The roughly central part of the Property is occupied by the building, surrounded by storage and parking areas.

The vicinity of the Property can generally be described as industrial. Current usage of the adjoining properties includes: north – Overhead Door Company; south – Bridge City Steel; east – NW St Helens Road with Western Group (metal manufacturer) and Shell Products Loading Terminal beyond; and west – Forest Park.

1.2 Current Zoning and Future Land Use

The zoning is Heavy Industrial (IH) by the City of Portland. Currently the property is occupied by the Tahoe Corporation owned by Bing Bingham. The future use of the property is anticipated to remain industrial use.

1.3 Geology and Groundwater

The Property is situated within the Willamette Valley, which is a portion of the Puget Trough physiographic sub province of the Pacific Mountain System geological province of the State of Oregon. This area consists of fluviolacustrine sedimentary deposits. Underlying the area is unconsolidated silt, sand, gravel and clay. Generally, this specific area consists of fine-grained material, but gravel layers may also be found there to some extent. (Walker, et al., 1991).

According to the Water Resources Department (WRD) online database and the USGS Depth to Groundwater Interactive Map of Portland, static groundwater onsite is estimated to be located approximately 45 feet below surface grade (bsg), although some monitoring wells in the area indicate it may be as shallow as 10 to 15 feet.

The flow of groundwater typically imitates the surface topography and ordinarily flows from higher to lower elevations. The near surface flow may be influenced by stratigraphy, water bodies, rainfall, underground utilities and other subsurface features. Based on the topography and site observations, groundwater is anticipated to flow to the northeast.

The nearest major surface water in the vicinity of the Property is the Willamette River located approximately 0.51 miles northeast of the site.

2.0 BENEFICIAL LAND AND WATER USE DETERMINATIONS

2.1 Land Use

The subject property is zoned Heavy Industrial (IH) by the City of Portland. The zoning permits industrial uses. Residential use is not considered a likely future use for this property. Surrounding properties do not include residential uses and the residential receptor scenario pathway is deemed incomplete.

2.2 Groundwater Use

A search of the Oregon Water Resources Department (OWRD) database was conducted. No industrial water wells were identified within 0.4 miles of the subject property and no residential water wells were identified within 1.0 mile of the subject property.

The City of Portland supplies potable water to the property and nearby businesses. There is no onsite groundwater use.

Based on the information provided, there is no known current or likely future beneficial use of shallow groundwater within 0.4 miles of the site that might be impacted by site-related contamination.

2.3 Surface Water Use

The closest surface water to the site is the Willamette River located approximately 0.5 miles northeast of the property. The subject property partially paved and covered by the site buildings. For paved areas, stormwater runoff either drains to unpaved areas or drains to the adjoining city streets. In the non-paved areas of the property, water infiltrates naturally into the subsurface.

3.0 FIELD INVESTIGATION AND SAMPLING PROCEDURES

3.1 Preliminary Field Work

Prior to sampling, Alpha filed a public utility locate request with One Call Oregon and utilities were marked by respective utility companies where they entered the Property.

Alpha subcontracted Pacific NW Locating to perform a utility survey of the Property in preparation for the drilling.

3.2 Boring Location Rationale

The boring locations were chosen based on the previous sampling by GEM and in accordance with locations approved by the DEQ.

3.3 Drilling and Sampling Activities

Field investigation and drilling activities were conducted under the supervision of Mr. Matt Holmstrom, staff geologist and UST Supervisor for Alpha. Work was reviewed by Jim Cooper, R.G. senior geologist for Alpha. The subsurface sampling consisted of the advancement of seven borings in August 2024 and four borings in December 2024, both advanced by Cascade Drilling using a track-mounted direct-push drill rig.

Soil samples were collected using a single-use thin-walled polyethylene tube inserted inside a stainless-steel sampling tube. In between each boring, the push probe sampler, the outer tubing and inner sampling rods were decontaminated by pressure washing.

Soil lithology was observed and logged by slicing the disposable sample tube along the longitudinal axis. Soil samples were field screened for visual and olfactory signs of petroleum contamination. The soil samples from the investigation were obtained directly from direct-push disposable liners. The liners were split open along the longitudinal axis and laid open for visual observation. Any obviously impacted soil was placed directly into both laboratory-provided jars using new disposable nitrile gloves. A new set of gloves was donned after any sample handling and between each interval of sample collected. Soil samples during the August 2024 sampling event were field screened with headspace vapor screening for volatile organic compounds using a hand-held photoionization detection (PID) meter. Representative samples were placed in Ziplock storage bags and left to equalize for approximately 5 to 10 minutes before readings were taken by inserting the tip of the meter into the bag.

Temporary 1-inch diameter PVC groundwater wells were installed by Cascade using expendable drill points (i.e. a solid pointed drill tip attached to the drilling stem that is advanced down the hole and left in place when the drilling rods are retracted) to reach the depth of groundwater. The PVC well casing is lowered through the annular space inside the drilling rods and then the drill rods are removed. The temporary wells were slotted between 10 to 20 feet. No soil samples were collected from these borings.

The soil and groundwater samples were placed in laboratory-provided glass jars and placed in a cooler on ice. The soil samples were transported to Alpha's designated sample refrigerator until picked up by an Apex Laboratory courier.

Samples were handled under chain-of-custody protocol and initial analyzed by test method NWTPH-Gx (quantifies gasoline range petroleum hydrocarbons) and EPA Test Method 8260 RBDM VOCs. Samples from the August sampling event were also analyzed by NWTPH-Dx (quantifies diesel and oil range petroleum hydrocarbons).

Borings were abandoned in accordance with Oregon Department of Water Resources (WRD) requirements by filling with bentonite chips. The surface was repaired to closely match the existing surface.

3.4 Soil-Gas Sampling

The soil-gas samples were collected from temporary test points using Section 3.2.1 of DEQs *Guidance for Assessing and Remediating Vapor Intrusion in Buildings, 2010*. EPA Method TO-15 was used to analyze the soil-gas samples. A total of three soil-gas samples were collected on the Property.

A roto-hammer was utilized to drill to just below the concrete slab. A dedicated, single-use gas vapor probe (GVP) point was inserted into the hole and sealed using a sand pack at the base and hydrated bentonite at the surface. The seal and borehole were given approximately 30 minutes of equilibration time before the purging process was performed. The purging process was performed using a hand-operated calibrated syringe. A total of approximately three purge volumes of air were slowly purged out of the system.

The 1-liter Summa canister was then connected to the sampling train using disposable Teflon® tubing. A leak check was performed using a vacuum pump to determine if leaks were present in the sampling train. Isopropyl alcohol was applied to sampling train connection areas and floor seal during the sample collection.

The Summa canister regulators were set by the laboratory to 200 milliliters per minute (ml/min) and were opened for a duration of approximately 5 minutes.

During subsequent laboratory analysis, each sub-slab sample was additionally analyzed for 2-propanol. According to Section H.3.3.5 Liquid Tracers, NJDEP, 2018, a 0.1% leak of ambient air into the sample canister would conservatively equate to a detection of 100,000 µg/m3 of 2-propanol. Laboratory analysis of the samples collected from SS1, SS2, SS3 SS3-2, SS4, and SS5 reported concentrations of 1,840 µg/m3, 693 µg/m3, 2,950 µg/m3, 133 µg/m3, 20.6 µg/m3 and ND, respectively. These reported tracer gas concentrations are well below the recommended 100,000 µg/m3 threshold for a 0.1% leak.

3.5 Field Investigation Summary

Sampling Event	Date	Scope	Significant Findings
			ug/l
1	9/6/24	7 soil borings	Maximum gasoline detection in soil of 4,040 ppm.
2	12/23/24	2 soil borings 2 groundwater borings 3 sub-slab soil vapor samples	Maximum gasoline detection in soil of 4,370 ppm. No detection in groundwater samples. Soil vapors for gasoline in SS1 exceeded the RBCs.
3	3/19/25	3 sub-slab soil vapor samples	Soil vapors for gasoline and VOCs in all samples below the RBCs.

4.0 QUALITY ASSURANCE & QUALITY CONTROL

For the project, Alpha comply with the DEQ's Quality Assurance Project Plan (QAPP) for Preliminary Assessments, DEQ05-LQ-069-QAPP, Version 2.2 dated August 14, 2012 or the Underground Storage Tanks Programs, DEQ02-LQ-0002-QAPP, Version 3.1, dated June 20, 2016.

4.1 Field Equipment & Decontamination

Disposable field equipment used for this project include nitrile gloves, plastic spoons, drill core liners, Terra Core™ samplers and Ziplock bags. Reusable field equipment included a soil cutting knife.

Decontamination of Alpha supplied reusable field equipment included manual removal of particles, wash with Alconox solution, rinse with tap water, wash with Alconox solution and rinse with distilled water. In between each boring, the driller rinsed all sample tubing, cutting bits, etc. with a hot water pressure rinse.

4.2 Sample Collection

Soil samples from the investigation were collected directly from direct-push disposable liners. For samples collected for gasoline/ VOC analysis, the sample of the soil was collected following EPA Method 5035A using a Terra Core™ sampling tool and placed in a pre-tared vial containing preservative with a septum-sealed screw cap. Once sealed, the sample was not exposed to the atmosphere until analysis was conducted. The sample collection process was completed in the least amount of time in order to minimize the loss of VOCs due to volatilization.

Groundwater samples from the investigation were collected directly from temporary PVC wells using a low flow peristaltic pump (approximately 50 to 100 ml/min) and disposable polyethylene tubing. Prior to sampling, each well was purged of approximately 3 volumes of water and allowed to stabilize foe approximately 30 minutes. Groundwater samples were collected from approximately 15 feet. The groundwater samples were dispensed directly into appropriate laboratory provided containers.

4.3 Sample Identification

Soil sample containers were labeled with the project name and number, the time of sampling, sampler's initials, sample designation and date. The chain of custody was completed, placed in a Ziplock bag and put to the cooler.

4.4 Field Duplicates

Field duplicates were collected at a rate of 1 per 20 analytical samples for each matrix sampled, except for soil vapor (not enough canisters were available). The field duplicate for the soil sample was collected from an area of obvious impacts. For non-VOCs, the sample was homogenized and then the field investigation and duplicate sample alternately collected. For VOCs, two separate field plugs were taken side by side from the undisturbed sample, with as little time between samples as possible. The duplicate sample was collected from Boring D8@17'.

The field duplicate for the groundwater sample was collected from the temporary monitoring well (Boring D9) after the collection of the initial sample.

4.5 Sample Transport

The samples were packed in reusable ice with an appropriate temperature blank(s), which consisted of a 100-ml polyethylene bottle filled with clean water.

Containers were placed upright in the cooler and cushioned by bubble wrap. Ice packets were placed around and on top of the sample containers. The samples were transported by the geologist to Alpha's personnel protected sample refrigerator. A courier from Apex picked the samples up directly from Alpha's designated sample refrigerator and delivered the samples to Apex Laboratories in Tigard, Oregon. Delivery occurred within 24 hours of sampling and samples were kept refrigerated and/ or on ice during storage and transport.

Samples were handled under chain-of-custody protocol in which the custody form was signed and dated by the Alpha personnel. Upon pickup of the samples, personnel at Apex Laboratories examined and recorded the condition of the sample containers, signed the custody form, and transferred the samples to their coolers. A completed copy of the chain-of-custody form is included at the end of the laboratory analytical report.

Soil-gas sample canisters were labeled with the project name and number, the time of sampling, sampler's initials, sample designation and date. The quality control procedures for the assessment also included the use of nitrile gloves during assembly and disassembly. The regulator flow rates for the Summa canisters are set by the laboratory before shipping and re-checked upon return. Field notes were used to record the test start and end times, flow rates, and other pertinent field information.

Samples were handled under chain-of-custody protocol in which the custody form was signed and dated by the Alpha personnel. Upon receipt of the samples, personnel at Pace Laboratories inspected and recorded the condition of the sample canisters and signed the custody form. A copy of the completed chain-of-custody form is included at the end of the laboratory analytical reports (Appendix A).

5.0 SAMPLE ANALYTICAL RESULTS

5.1 Soil Findings

Petroleum Results – August 6, 2024

The NWTPH-Gx analytical results indicate that gasoline was detected in Borings D1, D2, D3, D5 and D6. The NWTPH-Dx analytical results indicate that diesel was only detected in Boring D2 and D3; however, the laboratory determined the detection was likely from overlap of the Gasoline Range product.

The concentrations of gasoline in several samples exceed the Leaching to Groundwater Pathway.

Petroleum Results – December 23, 2024

The NWTPH-Gx analytical results indicate that gasoline was detected in Boring D8. Soil samples were not collected from Boring D9 or D10 because these were temporary groundwater sample locations installed with a expendable drill tip. Diesel and oil were not analyzed because previous testing indicated only gasoline range hydrocarbons are present.

The concentrations of gasoline in the D8 samples exceeds the Leaching to Groundwater Pathway.

A summary of the results for the soil analysis is presented in Table 1. Laboratory analytical reports are included as Appendix A.

Table 1 - Soil Sample Analytical Results – Petroleum

Boring No.	Date	Location of Sample	Sample Depth in Feet	Petroleum		
				Gasoline	Diesel	Heavy Oil
				mg/kg	mg/kg	mg/kg
D1	8/6/24	East end of tank pit based on GEM map	12	**11.4**	*ND <24.1*	*ND <48.2*
			15	*ND <8.08*	*ND <25.7*	*ND <51.4*
D2	8/6/24	East center of tank pit based on GEM map	12	**203**	**25.3**	*ND <48.8*
			15	**39.1**	*ND <25.9*	*ND <51.8*
D3	8/6/24	East end of tank pit based on field observations	12	**4,040**	**187**	*ND <48.2*
			15	**13.9**	*ND <25.1*	*ND <50.3*
D4	8/6/24	East of tank pit based on GEM map	12	*ND <6.97*	*ND <23.2*	*ND <46.4*
			15	*ND <7.98*	*ND <24.4*	*ND <48.7*
D5	8/6/24	Center of tank pit based on field observations	12	**172**	*ND <23.6*	*ND <47.1*
			15	**33.0**	*ND <25.7*	*ND <51.4*
D6	8/6/24	North side of tank pit based on field observations	12	**2,360**	**114**	*ND <48.4*
			15	**1,200**	*ND <23.2*	*ND <51.3*
D7	8/6/24	South side of tank pit based on field observations	12	*ND <6.13*	*ND <23.1*	*ND <46.1*
D8	12/23/24	North of southern tank pit	12	**4,370**	-	-
			15	**2,410**	-	-
			17	**932**	-	-
			20	**142**	-	-
D9	12/23/24	Eastern portion of site – GW only, no soil samples collected	-	-	-	-
D10	12/23/24	Eastern portion of site – GW only, no soil samples collected	-	-	-	-
D11	12/23/24	North of southern tank pit and at the west end of northern tank pit	12	*ND*		
			15	*ND*	-	-
			20	*ND*	-	-
DEQ Risk-Based Concentrations						
Leaching to Groundwater (Occupational Use)				130	>Max	>Max
Dermal Contact (Construction Worker)				9,700	4,000	11,000
Dermal Contact (Excavation Worker)				>Max	>Max	>Max

ND = Analyte Not Detected at or above laboratory reporting limit (See Laboratory Report) All reporting limits are below the RBCs.
mg/kg = milligram per kilogram or parts per million (ppm)
203 = Exceeds Leaching to Groundwater RBC

VOC Results– August 6, 2024

The VOC analytical results for the two highest gasoline detections were competed on Boring D3@12' and D6@12'. The results indicate that several VOCs were detected in the sample above the laboratory reporting limits.

In some or all of the samples, the laboratory reporting limits exceeded the leaching to groundwater RBC for benzene, MTBE, EDB and EDC; however, this is not expected to effect overall data interpretation as groundwater is not used at the site for drinking water purposes and the Vapor Intrusion to Building from groundwater risk pathway was checked with sub-slab vapor sampling.

A summary of the results for the soil analysis is presented in Table 1A. Laboratory analytical reports are included as Appendix A.

VOC Results– December 23, 2024

All soil samples form the December sampling event were analyzed for VOCs. The VOC analytical results for Boring D8 are various depths indicate that several VOCs were detected in the sample above the laboratory reporting limits.

As with the previous sampling, in some or all of the samples, the laboratory reporting limits exceeded the leaching to groundwater RBC for benzene, MTBE, EDB and EDC. No overall risk is expected from the Leaching to Groundwater Pathway.

A summary of the results for the soil analysis is presented in Table 1A. Laboratory analytical reports are included as Appendix A.

Table 1A – Soil Sample Analytical Results – RBDM VOCs

Boring Number and Depth	RBDM VOCs										
	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Naphthalene	EDB	EDC	Isopropylbenzene	1,2,4-Trimathybenzene	1,3,5-Trimethybenzene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
D3@12'	*ND <0.579*	*ND <2.89*	**143**	**4.72**	*ND <2.89*	**22.2**	*ND <2.89*	*ND <1.45*	**17.6**	*ND <2.89*	*ND <2.89*
D6@12'	*ND <0.146*	*ND <0.732*	**5.14**	*ND <1.10*	*ND <0.732*	*ND <1.46*	*ND <0.732*	*ND <0.366*	*ND <0.732*	*ND <0.732*	*ND <0.732*
D8@12'	*ND <0.5698*	*ND <3.49*	**176**	*ND <5.23*	*ND <3.49*	**24.0**	*ND <3.49*	*ND <1.74*	**21.5**	**71.8**	**7.26**
D8@15'	*ND <0.339*	*ND <1.70*	**71.8**	**108**	*ND <1.70*	**8.38**	*ND <1.70*	*ND <0.848*	**6.72**	**96.6**	**28.0**
D8@17'	*ND <0.0727*	*ND <0.363*	**24.5**	**40.5**	*ND <0.363*	**3.46**	*ND <0.363*	*ND <0.182*	**2.64**	**35.3**	**10.3**
D8@20'	*ND <0.0163*	*ND <0.0814*	**4.76**	**1.43**	*ND <0.0814*	**0.568**	*ND <0.0814*	*ND <0.0407*	**0.587**	**3.73**	**0.120**
D11@12'	*ND <0.0188*	*ND <0.0938*	*ND <0.0469*	*ND <0.141*	*ND <0.938*	*ND <0.188*	*ND <0.0938*	*ND <0.0469*	*ND <0.0938*	*ND <0.0938*	*ND <0.0938*
D11@15'	*ND <0.210*	*ND <0.105*	*ND <0.0526*	*ND <0.158*	*ND <0.105*	*ND <0.210*	*ND <0.105*	*ND <0.0526*	*ND <0.105*	*ND <0.105*	*ND <0.105*
D11@20'	*ND <0.0171*	*ND <0.0857*	*ND <0.0429*	*ND <0.129*	*ND <0.0857*	*ND <0.171*	*ND <0.0857*	*ND <0.0429*	*ND <0.0857*	*ND <0.0857*	*ND <0.0857*
DEQ Risk-Based Screening Levels											
Leaching to Groundwater	0.10	490	0.90	100	0.54	0.34	0.00056	0.013	>Csat	48	53
Direct Contact (Const.Worker)	380	28,000	1,700	20,000	12,000	580	9.0	200	>Csat	2,900	2,900
Direct Contact (Excv.Worker)	11,000	770k	48,000	560k	320k	16,000	250	5,600	>Csat	81,000	81,000

ND = Analyte Not Detected at or above laboratory reporting limit (See Laboratory Report) All reporting limits are below the RBCs.
>Csat = This soil RBC exceeds the limit of the three-phase equilibrium partitioning.
143 = Exceeds Leaching to Groundwater RBC

5.2 Groundwater Findings

Petroleum Results – December 23, 2024

The groundwater analytical results indicate that gasoline or VOCs were not detected in Boring D9 or D10. Diesel and oil were not analyzed because previous testing indicated only gasoline range hydrocarbons are present.

Table 2 – GW Sample Analytical Results – Petroleum

Boring No.	Date	Location of Sample	Boring Depth in Feet	Petroleum
				Gasoline
				ug/l
D9	12/23/24	Eastern portion of site – GW only, no soil samples collected	20	*ND <100*
D10	12/23/24	Eastern portion of site – GW only, no soil samples collected	20	*ND <100*
DEQ Risk-Based Concentrations				
Vapor Intrusion into Buildings (Occupational Use)				520
Groundwater in Excavation				14,000

ND = Analyte Not Detected at or above laboratory reporting limit (See Laboratory Report) All reporting limits are below the RBCs.
ug/l = microgram per liter or parts per billion (ppb)

Table 2A – Groundwater Sample Analytical Results – RBDM VOCs

Boring Number	RBDM VOCs										
	Benzene	**Toluene**	**Ethylbenzene**	**Xylenes**	**MTBE**	**Naphthalene**	**EDB**	**EDC**	**Isopropylbenzene**	**1,2,4-Trimathybenzene**	**1,3,5-Trimethybenzene**
	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
D9	*ND <0.200*	*ND <1.00*	*ND <0.500*	*ND <1.50*	*ND <1.00*	*ND <5.00*	*ND <0.500*	*ND <0.400*	*ND <1.00*	*ND <1.00*	*ND <1.00*
D10	*ND <0.200*	*ND <1.00*	*ND <0.500*	*ND <1.50*	*ND <1.00*	*ND <5.00*	*ND <0.500*	*ND <0.400*	*ND <1.00*	*ND <1.00*	*ND <1.00*
DEQ Risk-Based Screening Levels											
Volatilization to Outdoor Air	14,000	>S	>S	>S	1,500,000	16,000	790	9.000	>S	>S	>S
Vapor Intrusion into Buildings	12	150,000	31	3,300	3,200	50	1.5	18	9,100	2,400	1,700
Groundwater in Excavation	1,800	220,000	4,500	560k	63,000	500	27	630	51,000	81,000	81,000

ND = Analyte Not Detected at or above laboratory reporting limit (See Laboratory Report) All reporting limits are below the RBCs.

>S = This groundwater RBC exceeds the solubility limit.

ug/l = microgram per liter or parts per billion (ppb

5.2 Soil-Gas Findings

December 23,2024

The laboratory analytical results indicate that several VOCs and Total Petroleum Hydrocarbons (TPH) were detected in samples. The detected concentrations were compared to the DEQ RBCs and the concentrations of Total Petroleum Hydrocarbons (TPH) in Sample SS1 exceed the Vapor Intrusion into Buildings RBCs for occupational receptors. A summary of the results for the soil vapor analysis is presented in Table 3. Only analytes that had a detection and have a corresponding RBC, are in the table below. The complete laboratory analytical report is included as Appendix A.

Table 3 – Soil Vapor Sample Analytical Results

	SS1	***SS2***	***SS3***	***RBC_{sv} (Occupational)***
Depth bsg (feet)	Sub-Slab	Sub-Slab	Sub-Slab	-
	Result µg/m3	**Result** µg/m3	**Result** µg/m3	µg/m3
Benzene	**17.0**	**2.26**	**0.76**	52
Cyclohexane	**272**	**4.34**	*ND*	880,000
Ethylbenzene	**49.9**	**3.56**	**1.79**	160
Dichlorofluoromethane	**2.77**	**2.61**	**2.74**	15,000
n-Hexane	**32,300**	**367**	**6.49**	100,000
Methyl Ethyl Ketone (2-Butanone)	**425**	**19.0**	**13.2**	730,000
2-Propanol	**1,840**	**693**	**2,950**	Leak Detection Compound
Toluene	**22.9**	**4.48**	**4.52**	730,000
Tetrachloroethylene	*ND*	*ND*	**1.09**	1,600
1,2,4-Trimethybenzene	**15.6**	**5.89**	**8.69**	8,800
1,3,5-Trimethybenzene	**5.50**	**2.04**	**3.09**	8,800
Xylenes	**250**	**20.2**	**14.0**	15,000
TPH	**48,700**	**2,470**	*ND*	40,000

ND = Analyte Not Detected at or above laboratory reporting limit (See Appendix A for reporting limits). All reporting limits are below the RBCs.
µg/m3 = microgram per meter cubed
48,700 = Exceeds Vapor Inrusion into Building RBC
RBCsv = Soil-Gas risk-based concentration for Vapor Intrusion into Buildings – Occupational & Residential Pathway. Only anyltes with RBCs are listed above, for a complete list, see Appendix B.

March 19. 2025

Because there was an exceedance in one the soil vapor samples (SS1), on March 19, 2025, three additional sub-slab vapor samples were collected. For the March sampling event, one of the sample numbers (SS3) was accidentally duplicated. The sample named SS3-2 in this report, from the March sampling event, is near the location of SS1 in the sampling event from December 2024. The laboratory report identifies it as SS3 (Lab Report L1812794 -03)

The laboratory analytical results indicate that several VOCs and TPH were detected in samples. The detected concentrations were compared to the DEQ RBCs, and concentrations did not exceed the RBC for the Vapor Intrusion into Buildings RBCs for occupational receptors. A summary of the results for the soil vapor analysis is presented in Table 4. The complete laboratory analytical report is included as Appendix A.

Table 4 – Soil Vapor Sample Analytical Results

	SS3-2	***SS4***	***SS5***	***RBC_{sv} (Occupational)***
Depth bsg (feet)	Sub-Slab	Sub-Slab	Sub-Slab	-
	Result µg/m3	**Result** µg/m3	**Result** µg/m3	µg/m3
Benzene	**3.83**	**4.06**	**4.25**	52
Cyclohexane	**2.78**	**1.17**	*3.89*	880,000
Ethylbenzene	**7.41**	**5.81**	**9.02**	160
Dichlorofluoromethane	**1.62**	**1.48**	**1.48**	15,000
n-Hexane	**10.2**	**8.88**	**3.77**	100,000
Methyl Ethyl Ketone (2-Butanone)	**45.4**	*ND*	**21.6**	730,000
2-Propanol	**133**	**20.6**	*ND*	Leak Detection Compound
Toluene	**29.9**	**20.9**	**38.4**	730,000
1,2,4-Trimethybenzene	**6.72**	**5.30**	**8.54**	8,800
1,3,5-Trimethybenzene	**2.33**	**2.01**	**3.00**	8,800
Xylenes	**41.8**	**31.7**	**50.3**	15,000
TPH	**504**	**390**	**425**	40,000

ND = Analyte Not Detected at or above laboratory reporting limit (See Appendix A for reporting limits). All reporting limits are below the RBCs.
µg/m3 = microgram per meter cubed
RBCsv = Soil-Gas risk-based concentration for Vapor Intrusion into Buildings – Occupational & Residential Pathway. Only anyltes with RBCs are listed above, for a complete list, see Appendix B.

6.0 RISK-BASED EVALUATIONS

6.1 Conceptual Site Models

A conceptual site model (CSM) describes the known or suspected sources of contamination, considers how the contaminants are likely to migrate (pathways), and identifies who is likely to be affected by the contaminants (receptors). In order for risk to be present at the site, a source must be present, a pathway must be complete and a receptor must be present.

The risk is evaluated for each contaminant of interest (COl) in order to determine whether risk is present at a site. Current conditions as well as anticipated future conditions are considered when developing the CSM.

6.2 Expected Future Use of the Site

The future use of the subject property, currently zoned heavy industrial, and based on site uses in the area, is not likely to change for the foreseeable future.

6.3 Conceptual Site Model Summary

The Conceptual Site Model (CSM) summary is designed to provide a depiction of relevant site features and the surface/subsurface conditions. The table helps to define the transport mechanisms, exposure pathways and the risk to potential receptors.

TABLE 5: - Conceptual Site Model Risk Table

Pathway	Receptor	Applicable RBC?	Basis for selection/exclusion
SOURCE: **GASOLINE TANK;** CURRENT AND FUTURE LAND USE: **INDUSTRIAL;** IMPACTED MEDIUM: **SOIL**			
Ingestion, dermal contact, and inhalation	Residential	No	
	Occupational	Yes	Pathway is complete; however, contaminates appear to be greater than 3’
	Construction worker	Yes	Pathway is complete; however, contaminates do not exceed the RBCs
	Excavation worker	Yes	Pathway is complete; however, contaminates do not exceed the RBCs
Volitization to Outdoor Air	Residential	No	Pathway is complete; however, based on the sub-slab vapor samples results and outdoor risk is unlikely to exist.
	Occupational	Yes	
Vapor intrusion into buildings	Residential	No	
	Occupational	Yes	Pathway is complete and soil vapors do not exceed the RBCs.
Leaching to groundwater	Residential	No	No impacts were detected in the groundwater samples. See Note 1.
	Occupational	No	

Notes:

1. City water is provided. Deep groundwater wells or surface water from Bull Run are currently used for drinking water in Portland.

6.4 Contaminant Concentrations

As noted above, the contaminants identified at the site are petroleum products as gasoline and related VOC constituents. The previous Tables are a summary of soils collected by Alpha during the sampling event from August 2024, December 2024 and March 2025.

6.5 Human Health Risk

The following Contaminants of Potential Concern (COPCs) were identified for the applicable soil exposure pathways.

Soil:

Soil ingestion, dermal contact, and inhalation: Petroleum was detected, but at concentrations below applicable screening levels for occupational receptors and construction and excavation workers.

Visual observations in the upper 3 feet of soil did not indicate petroleum impacts from this depth interval. Field observations and soil results are consistent with a below ground tank release. Based on these factors, the occupational direct contact risk does not appear to be applicable.

Groundwater:

Groundwater samples indicate that groundwater has not been significantly impacted in the downgradient and there does not appear to be a vapor intrusion risk from groundwater. The drinking water is supplied by the municipal system.

Volatilization to Outdoor Air:

The Volitization to Outdoor Air Pathway is complete; however, based on the relatively low sub-slab vapor samples results and outdoor risk is unlikely to exist.

Vapor Intrusion into Buildings:

Based on the initial testing, one sample (SS1) exceeded the RBCs for petroleum hydrocarbons. The area was retested along with two additional spots along the southeast part of the building, and all results are well below the RBCs. Based on the most recent testing, a vapor intrusion condition is not likely to exist.

6.6 Ecological Receptors

The nearest major surface water in the vicinity of the Property is the Willamette River located 0.5 miles from the property. Based on the intervening distance and site uses surrounding the property no ecological risk is anticipated.

Some wildlife from adjacent Forest Park to the west, could potentially enter the site. The property is surrounded by a chain link fence, so this would be limited. There is not anticipated risk to potential wildfire as contamination is not present at the surface.

7.0 FINDINGS, CONCLUSIONS, RISK EVALUATION AND RECOMMENDATIONS

Alpha has conducted the Site Investigation for the Property located at 3939 NW St Helens Road, Portland, Oregon. The assessment was performed in accordance with the agreed-upon scope of services. The assessment followed the standard practice for conducting Environmental Site Assessments from the ASTM Standard E1903-19 and DEQ Site Assessment regulations. Based on the evaluation of the current findings of this assessment, the following findings, conclusions and recommendations have been developed.

7.1 Findings

GEM Report Review and Field Observation Findings

- All boring locations performed by GEM were field located by Alpha, except for Boring B2.
- The location of the southern tank pit shown on the GEM map (Figure 2 - Site Plan) does not appear to correspond to field markings painted on the ground during the geophysical survey. Borings logs were reviewed to help interpret if Boring B2 was inside the tank pit. The log shows there was no recovery between 4 to 8 feet and fill material below, indicating it may have been. As mentioned above, Alpha was unable to field locate Boring B2.
- Gasoline only detected from Boring B2 at the east end of the southern suspected tank pit location.
- Low VOCs detected in Boring B2.

Summary of Alpha August 2024 Findings

- Gasoline was detected in Borings D1, D2, D3, D5 and D6.
- The highest detected concentration of gasoline was in Boring D3@12’ (4,040 ppm).
- Concentrations appear to rapidly attenuate in all borings except for Boring D6 (2,360 ppm at 12’ and 1,200 ppm at 15’).
- Visual observations in the upper 3 feet of soil did not indicate petroleum impacts from this depth interval. Field observations and soil results are consistent with a below ground tank release. Based on these factors, the occupational direct contact risk does not appear to be applicable.
- The detections of gasoline and VOCs indicate a vapor intrusion risk may exist.

Summary of Alpha December 2024 Findings

- The maximum gasoline detection was in Boring D8@12’ (4,370 ppm) and rapidly attenuates with depth to Boring D8@20’ (142 ppm).
- Visual observations in the upper 3 feet of soil did not indicate petroleum impacts from this depth interval. Field observations and soil results are consistent with a below ground tank release. Based on these factors, the occupational direct contact risk does not appear to be applicable.
- The groundwater analytical results from the two downgradient wells indicate that gasoline or VOCs were not detected in Boring D9 or D10.
- The laboratory analytical results indicate TPH detections in Sub-Slab Vapor Sample SS1 exceed the Vapor Intrusion into Buildings RBCs for occupational receptors. The detected concentration was 47,800 µg/m3 and the occupational RBC is 40,000 µg/m3. The field technician noted that the sample was collected along a crack in the concrete floor. This appears to have biased the sample results high.

Summary of Alpha March 2025 Findings

- The laboratory analytical results indicate VOC and TPH detections in sub-slab vapor sample. The detected concentrations did not exceed the Vapor Intrusion into Buildings RBCs for occupational receptors. The detected TPH concentrations of 504 µg/m3 in SS3-2, 390 µg/m3 in SS4 and 425 µg/m3 in SS5 are well below the occupational RBC is 40,000 µg/m3. Sample SS3-2 was located approximately 3 feet from SS1.

7.2 Conclusions

Soil

Gasoline impacts in the soils appear to be isolated around the area of the southern tank pit. Based on previous and current data, the impacted area measures approximately 30'x 30' or 900 square feet. Soil impacts are relatively deep ranging from approximately 12 to 20 feet. The lateral and vertical impacts appear to have been sufficiently delineated.

Groundwater

Gasoline impacts were not encountered in the two downgradient wells. If any groundwater impacts on the site exist, they would be restricted to the immediate area around the former tank.

7.3 Risk Evaluation

Based on the previous soil and groundwater testing and the current sub-slab vapor findings, no environmental conditions were encountered at the Property that could pose an adverse risk to site occupants or future workers.

7.4 Recommendations

Alpha does not recommend further assessment of the Property at this time.

Based on the analytical results and comparison with current DEQ RBCs, it is our opinion that the site is a candidate for an NFA determination by the DEQ.

Basis for NFA recommendation:

- Near surface impacts (less than 3 feet) do not appear to be present as the release was from an underground storage tank.
- The concentrations of petroleum and VOCs in soils greater than three feet are below all RBCs, except leaching to groundwater.
- Groundwater at the site is not used and any potential impacts are limited to the site itself.
- The investigation indicates site impacts are relatively localized.
- The investigation indicates that in general, soil concentrations rapidly attenuate with depth.
- Soil vapors are not a significant risk to site occupants.
- The area in the vicinity of the Property is supplied by the municipal water system.

8.0 LIMITATIONS & USE RELIANCE

The investigation considered the past activities and operations conducted on the Property and adjacent properties to identify the potential for releases to have occurred or other reasons to conclude that there is a presence or likely presence of substances relevant to the objectives of the investigation. Alpha makes every attempt to fulfill the user's objectives which dictate the thresholds of concern or confidence desired in the conclusions to be derived from this assessment.

There is a possibility that, even with the proper application of these methodologies, there may exist at the Property conditions that could not be identified within the scope of the assessment or which were not reasonably identifiable from the available information. The methodologies of this assessment are not intended to produce all inclusive or comprehensive results, but rather to provide the client and interested parties with an indication of subsurface environmental conditions in specifically targeted areas of the property at this time.

8.1 Limitations and Exceptions

In preparing the investigation sampling plans and reports, Alpha has relied upon certain information and representations contained in the historical documents provided to Alpha and the verbal statements of other consultants, field data (soil/groundwater) and additional information provided to Alpha. Therefore, this report is limited to the conclusions drawn based on information obtained and assumptions made during the review process and analytical results for this investigation.

Alpha relied upon the information and did not attempt to independently re-verify its accuracy or completeness, except as discussed. Potential inconsistencies or omissions of a nature that might call into question the validity of the information were not detected. To the extent that the conclusions in this report are based in whole or in part on such information, they are contingent on its validity. Alpha assumes no responsibility for any consequence arising from any information or condition that was concealed, withheld, misrepresented, or otherwise not fully disclosed or available to Alpha.

Within the limitations of the agreed-upon scope of services or the time and budgeting restraints imposed by the client, this investigation has been undertaken and performed in a professional manner, in accordance with generally accepted engineering practices, using the degree of skill and care ordinarily exercised by reputable environmental consultants under similar circumstances. No representations or warranties are made concerning the nature or quality of the air, soil, water, building materials, or any other substance on the Property (including the potential for any substance to migrate into a structure), other than the immediate subject sampling areas as stated in this report. The investigation is a screening and is not intended to be a definitive investigation of existing or potential adverse environmental impacts; thus, it is possible that such an impact exists on the Property or adjacent properties, but was not identified during the investigation. The investigation is not intended to satisfy the level of inquiry that may be necessary to support remedial solutions for a site. Conclusions in this report represent professional judgments based upon the information evaluated during the course of the assessment, not scientific certainties.

8.2 Use Reliance

This report has been prepared for the express use of Jay Poizer, his representatives and the Oregon DEQ. The client and/or Users of this report and its legal counsel may release all or parts of this report to third parties; however, in using this report, such third parties agree that they shall have no legal recourse against Alpha or its parent or subsidiaries, and shall indemnify and defend Alpha from and against all claims arising out of or in conjunction with such use or reliance. This report does not constitute legal advice. In addition, Alpha makes no determination or recommendations regarding the decision to purchase, sell, or provide financing for this Property.

9.0 SIGNATURES OF ENVIROMENTAL PROFESSIONALS

Alpha is providing the client with the results of our investigation for the Property. Alpha completed the investigation of the Property in a professional manner according with generally accepted engineering practices, using the degree of skill and care ordinarily exercised by reputable environmental consultants under similar circumstances.

The environmental consultants listed below exercised professional judgment based on knowledge of the manner in which releases commonly occur in connection with commercial or industrial activities and operations similar to those currently or historically conducted on or adjacent to the Property.

The consultants also possess applicable education, professional training, licensing and relevant experience to conduct the environmental investigation and other activities in accordance with the relevant standards and to develop opinions and conclusions regarding target analytes in the environmental media.

Alpha appreciates the opportunity to provide environmental services to you. If you have any questions concerning this report, or if we can assist you in any other matter, please contact our office at 503-292-5346.

Jim Cooper, R.G.
Senior Geologist

ALPHA ENVIRONMENTAL SERVICES, INC.

10.0 REFERENCES

American Society for Testing and Materials, *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process*, ASTM Designation: E 1903-19

New Jersey Department of Environmental Protection, Site Remediation and Waste Management Program, *Vapor Intrusion Guidance*, Version 4.1, January 2018.

Oregon DEQ, *Files from Public Records*.

State of Oregon Water Resources Department, Agency Resources, *Online Well Log Search and Groundwater Level Data*, accessed via website.

United States Geological Survey, *Depth to Groundwater in Portland*, Interactive Map.

Walker, 1991. *Geological Map of Oregon,* United States Geological Survey, Walker, G.W. and MacLeod, N.S., 1991.

11.0 ACRONYMS

ASTM	American Society for Testing and Materials
bsg	below surface grade
COPC	Contaminants of Potential Concern
CSM	Conceptual Site Model
DEQ	Department of Environmental Quality (Oregon)
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
ND	Not Detected At or Above Laboratory Reporting Limits
ppm	parts per million
RBCs	Risk-based Concentrations
RBDM	Risk-based Decision Making
RCRA	Resource Conservation & Recovery Act
RECs	Recognized Environmental Conditions
TPH	Total Petroleum Hydrocarbons
VOCs	Volatile Organic Compounds
WRD	Water Resources Department (Oregon)

FIGURES:

SITE OVERVIEW MAP
SITE SAMPLING MAP

LEGEND

PROPERTY BOUNDARY

FIGURE 1: SITE OVERVIEW MAP

3939 NW ST HELENS ROAD
PORTLAND, OREGON 97210

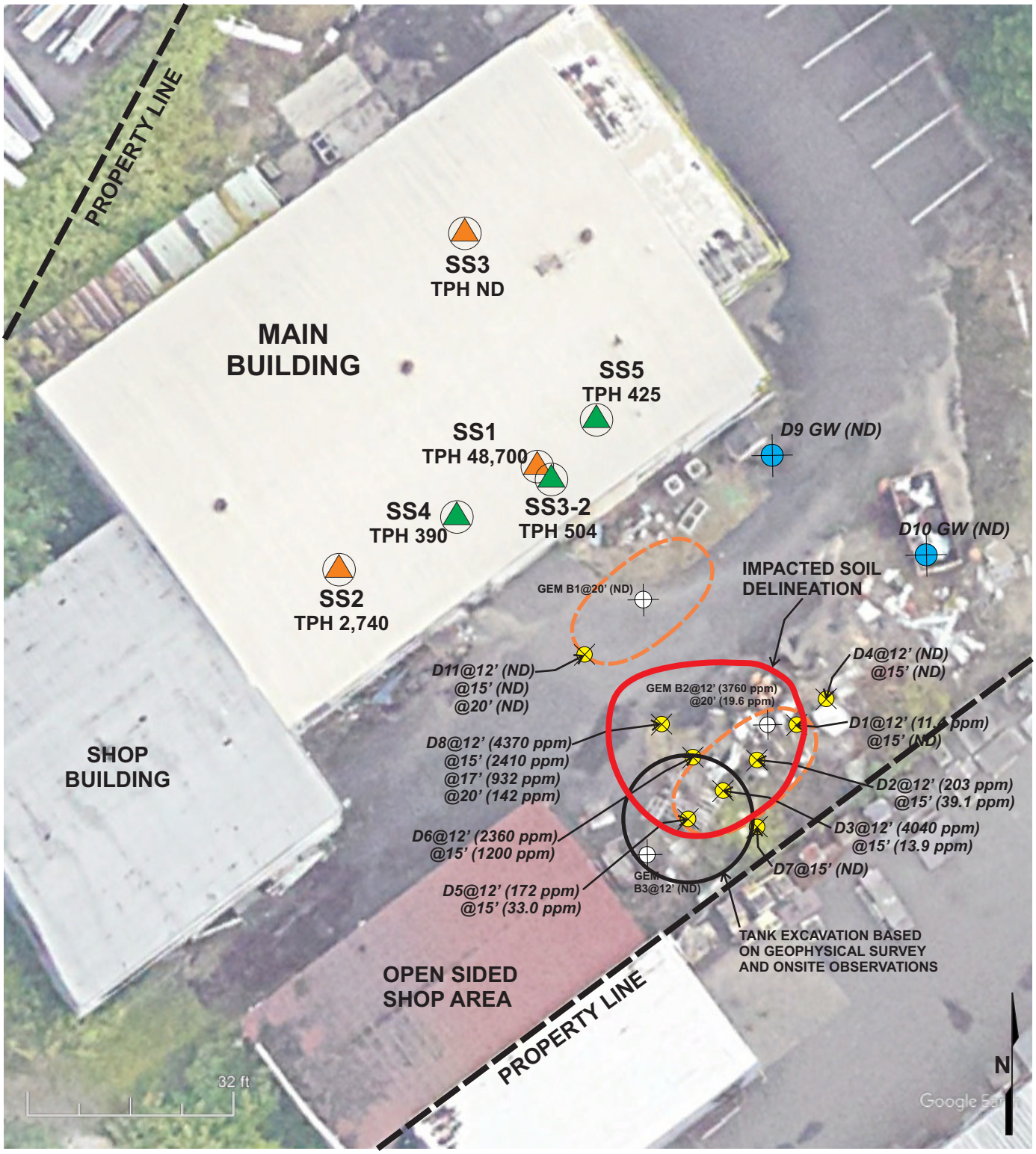
NOTES

MAP SYMBOLS DENOTE LOCATIONS AND MAY NOT BE TO SCALE

GOOGLE MAPS BASE IMAGE MAY BE SKEWED BY SATELLITE POSITION

PROJECT NO: 24-63060

Alpha environmental
11080 SW ALLEN BVLD, STE 100
BEAVERTON, OREGON 97005
(503) 292-5346



LEGEND

- SOIL SAMPLE LOCATIONS
- GEM SOIL SAMPLE LOCATIONS
- GW SAMPLE LOCATION
- SUB-SLAB VAPOR SAMPLE LOCATIONS (DEC 2024)
- TANK EXCAVATION BASED ON GEM MAP
- SUB-SLAB VAPOR SAMPLE LOCATIONS (MAR 2025)

FIGURE 2: SITE SAMPLING MAP

3939 NW ST HELENS ROAD
PORTLAND, OREGON 97210

NOTES

MAP SYMBOLS DENOTE LOCATIONS AND MAY NOT BE TO SCALE

GOOGLE MAPS BASE IMAGE MAY BE SKEWED BY SATELLITE POSITION

PROJECT NO: 24-63060

Alpha environmental
11080 SW ALLEN BVLD, STE 100
BEAVERTON, OREGON 97005
(503) 292-5346

APPENDIX A:

BORING LOGS

BOREHOLE LITHOLOGIC LOG

BORING # D1 | **PROJECT #** 24-63060 | **SHEET** 1 of 1

PROJECT NAME: 3939 NW St. Helens Rd
Portland, OR. 97210
LOGGED BY: Matt Holmstrom
DRILLED BY: Cascade Drilling

START/END DATE: 08/06/2024
BORING METHOD: Direct-Push Sampler
BORING DEPTH: 15'
BORING DIAMETER: 2-3/8"

DEPTH (ft.)	TEMP. WELL DETAILS	SAMPLING INTERVAL 2.5 feet	PID (ppm)	SAMPLE #	~ % RECOVERY	APPARENT MOISTURE CONDITIONS	SOIL DESCRIPTION
1						Dry	**Brown Silt w/ Gravel**
			<5		62		
						Damp	
5							**Gray Silt (Organic)**
							No Recovery from 5'-10'
			<5		0		
10							
							Brown/Gray Silt
			<5	D1@12'			**Gravel**
					100		**Gray Silt**
15			<5	D1@15'			**Brown Sitl**
						Bottom of boring at 15'	

Boreholes are continuously sampled at 5 ft. intervals. Samples are collected and field checked with PID meter and for soil discoloration/odors. *Boring was abandoned with 3/8 Bentonite chips.*

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN ONLY APPLIES AT THE SPECIFIC BORING LOCATION AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

BOREHOLE LITHOLOGIC LOG

BORING # D2	PROJECT # 24-63060	SHEET 1 of 1

PROJECT NAME: 3939 NW St. Helens Rd
Portland, OR. 97210
LOGGED BY: Matt Holmstrom
DRILLED BY: Cascade Drilling

START/END DATE: 08/06/2024
BORING METHOD: Direct-Push Sampler
BORING DEPTH: 15'
BORING DIAMETER: 2-3/8"

DEPTH (ft.)	TEMP. WELL DETAILS	SAMPLING INTERVAL 2.5 feet	PID (ppm)	SAMPLE #	~ % RECOVERY	APPARENT MOISTURE CONDITIONS	SOIL DESCRIPTION
1					87		Brown Silt w/ Gravel
5							Gray Silt (Organic)
10					100		
15			<5	D2@12'	100		Brown Silt
			<5	D2@15'			
						Bottom of boring at 15'	

Boreholes are continuously sampled at 5 ft. intervals. Samples are collected and field checked with PID meter and for soil discoloration/odors. *Boring was abandoned with 3/8 Bentonite chips.*

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN ONLY APPLIES AT THE SPECIFIC BORING LOCATION AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

BOREHOLE LITHOLOGIC LOG

BORING # D3 | **PROJECT #** 24-63060 | **SHEET** 1 of 1

PROJECT NAME: 3939 NW St. Helens Rd, Portland, OR. 97210
LOGGED BY: Matt Holmstrom
DRILLED BY: Cascade Drilling

START/END DATE: 08/06/2024
BORING METHOD: Direct-Push Sampler
BORING DEPTH: 15'
BORING DIAMETER: 2-3/8"

DEPTH (ft.)	TEMP. WELL DETAILS	SAMPLING INTERVAL 2.5 feet	PID (ppm)	SAMPLE #	~ % RECOVERY	APPARENT MOISTURE CONDITIONS	SOIL DESCRIPTION
1					80	Dry	**Brown Silt w/ Gravel**
5						Damp	**Gray Silt**
10					100		**Gray/Brown Silt**
15			89	D3@12'	100	Moist	**Dark Gray Silt**
			<5	D3@15'			**Brown Silt**
						Bottom of boring at 15'	

Boreholes are continuously sampled at 5 ft. intervals. Samples are collected and field checked with PID meter and for soil discoloration/odors. *Boring was abandoned with 3/8 Bentonite chips.*

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN ONLY APPLIES AT THE SPECIFIC BORING LOCATION AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

BOREHOLE LITHOLOGIC LOG

BORING # D4 | **PROJECT #** 24-63060 | **SHEET** 1 of 1

PROJECT NAME: 3939 NW St. Helens Rd
Portland, OR. 97210
LOGGED BY: Matt Holmstrom
DRILLED BY: Cascade Drilling

START/END DATE: 08/06/2024
BORING METHOD: Direct-Push Sampler
BORING DEPTH: 15'
BORING DIAMETER: 2-3/8"

DEPTH (ft.)	TEMP. WELL DETAILS	SAMPLING INTERVAL 2.5 feet	PID (ppm)	SAMPLE #	~ % RECOVERY	APPARENT MOISTURE CONDITIONS	SOIL DESCRIPTION
1					80	Dry	**Gravel**
							Brown Silt
5			<5			Damp	**Gray Silt**
					80		**Brown/Gray Silt**
10							
					100		**Gray Silt**
			<5	D4@12'			
15			<5	D4@15'			
						Bottom of boring at 15'	

Boreholes are continuously sampled at 5 ft. intervals. Samples are collected and field checked with PID meter and for soil discoloration/odors. *Boring was abandoned with 3/8 Bentonite chips.*

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN ONLY APPLIES AT THE SPECIFIC BORING LOCATION AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

BOREHOLE LITHOLOGIC LOG

BORING # D5	PROJECT # 24-63060	SHEET 1 of 1

PROJECT NAME: 3939 NW St. Helens Rd, Portland, OR. 97210
LOGGED BY: Matt Holmstrom
DRILLED BY: Cascade Drilling

START/END DATE: 08/06/2024
BORING METHOD: Direct-Push Sampler
BORING DEPTH: 15'
BORING DIAMETER: 2-3/8"

DEPTH (ft.)	TEMP. WELL DETAILS	SAMPLING INTERVAL 2.5 feet	PID (ppm)	SAMPLE #	~ % RECOVERY	APPARENT MOISTURE CONDITIONS	SOIL DESCRIPTION
1						Dry	**Brown Silt w/ Gravel**
			<5		67		
5							
			<5		100		**Gray Silt (Organic)**
10						Damp	
			<5	D5@12'			
					100		
15			<5	D5@15'			
						Bottom of boring at 15'	

Boreholes are continuously sampled at 5 ft. intervals. Samples are collected and field checked with PID meter and for soil discoloration/odors. ***Boring was abandoned with 3/8 Bentonite chips.***

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN ONLY APPLIES AT THE SPECIFIC BORING LOCATION AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

BOREHOLE LITHOLOGIC LOG

BORING # D6	PROJECT # 24-63060	SHEET 1 of 1

PROJECT NAME: 3939 NW St. Helens Rd, Portland, OR. 97210
LOGGED BY: Matt Holmstrom
DRILLED BY: Cascade Drilling

START/END DATE: 08/06/2024
BORING METHOD: Direct-Push Sampler
BORING DEPTH: 15'
BORING DIAMETER: 2-3/8"

DEPTH (ft.)	TEMP. WELL DETAILS	SAMPLING INTERVAL 2.5 feet	PID (ppm)	SAMPLE #	~ % RECOVERY	APPARENT MOISTURE CONDITIONS	SOIL DESCRIPTION
1					60	Dry	**Asphalt**
							Brown Sandy Silt w/ Gravel
5							**Brown Silt**
10			<5		37		
						Moist	**Gray Silt**
			46	D6@12'	100		
15			15	D6@15'			**Brown Silt**
						Bottom of boring at 15'	

Boreholes are continuously sampled at 5 ft. intervals. Samples are collected and field checked with PID meter and for soil discoloration/odors. ***Boring was abandoned with 3/8 Bentonite chips.***

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN ONLY APPLIES AT THE SPECIFIC BORING LOCATION AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

BOREHOLE LITHOLOGIC LOG

BORING # D7 | **PROJECT #** 24-63060 | **SHEET** 1 of 1

PROJECT NAME: 3939 NW St. Helens Rd
Portland, OR. 97210
LOGGED BY: Matt Holmstrom
DRILLED BY: Cascade Drilling

START/END DATE: 08/06/2024
BORING METHOD: Direct-Push Sampler
BORING DEPTH: 15'
BORING DIAMETER: 2-3/8"

DEPTH (ft.)	TEMP. WELL DETAILS	SAMPLING INTERVAL 2.5 feet	PID (ppm)	SAMPLE #	~ % RECOVERY	APPARENT MOISTURE CONDITIONS	SOIL DESCRIPTION
1					87	Dry	**Gravel with Sand and Silt**
							Brown Silt
5							
					100	Damp	**Gray Silt (Organic)**
10							
					100		**Gray/Brown Silt**
15			<5	D7@15'			
						Bottom of boring at 15'	

Boreholes are continuously sampled at 5 ft. intervals. Samples are collected and field checked with PID meter and for soil discoloration/odors. ***Boring was abandoned with 3/8 Bentonite chips.***

BOREHOLE LITHOLOGIC LOG

BORING # D8 | **PROJECT #** 24-63060 | **SHEET** 1 of 1

PROJECT NAME: 3939 NW St. Helens Rd, Portland, OR. 97210
LOGGED BY: Matt Holmstrom
DRILLED BY: Cascade Drilling

START/END DATE: 12/23/2024
BORING METHOD: Direct-Push Sampler
BORING DEPTH: 20'
BORING DIAMETER: 2-3/8"

DEPTH (ft.)	TEMP. WELL DETAILS	SAMPLING INTERVAL 2.5 feet	PID (ppm)	SAMPLE #	~ % RECOVERY	APPARENT MOISTURE CONDITIONS	SOIL DESCRIPTION
1						Dry	**Gravel with Sand and Silt**
							Brown Silt
					78		
5							
						Damp	
					99		
						Moist	
10							**Gray/Brown Silt**
				D8@12'			
					100	Very Moist	**Gray Silt**
15				D8@15'			**Brown Silt**
						Wet	
				D8@17'			
					100		
20				D8@20'		**Bottom of boring at 20'**	

Boreholes are continuously sampled at 5 ft. intervals. Samples are collected and field checked with PID meter and for soil discoloration/odors. ***Boring was abandoned with 3/8 Bentonite chips.***

BOREHOLE LITHOLOGIC LOG

BORING # D9	PROJECT # 24-63060	SHEET 1 of 1

PROJECT NAME: 3939 NW St. Helens Rd
Portland, OR. 97210
LOGGED BY: Matt Holmstrom
DRILLED BY: Cascade Drilling

START/END DATE: 12/23/2024
BORING METHOD: Direct-Push Sampler
BORING DEPTH: 20'
BORING DIAMETER: 2-3/8"

DEPTH (ft.)	TEMP. WELL DETAILS	SAMPLING INTERVAL 2.5 feet	PID (ppm)	SAMPLE #	~ % RECOVERY	APPARENT MOISTURE CONDITIONS	SOIL DESCRIPTION
1							No Sample Recovery – Boring Drilled with Expendable Drill Point
5							
10							SCREENED INTERVAL 10 to 20'
15							Static GW at 11.5'
20						Bottom of boring at 20'	

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN ONLY APPLIES AT THE SPECIFIC BORING LOCATION AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

BOREHOLE LITHOLOGIC LOG

BORING # D10	PROJECT # 24-63060	SHEET 1 of 1

PROJECT NAME: 3939 NW St. Helens Rd
Portland, OR. 97210
LOGGED BY: Matt Holmstrom
DRILLED BY: Cascade Drilling

START/END DATE: 12/23/2024
BORING METHOD: Direct-Push Sampler
BORING DEPTH: 20'
BORING DIAMETER: 2-3/8"

DEPTH (ft.)	TEMP. WELL DETAILS	SAMPLING INTERVAL 2.5 feet	PID (ppm)	SAMPLE #	~ % RECOVERY	APPARENT MOISTURE CONDITIONS	SOIL DESCRIPTION
1							No Sample Recovery – Boring Drilled with Expendable Drill Point
5							
10							SCREENED INTERVAL 10 to 20'
15							Static GW at 12.6'
20						Bottom of boring at 20'	

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN ONLY APPLIES AT THE SPECIFIC BORING LOCATION AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

BOREHOLE LITHOLOGIC LOG

BORING # D11 | **PROJECT #** 24-63060 | **SHEET** 1 of 1

PROJECT NAME: 3939 NW St. Helens Rd, Portland, OR. 97210
LOGGED BY: Matt Holmstrom
DRILLED BY: Cascade Drilling

START/END DATE: 12/23/2024
BORING METHOD: Direct-Push Sampler
BORING DEPTH: 20'
BORING DIAMETER: 2-3/8"

DEPTH (ft.)	TEMP. WELL DETAILS	SAMPLING INTERVAL 2.5 feet	PID (ppm)	SAMPLE #	~ % RECOVERY	APPARENT MOISTURE CONDITIONS	SOIL DESCRIPTION
1					42	Dry	**Gravel with Sand and Silt**
							Brown Silt
5							
					100	Damp	
10						Moist	**Brown Silt**
				D11@12'	100		
15				D11@15'			**Brown Sand**
					100	Very Moist / Wet	
20				D11@20'		**Bottom of boring at 20'**	

Boreholes are continuously sampled at 5 ft. intervals. Samples are collected and field checked with PID meter and for soil discoloration/odors. ***Boring was abandoned with 3/8 Bentonite chips.***

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN ONLY APPLIES AT THE SPECIFIC BORING LOCATION AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

APPENDIX B:

ANALYTICAL LABORATORY REPORTS

ANALYTICAL REPORT

March 25, 2025

Alpha Environmental Services, Inc

Sample Delivery Group:	L1837811
Samples Received:	03/19/2025
Project Number:	24-64842
Description:	3939 NW St Helens Rd

Report To:

Jim Cooper
11080 SW Allen Blvd.
Suite 100
Beaverton, OR 97005

Entire Report Reviewed By:

Jordan N Zito
Project Manager

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

TABLE OF CONTENTS

SAMPLE SUMMARY

SS3 L1837811-01 Air

Collected by: 24-63060 | Collected date/time: 03/18/25 10:06 | Received date/time: 03/19/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2474821	1	03/23/25 13:49	03/23/25 13:49	GH	Mt. Juliet, TN

SS4 L1837811-02 Air

Collected by: 24-63060 | Collected date/time: 03/18/25 10:16 | Received date/time: 03/19/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2474821	1	03/23/25 14:30	03/23/25 14:30	GH	Mt. Juliet, TN

SS5 L1837811-03 Air

Collected by: 24-63060 | Collected date/time: 03/18/25 10:23 | Received date/time: 03/19/25 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2474821	1	03/23/25 15:11	03/23/25 15:11	GH	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.

Jordan N Zito
Project Manager

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	MDL ug/m3	RDL ug/m3	Result ug/m3	Qualifier	Dilution	Batch
TPH (GC/MS) Low Fraction	8006-61-9	101	282	826	504	J	1	WG2474821
Acetone	67-64-1	58.10	1.24	2.97	63.2		1	WG2474821
Allyl chloride	107-05-1	76.53	0.582	0.626	U		1	WG2474821
Benzene	71-43-2	78.10	0.351	0.639	3.83		1	WG2474821
Benzyl Chloride	100-44-7	127	0.461	1.04	U		1	WG2474821
Bromodichloromethane	75-27-4	164	0.466	1.34	U		1	WG2474821
Bromoform	75-25-2	253	0.781	6.52	U		1	WG2474821
Bromomethane	74-83-9	94.90	0.364	0.776	U		1	WG2474821
1,3-Butadiene	106-99-0	54.10	0.350	4.43	9.56		1	WG2474821
Carbon disulfide	75-15-0	76.10	0.498	1.24	5.79		1	WG2474821
Carbon tetrachloride	56-23-5	154	0.470	1.26	U		1	WG2474821
Chlorobenzene	108-90-7	113	0.545	0.924	U		1	WG2474821
Chloroethane	75-00-3	64.50	0.290	0.528	U		1	WG2474821
Chloroform	67-66-3	119	0.506	0.973	U		1	WG2474821
Chloromethane	74-87-3	50.50	0.227	0.413	1.32		1	WG2474821
2-Chlorotoluene	95-49-8	126	0.406	1.03	U		1	WG2474821
Cyclohexane	110-82-7	84.20	0.585	0.689	2.78		1	WG2474821
Dibromochloromethane	124-48-1	208	0.592	1.70	U		1	WG2474821
1,2-Dibromoethane	106-93-4	188	0.531	1.54	U		1	WG2474821
1,2-Dichlorobenzene	95-50-1	147	0.441	1.20	U		1	WG2474821
1,3-Dichlorobenzene	541-73-1	147	0.453	1.20	U		1	WG2474821
1,4-Dichlorobenzene	106-46-7	147	0.462	1.20	U		1	WG2474821
1,2-Dichloroethane	107-06-2	99	0.296	0.810	U		1	WG2474821
1,1-Dichloroethane	75-34-3	98	0.285	0.802	U		1	WG2474821
1,1-Dichloroethene	75-35-4	96.90	0.296	0.793	U		1	WG2474821
cis-1,2-Dichloroethene	156-59-2	96.90	0.315	0.793	U		1	WG2474821
trans-1,2-Dichloroethene	156-60-5	96.90	0.291	0.793	U		1	WG2474821
1,2-Dichloropropane	78-87-5	113	0.348	0.924	U		1	WG2474821
cis-1,3-Dichloropropene	10061-01-5	111	0.337	0.908	U		1	WG2474821
trans-1,3-Dichloropropene	10061-02-6	111	0.361	0.908	U		1	WG2474821
1,4-Dioxane	123-91-1	88.10	0.591	2.27	1.70	J	1	WG2474821
Ethanol	64-17-5	46.10	4.47	4.71	35.1		1	WG2474821
Ethylbenzene	100-41-4	106	0.337	0.867	7.41		1	WG2474821
4-Ethyltoluene	622-96-8	120	0.435	0.982	6.48		1	WG2474821
Trichlorofluoromethane	75-69-4	137.40	0.433	1.12	1.71		1	WG2474821
Dichlorodifluoromethane	75-71-8	120.92	0.399	0.989	1.62		1	WG2474821
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.576	1.53	1.17	J	1	WG2474821
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.529	1.40	U		1	WG2474821
Heptane	142-82-5	100	0.466	0.818	6.26		1	WG2474821
Hexachloro-1,3-butadiene	87-68-3	261	0.854	6.73	U		1	WG2474821
n-Hexane	110-54-3	86.20	0.504	2.22	10.2		1	WG2474821
Isopropylbenzene	98-82-8	120.20	0.355	0.983	0.703	J	1	WG2474821
Methylene Chloride	75-09-2	84.90	0.587	0.694	6.56		1	WG2474821
Methyl Butyl Ketone	591-78-6	100	0.544	5.11	0.875	J	1	WG2474821
2-Butanone (MEK)	78-93-3	72.10	0.342	3.69	45.4		1	WG2474821
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	0.434	5.12	0.880	J	1	WG2474821
Methyl methacrylate	80-62-6	100.12	0.692	0.819	U		1	WG2474821
MTBE	1634-04-4	88.10	0.293	0.721	U		1	WG2474821
Naphthalene	91-20-3	128	3.23	3.30	U		1	WG2474821
2-Propanol	67-63-0	60.10	1.67	3.07	133		1	WG2474821
Propene	115-07-1	42.10	0.368	2.15	33.9		1	WG2474821
Styrene	100-42-5	104	0.341	1.70	U		1	WG2474821
1,1,2,2-Tetrachloroethane	79-34-5	168	0.478	1.37	U		1	WG2474821
Tetrachloroethylene	127-18-4	166	0.754	1.36	U		1	WG2474821
Tetrahydrofuran	109-99-9	72.10	0.484	0.590	U		1	WG2474821
Toluene	108-88-3	92.10	0.490	1.88	29.9		1	WG2474821

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.	MDL ug/m3	RDL ug/m3	Result ug/m3	Qualifier	Dilution	Batch
1,2,4-Trichlorobenzene	120-82-1	181	3.42	4.66	U		1	WG2474821
1,1,1-Trichloroethane	71-55-6	133	0.391	1.09	0.577	J	1	WG2474821
1,1,2-Trichloroethane	79-00-5	133	0.372	1.09	U		1	WG2474821
Trichloroethylene	79-01-6	131	0.364	1.07	U		1	WG2474821
1,2,4-Trimethylbenzene	95-63-6	120	0.455	0.982	6.72		1	WG2474821
1,3,5-Trimethylbenzene	108-67-8	120	0.419	0.982	2.33		1	WG2474821
2,2,4-Trimethylpentane	540-84-1	114.22	0.420	0.934	6.87		1	WG2474821
Vinyl chloride	75-01-4	62.50	0.211	0.511	U		1	WG2474821
Vinyl Bromide	593-60-2	106.95	0.328	0.875	U		1	WG2474821
Vinyl acetate	108-05-4	86.10	0.341	2.22	U		1	WG2474821
m&p-Xylene		106	0.754	1.73	30.9		1	WG2474821
o-Xylene	95-47-6	106	0.385	0.867	10.9		1	WG2474821
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*			*97.3*		*60.0-140*	WG2474821

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	MDL ug/m3	RDL ug/m3	Result ug/m3	Qualifier	Dilution	Batch
TPH (GC/MS) Low Fraction	8006-61-9	101	282	826	390	J	1	WG2474821
Acetone	67-64-1	58.10	1.24	2.97	29.0		1	WG2474821
Allyl chloride	107-05-1	76.53	0.582	0.626	U		1	WG2474821
Benzene	71-43-2	78.10	0.351	0.639	4.06		1	WG2474821
Benzyl Chloride	100-44-7	127	0.461	1.04	U		1	WG2474821
Bromodichloromethane	75-27-4	164	0.466	1.34	U		1	WG2474821
Bromoform	75-25-2	253	0.781	6.52	U		1	WG2474821
Bromomethane	74-83-9	94.90	0.364	0.776	U		1	WG2474821
1,3-Butadiene	106-99-0	54.10	0.350	4.43	1.93	J	1	WG2474821
Carbon disulfide	75-15-0	76.10	0.498	1.24	2.07		1	WG2474821
Carbon tetrachloride	56-23-5	154	0.470	1.26	U		1	WG2474821
Chlorobenzene	108-90-7	113	0.545	0.924	U		1	WG2474821
Chloroethane	75-00-3	64.50	0.290	0.528	U		1	WG2474821
Chloroform	67-66-3	119	0.506	0.973	U		1	WG2474821
Chloromethane	74-87-3	50.50	0.227	0.413	1.43		1	WG2474821
2-Chlorotoluene	95-49-8	126	0.406	1.03	U		1	WG2474821
Cyclohexane	110-82-7	84.20	0.585	0.689	1.17		1	WG2474821
Dibromochloromethane	124-48-1	208	0.592	1.70	U		1	WG2474821
1,2-Dibromoethane	106-93-4	188	0.531	1.54	U		1	WG2474821
1,2-Dichlorobenzene	95-50-1	147	0.441	1.20	U		1	WG2474821
1,3-Dichlorobenzene	541-73-1	147	0.453	1.20	U		1	WG2474821
1,4-Dichlorobenzene	106-46-7	147	0.462	1.20	U		1	WG2474821
1,2-Dichloroethane	107-06-2	99	0.296	0.810	U		1	WG2474821
1,1-Dichloroethane	75-34-3	98	0.285	0.802	U		1	WG2474821
1,1-Dichloroethene	75-35-4	96.90	0.296	0.793	U		1	WG2474821
cis-1,2-Dichloroethene	156-59-2	96.90	0.315	0.793	U		1	WG2474821
trans-1,2-Dichloroethene	156-60-5	96.90	0.291	0.793	U		1	WG2474821
1,2-Dichloropropane	78-87-5	113	0.348	0.924	U		1	WG2474821
cis-1,3-Dichloropropene	10061-01-5	111	0.337	0.908	U		1	WG2474821
trans-1,3-Dichloropropene	10061-02-6	111	0.361	0.908	U		1	WG2474821
1,4-Dioxane	123-91-1	88.10	0.591	2.27	U		1	WG2474821
Ethanol	64-17-5	46.10	4.47	4.71	39.0		1	WG2474821
Ethylbenzene	100-41-4	106	0.337	0.867	5.81		1	WG2474821
4-Ethyltoluene	622-96-8	120	0.435	0.982	5.30		1	WG2474821
Trichlorofluoromethane	75-69-4	137.40	0.433	1.12	1.41		1	WG2474821
Dichlorodifluoromethane	75-71-8	120.92	0.399	0.989	1.48		1	WG2474821
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.576	1.53	0.647	J	1	WG2474821
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.529	1.40	U		1	WG2474821
Heptane	142-82-5	100	0.466	0.818	3.01		1	WG2474821
Hexachloro-1,3-butadiene	87-68-3	261	0.854	6.73	U		1	WG2474821
n-Hexane	110-54-3	86.20	0.504	2.22	8.88		1	WG2474821
Isopropylbenzene	98-82-8	120.20	0.355	0.983	0.570	J	1	WG2474821
Methylene Chloride	75-09-2	84.90	0.587	0.694	16.7		1	WG2474821
Methyl Butyl Ketone	591-78-6	100	0.544	5.11	U		1	WG2474821
2-Butanone (MEK)	78-93-3	72.10	0.342	3.69	9.08		1	WG2474821
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	0.434	5.12	0.847	J	1	WG2474821
Methyl methacrylate	80-62-6	100.12	0.692	0.819	U		1	WG2474821
MTBE	1634-04-4	88.10	0.293	0.721	U		1	WG2474821
Naphthalene	91-20-3	128	3.23	3.30	U		1	WG2474821
2-Propanol	67-63-0	60.10	1.67	3.07	20.6		1	WG2474821
Propene	115-07-1	42.10	0.368	2.15	U		1	WG2474821
Styrene	100-42-5	104	0.341	1.70	U		1	WG2474821
1,1,2,2-Tetrachloroethane	79-34-5	168	0.478	1.37	U		1	WG2474821
Tetrachloroethylene	127-18-4	166	0.754	1.36	U		1	WG2474821
Tetrahydrofuran	109-99-9	72.10	0.484	0.590	U		1	WG2474821
Toluene	108-88-3	92.10	0.490	1.88	20.9		1	WG2474821

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	MDL ug/m3	RDL ug/m3	Result ug/m3	Qualifier	Dilution	Batch
1,2,4-Trichlorobenzene	120-82-1	181	3.42	4.66	U		1	WG2474821
1,1,1-Trichloroethane	71-55-6	133	0.391	1.09	U		1	WG2474821
1,1,2-Trichloroethane	79-00-5	133	0.372	1.09	U		1	WG2474821
Trichloroethylene	79-01-6	131	0.364	1.07	U		1	WG2474821
1,2,4-Trimethylbenzene	95-63-6	120	0.455	0.982	5.30		1	WG2474821
1,3,5-Trimethylbenzene	108-67-8	120	0.419	0.982	2.01		1	WG2474821
2,2,4-Trimethylpentane	540-84-1	114.22	0.420	0.934	8.74		1	WG2474821
Vinyl chloride	75-01-4	62.50	0.211	0.511	U		1	WG2474821
Vinyl Bromide	593-60-2	106.95	0.328	0.875	U		1	WG2474821
Vinyl acetate	108-05-4	86.10	0.341	2.22	U		1	WG2474821
m&p-Xylene		106	0.754	1.73	23.2		1	WG2474821
o-Xylene	95-47-6	106	0.385	0.867	8.54		1	WG2474821
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*			*97.0*		*60.0-140*	WG2474821

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	MDL ug/m3	RDL ug/m3	Result ug/m3	Qualifier	Dilution	Batch
TPH (GC/MS) Low Fraction	8006-61-9	101	282	826	425	J	1	WG2474821
Acetone	67-64-1	58.10	1.24	2.97	69.1		1	WG2474821
Allyl chloride	107-05-1	76.53	0.582	0.626	U		1	WG2474821
Benzene	71-43-2	78.10	0.351	0.639	4.25		1	WG2474821
Benzyl Chloride	100-44-7	127	0.461	1.04	U		1	WG2474821
Bromodichloromethane	75-27-4	164	0.466	1.34	U		1	WG2474821
Bromoform	75-25-2	253	0.781	6.52	U		1	WG2474821
Bromomethane	74-83-9	94.90	0.364	0.776	U		1	WG2474821
1,3-Butadiene	106-99-0	54.10	0.350	4.43	0.447	J	1	WG2474821
Carbon disulfide	75-15-0	76.10	0.498	1.24	2.92		1	WG2474821
Carbon tetrachloride	56-23-5	154	0.470	1.26	U		1	WG2474821
Chlorobenzene	108-90-7	113	0.545	0.924	U		1	WG2474821
Chloroethane	75-00-3	64.50	0.290	0.528	U		1	WG2474821
Chloroform	67-66-3	119	0.506	0.973	U		1	WG2474821
Chloromethane	74-87-3	50.50	0.227	0.413	1.38		1	WG2474821
2-Chlorotoluene	95-49-8	126	0.406	1.03	U		1	WG2474821
Cyclohexane	110-82-7	84.20	0.585	0.689	3.89		1	WG2474821
Dibromochloromethane	124-48-1	208	0.592	1.70	U		1	WG2474821
1,2-Dibromoethane	106-93-4	188	0.531	1.54	U		1	WG2474821
1,2-Dichlorobenzene	95-50-1	147	0.441	1.20	U		1	WG2474821
1,3-Dichlorobenzene	541-73-1	147	0.453	1.20	U		1	WG2474821
1,4-Dichlorobenzene	106-46-7	147	0.462	1.20	U		1	WG2474821
1,2-Dichloroethane	107-06-2	99	0.296	0.810	U		1	WG2474821
1,1-Dichloroethane	75-34-3	98	0.285	0.802	U		1	WG2474821
1,1-Dichloroethene	75-35-4	96.90	0.296	0.793	U		1	WG2474821
cis-1,2-Dichloroethene	156-59-2	96.90	0.315	0.793	U		1	WG2474821
trans-1,2-Dichloroethene	156-60-5	96.90	0.291	0.793	U		1	WG2474821
1,2-Dichloropropane	78-87-5	113	0.348	0.924	U		1	WG2474821
cis-1,3-Dichloropropene	10061-01-5	111	0.337	0.908	U		1	WG2474821
trans-1,3-Dichloropropene	10061-02-6	111	0.361	0.908	U		1	WG2474821
1,4-Dioxane	123-91-1	88.10	0.591	2.27	U		1	WG2474821
Ethanol	64-17-5	46.10	4.47	4.71	32.6		1	WG2474821
Ethylbenzene	100-41-4	106	0.337	0.867	9.02		1	WG2474821
4-Ethyltoluene	622-96-8	120	0.435	0.982	8.29		1	WG2474821
Trichlorofluoromethane	75-69-4	137.40	0.433	1.12	1.37		1	WG2474821
Dichlorodifluoromethane	75-71-8	120.92	0.399	0.989	1.48		1	WG2474821
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.576	1.53	U		1	WG2474821
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.529	1.40	U		1	WG2474821
Heptane	142-82-5	100	0.466	0.818	6.42		1	WG2474821
Hexachloro-1,3-butadiene	87-68-3	261	0.854	6.73	U		1	WG2474821
n-Hexane	110-54-3	86.20	0.504	2.22	3.77		1	WG2474821
Isopropylbenzene	98-82-8	120.20	0.355	0.983	0.728	J	1	WG2474821
Methylene Chloride	75-09-2	84.90	0.587	0.694	1.26		1	WG2474821
Methyl Butyl Ketone	591-78-6	100	0.544	5.11	0.695	J	1	WG2474821
2-Butanone (MEK)	78-93-3	72.10	0.342	3.69	21.6		1	WG2474821
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	0.434	5.12	1.28	J	1	WG2474821
Methyl methacrylate	80-62-6	100.12	0.692	0.819	0.692	J	1	WG2474821
MTBE	1634-04-4	88.10	0.293	0.721	U		1	WG2474821
Naphthalene	91-20-3	128	3.23	3.30	U		1	WG2474821
2-Propanol	67-63-0	60.10	1.67	3.07	U		1	WG2474821
Propene	115-07-1	42.10	0.368	2.15	2.29		1	WG2474821
Styrene	100-42-5	104	0.341	1.70	U		1	WG2474821
1,1,2,2-Tetrachloroethane	79-34-5	168	0.478	1.37	U		1	WG2474821
Tetrachloroethylene	127-18-4	166	0.754	1.36	U		1	WG2474821
Tetrahydrofuran	109-99-9	72.10	0.484	0.590	U		1	WG2474821
Toluene	108-88-3	92.10	0.490	1.88	38.4		1	WG2474821

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.	MDL ug/m3	RDL ug/m3	Result ug/m3	Qualifier	Dilution	Batch
1,2,4-Trichlorobenzene	120-82-1	181	3.42	4.66	U		1	WG2474821
1,1,1-Trichloroethane	71-55-6	133	0.391	1.09	U		1	WG2474821
1,1,2-Trichloroethane	79-00-5	133	0.372	1.09	U		1	WG2474821
Trichloroethylene	79-01-6	131	0.364	1.07	U		1	WG2474821
1,2,4-Trimethylbenzene	95-63-6	120	0.455	0.982	8.54		1	WG2474821
1,3,5-Trimethylbenzene	108-67-8	120	0.419	0.982	3.00		1	WG2474821
2,2,4-Trimethylpentane	540-84-1	114.22	0.420	0.934	2.52		1	WG2474821
Vinyl chloride	75-01-4	62.50	0.211	0.511	U		1	WG2474821
Vinyl Bromide	593-60-2	106.95	0.328	0.875	U		1	WG2474821
Vinyl acetate	108-05-4	86.10	0.341	2.22	U		1	WG2474821
m&p-Xylene		106	0.754	1.73	37.1		1	WG2474821
o-Xylene	95-47-6	106	0.385	0.867	13.2		1	WG2474821
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*			*96.4*		*60.0-140*	WG2474821

Method Blank (MB)

(MB) R4190280-3 03/23/25 10:30

Analyte	MB Result ug/m3	MB Qualifier	MB MDL ug/m3	MB RDL ug/m3
TPH (GC/MS) Low Fraction	U		282	826
Acetone	U		1.24	2.97
Allyl chloride	U		0.582	0.626
Benzene	U		0.351	0.639
Benzyl Chloride	U		0.461	1.04
Bromodichloromethane	U		0.466	1.34
Bromoform	U		0.781	6.52
Bromomethane	U		0.364	0.776
1,3-Butadiene	U		0.350	4.43
Carbon disulfide	U		0.498	1.24
Carbon tetrachloride	U		0.470	1.26
Chlorobenzene	U		0.545	0.924
Chloroethane	U		0.290	0.528
Chloroform	U		0.506	0.973
Chloromethane	U		0.227	0.413
2-Chlorotoluene	U		0.406	1.03
Cyclohexane	U		0.585	0.689
Dibromochloromethane	U		0.592	1.70
1,2-Dibromoethane	U		0.531	1.54
1,2-Dichlorobenzene	U		0.441	1.20
1,3-Dichlorobenzene	U		0.453	1.20
1,4-Dichlorobenzene	U		0.462	1.20
1,2-Dichloroethane	U		0.296	0.810
1,1-Dichloroethane	U		0.285	0.802
1,1-Dichloroethene	U		0.296	0.793
cis-1,2-Dichloroethene	U		0.315	0.793
trans-1,2-Dichloroethene	U		0.291	0.793
1,2-Dichloropropane	U		0.348	0.924
cis-1,3-Dichloropropene	U		0.337	0.908
trans-1,3-Dichloropropene	U		0.361	0.908
1,4-Dioxane	U		0.591	2.27
Ethanol	U		4.47	4.71
Ethylbenzene	U		0.337	0.867
4-Ethyltoluene	U		0.435	0.982
Trichlorofluoromethane	U		0.433	1.12
Dichlorodifluoromethane	U		0.399	0.989
1,1,2-Trichlorotrifluoroethane	U		0.576	1.53
1,2-Dichlorotetrafluoroethane	U		0.529	1.40
Heptane	U		0.466	0.818
Hexachloro-1,3-butadiene	U		0.854	6.73

Method Blank (MB)

(MB) R4190280-3 03/23/25 10:30

Analyte	MB Result ug/m3	MB Qualifier	MB MDL ug/m3	MB RDL ug/m3
n-Hexane	U		0.504	2.22
Isopropylbenzene	U		0.355	0.983
Methylene Chloride	U		0.587	0.694
Methyl Butyl Ketone	U		0.544	5.11
2-Butanone (MEK)	U		0.342	3.69
4-Methyl-2-pentanone (MIBK)	U		0.434	5.12
Methyl methacrylate	U		0.692	0.819
MTBE	U		0.293	0.721
Naphthalene	U		3.23	3.30
2-Propanol	U		1.67	3.07
Propene	U		0.368	2.15
Styrene	U		0.341	1.70
1,1,2,2-Tetrachloroethane	U		0.478	1.37
Tetrachloroethylene	U		0.754	1.36
Tetrahydrofuran	U		0.484	0.590
Toluene	U		0.490	1.88
1,2,4-Trichlorobenzene	U		3.42	4.66
1,1,1-Trichloroethane	U		0.391	1.09
1,1,2-Trichloroethane	U		0.372	1.09
Trichloroethylene	U		0.364	1.07
1,2,4-Trimethylbenzene	U		0.455	0.982
1,3,5-Trimethylbenzene	U		0.419	0.982
2,2,4-Trimethylpentane	U		0.420	0.934
Vinyl chloride	U		0.211	0.511
Vinyl Bromide	U		0.328	0.875
Vinyl acetate	U		0.341	2.22
m&p-Xylene	U		0.754	1.73
o-Xylene	U		0.385	0.867
(S) 1,4-Bromofluorobenzene	*97.2*			*60.0-140*

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

(LCS) R4190280-1 03/23/25 09:07 • (LCSD) R4190280-2 03/23/25 09:49

Analyte	Spike Amount ug/m3	LCS Result ug/m3	LCSD Result ug/m3	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/MS) Low Fraction	777	830	826	107	106	70.0-130		J	0.499	25
Acetone	8.91	9.46	9.65	106	108	70.0-130			1.99	25
Allyl chloride	11.7	14.7	11.9	125	102	70.0-130			20.7	25
Benzene	12.0	14.0	14.1	117	117	70.0-130			0.684	25

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

(LCS) R4190280-1 03/23/25 09:07 • (LCSD) R4190280-2 03/23/25 09:49

Analyte	Spike Amount ug/m3	LCS Result ug/m3	LCSD Result ug/m3	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzyl Chloride	19.5	23.9	24.5	123	126	70.0-152			2.15	25
Bromodichloromethane	25.2	28.8	29.1	115	116	70.0-130			0.926	25
Bromoform	38.8	42.9	43.8	111	113	70.0-130			1.91	25
Bromomethane	14.6	16.3	17.2	112	118	70.0-130			5.32	25
1,3-Butadiene	8.30	8.92	9.12	107	110	70.0-130			2.21	25
Carbon disulfide	23.3	27.7	27.9	119	120	70.0-130			0.896	25
Carbon tetrachloride	23.6	27.1	27.0	115	114	70.0-130			0.233	25
Chlorobenzene	17.3	20.2	20.4	117	118	70.0-130			0.911	25
Chloroethane	9.89	11.4	12.0	115	121	70.0-130			5.20	25
Chloroform	18.3	20.8	21.0	114	115	70.0-130			1.16	25
Chloromethane	7.75	8.67	8.65	112	112	70.0-130			0.238	25
2-Chlorotoluene	19.3	23.2	23.6	120	122	70.0-130			1.32	25
Cyclohexane	12.9	14.7	14.8	114	115	70.0-130			0.932	25
Dibromochloromethane	31.9	36.5	36.6	114	115	70.0-130			0.233	25
1,2-Dibromoethane	28.8	32.8	33.2	114	115	70.0-130			1.16	25
1,2-Dichlorobenzene	22.5	27.0	27.2	120	121	70.0-130			0.887	25
1,3-Dichlorobenzene	22.5	26.9	27.2	119	121	70.0-130			1.11	25
1,4-Dichlorobenzene	22.5	27.7	28.0	123	124	70.0-130			0.864	25
1,2-Dichloroethane	15.2	17.3	17.6	114	116	70.0-130			1.63	25
1,1-Dichloroethane	15.0	17.3	17.5	115	116	70.0-130			0.922	25
1,1-Dichloroethene	14.9	16.6	17.3	112	117	70.0-130			3.97	25
cis-1,2-Dichloroethene	14.9	17.0	17.1	114	115	70.0-130			0.465	25
trans-1,2-Dichloroethene	14.9	17.1	16.9	115	114	70.0-130			0.932	25
1,2-Dichloropropane	17.3	19.9	20.1	115	116	70.0-130			0.924	25
cis-1,3-Dichloropropene	17.0	18.9	19.1	111	112	70.0-130			0.955	25
trans-1,3-Dichloropropene	17.0	18.6	18.7	109	110	70.0-130			0.731	25
1,4-Dioxane	13.5	15.5	16.0	115	118	70.0-140			2.97	25
Ethanol	7.07	7.75	7.92	110	112	55.0-148			2.17	25
Ethylbenzene	16.3	19.0	19.2	117	118	70.0-130			0.907	25
4-Ethyltoluene	18.4	22.0	22.6	120	123	70.0-130			2.42	25
Trichlorofluoromethane	21.1	24.5	25.3	116	120	70.0-130			3.38	25
Dichlorodifluoromethane	18.5	16.7	17.1	90.1	92.0	64.0-139			2.05	25
1,1,2-Trichlorotrifluoroethane	28.7	33.4	32.3	116	113	70.0-130			3.26	25
1,2-Dichlorotetrafluoroethane	26.2	29.0	29.4	111	112	70.0-130			1.44	25
Heptane	15.3	18.1	18.0	118	117	70.0-130			0.454	25
Hexachloro-1,3-butadiene	40.0	48.8	48.7	122	122	70.0-151			0.219	25
n-Hexane	13.2	15.2	15.2	115	115	70.0-130			0.000	25
Isopropylbenzene	18.4	22.1	22.3	120	121	70.0-130			1.11	25
Methylene Chloride	13.0	14.4	14.7	111	113	70.0-130			1.67	25
Methyl Butyl Ketone	15.3	17.6	17.8	115	116	70.0-149			1.15	25

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

(LCS) R4190280-1 03/23/25 09:07 • (LCSD) R4190280-2 03/23/25 09:49

Analyte	Spike Amount ug/m3	LCS Result ug/m3	LCSD Result ug/m3	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2-Butanone (MEK)	11.1	12.4	12.3	112	111	70.0-130			0.239	25
4-Methyl-2-pentanone (MIBK)	15.4	17.7	17.9	115	117	70.0-139			1.15	25
Methyl methacrylate	15.4	16.3	16.7	106	109	70.0-130			2.48	25
MTBE	13.5	15.2	15.5	113	115	70.0-130			1.64	25
Naphthalene	19.6	24.7	25.0	126	127	70.0-159			1.05	25
2-Propanol	9.22	9.68	9.88	105	107	70.0-139			2.01	25
Propene	6.46	7.13	7.13	110	110	64.0-144			0.000	25
Styrene	31.9	40.1	40.6	126	127	70.0-130			1.37	25
1,1,2,2-Tetrachloroethane	25.8	30.2	30.6	117	119	70.0-130			1.58	25
Tetrachloroethylene	25.5	28.9	29.3	114	115	70.0-130			1.40	25
Tetrahydrofuran	11.1	12.2	12.3	110	111	70.0-137			0.724	25
Toluene	14.1	16.4	16.5	116	117	70.0-130			0.686	25
1,2,4-Trichlorobenzene	27.8	34.1	33.7	123	121	70.0-160			1.31	25
1,1,1-Trichloroethane	20.4	23.0	23.2	113	114	70.0-130			0.943	25
1,1,2-Trichloroethane	20.4	23.3	23.6	114	116	70.0-130			1.16	25
Trichloroethylene	20.1	22.7	22.9	113	114	70.0-130			0.941	25
1,2,4-Trimethylbenzene	18.4	22.4	22.6	122	123	70.0-130			0.873	25
1,3,5-Trimethylbenzene	18.4	22.7	23.1	123	126	70.0-130			1.93	25
2,2,4-Trimethylpentane	17.5	20.1	20.4	115	116	70.0-130			1.39	25
Vinyl chloride	9.59	10.9	11.0	113	115	70.0-130			1.63	25
Vinyl Bromide	16.4	18.7	19.9	114	121	70.0-130			5.90	25
Vinyl acetate	13.2	10.8	11.2	81.6	85.1	70.0-130			4.16	25
m&p-Xylene	32.5	38.9	39.4	120	121	70.0-130			1.22	25
o-Xylene	16.3	19.2	19.6	118	120	70.0-130			1.79	25
(S) 1,4-Bromofluorobenzene				*97.4*	*97.5*	*60.0-140*				

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
J	The identification of the analyte is acceptable; the reported value is an estimate.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Pace* Location Requested (City/State):

Air CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here: M015

Scan QR code for instructions

Company Name: **Alpha Environmental Services, Inc**	Contact/Report To: **Jim Cooper**
Street Address: **11080 SW Allen Blvd.**	Phone #: **503-292-5346**
	E-Mail: **jim@alphaenvironmental.net**
City, State Zip:	Cc E-Mail:
Customer Project #: ~~Z4-64842~~ 24-63060	Invoice to:
Project Name: 3939 NW St Helens Rd	Invoice E-Mail:
Site Collection Info/Facility ID (as applicable): **ALPHAENVBOR-AIR**	Purchase Order # (if applicable):
	Quote #:
Time Zone Collected: [ ] AK [X] PT [ ] MT [ ] CT [ ] ET	State origin of sample(s):

Data Deliverables:
[ ] Level II [ ] Level III [ ]Level IV
[ ] EQUIS
[ ] Other_____

Regulatory Program (CAA, RCRA, etc.) as applicable:

Rush (Pre-approval required): 2 Day 3 day 5 day Other_____

Date Results Requested:

Permit # as applicable:

Units for Reporting: ug/m³ PPBV mg/m³ PPMV

* Matrix Codes (Insert in Matrix box below): Ambient (A), Indoor (I), Soil Vapor (SV), Other (O)

Customer Sample ID	Matrix *	Summa Canister ID	Flow Controller ID	Begin Collection Date	Begin Collection Time	End Collection Date	End Collection Time	Canister Pressure / Vacuum: Start Pressure / Vacuum (in Hg)	Canister Pressure / Vacuum: End Pressure / Vacuum (in Hg)	PUF / FILTER: Duration (minutes)	PUF / FILTER: Flow Rate m³/min or L/min	PUF / FILTER: Total Volume Sampled m³ or L	Analyses Requested: TO-15 Summa	Analyses Requested: VOC's	Analyses Requested: TPH	Sample Comment
SS3	SV	24005	20859	3/19	10:07	~~3/19~~	10:06	28	4	3			X	X	X	L1637811-01
SS4	SV	19940	22180	3/19	10:15	3/19	10:16	28	5	1			X	X	X	R2
SS5	SV	15024	21755	3/19	10:23	3/19	10:23	30	5	2			X	X	X	03

Sample Receipt Checklist
COC Seal Present/Intact: __Y__N__NP
COC Signed/Accurate: __Y__N
Bottles arrive intact: __Y__N
Correct bottles used: __Y__N
Unused: ____
Airs Size: 3 1L ____6L ____1.4L
Tage Color: G___ W3 P___ B___
Condition: ✓OK ___NCF

Customer Remarks / Special Conditions / Possible Hazards:

Collected By:
Printed Name:
Signature:

Additional Instructions from Pace*:

Coolers: Thermometer ID: Correction Factor (°C): Obs. Temp. (°C): A/MB Corrected Temp. (°C):

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time: 3/19 0900

Tracking Number: 4072 9213 0020

Delivered by: In- Person Courier FedEX UPS Other

Page: 1 of: 1

Lab Use Only
Proj. Manager: 942 - Jordan N Zito
AcctNum / Client ID: ALPHAENVBO
Table #:
Profile / Template: T241894
Prelog / Bottle Ord. ID: P1137708

3.11.25

ANALYTICAL REPORT

January 02, 2025

Alpha Environmental Services, Inc

Sample Delivery Group:	L1812794
Samples Received:	12/26/2024
Project Number:	24-63060
Description:	3939 NW St. Helens Rd.

Report To:

Jim Cooper
11080 SW Allen Blvd.
Suite 100
Beaverton, OR 97005

Entire Report Reviewed By:

Jordan N Zito
Project Manager

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

TABLE OF CONTENTS

SAMPLE SUMMARY

SS1 L1812794-01 Air

Collected by	Collected date/time	Received date/time
	12/23/24 13:30	12/26/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2424998	1	12/27/24 00:13	12/27/24 00:13	DAH	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG2426811	100	12/31/24 17:16	12/31/24 17:16	ED	Mt. Juliet, TN

SS2 L1812794-02 Air

Collected by	Collected date/time	Received date/time
	12/23/24 13:44	12/26/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2424998	1	12/27/24 00:54	12/27/24 00:54	DAH	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG2426811	5	12/31/24 16:46	12/31/24 16:46	ED	Mt. Juliet, TN

SS3 L1812794-03 Air

Collected by	Collected date/time	Received date/time
	12/23/24 13:51	12/26/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2424998	1	12/27/24 01:34	12/27/24 01:34	DAH	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG2426811	20	12/31/24 17:44	12/31/24 17:44	ED	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.

Jordan N Zito
Project Manager

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	MDL ug/m3	RDL ug/m3	Result ug/m3	Qualifier	Dilution	Batch
TPH (GC/MS) Low Fraction	8006-61-9	101	28200	82600	48700	J	100	WG2426811
Acetone	67-64-1	58.10	124	297	27600	E	100	WG2426811
Allyl chloride	107-05-1	76.53	0.582	0.626	U		1	WG2424998
Benzene	71-43-2	78.10	0.351	0.639	17.0		1	WG2424998
Benzyl Chloride	100-44-7	127	0.461	1.04	U		1	WG2424998
Bromodichloromethane	75-27-4	164	0.466	1.34	U		1	WG2424998
Bromoform	75-25-2	253	0.781	6.52	U		1	WG2424998
Bromomethane	74-83-9	94.90	0.364	0.776	U		1	WG2424998
1,3-Butadiene	106-99-0	54.10	0.350	4.43	U		1	WG2424998
Carbon disulfide	75-15-0	76.10	0.498	1.24	U		1	WG2424998
Carbon tetrachloride	56-23-5	154	0.470	1.26	U		1	WG2424998
Chlorobenzene	108-90-7	113	0.545	0.924	U		1	WG2424998
Chloroethane	75-00-3	64.50	0.290	0.528	U		1	WG2424998
Chloroform	67-66-3	119	0.506	0.973	U		1	WG2424998
Chloromethane	74-87-3	50.50	0.227	0.413	U		1	WG2424998
2-Chlorotoluene	95-49-8	126	0.406	1.03	U		1	WG2424998
Cyclohexane	110-82-7	84.20	0.585	0.689	272		1	WG2424998
Dibromochloromethane	124-48-1	208	0.592	1.70	U		1	WG2424998
1,2-Dibromoethane	106-93-4	188	0.531	1.54	U		1	WG2424998
1,2-Dichlorobenzene	95-50-1	147	0.441	1.20	U		1	WG2424998
1,3-Dichlorobenzene	541-73-1	147	0.453	1.20	U		1	WG2424998
1,4-Dichlorobenzene	106-46-7	147	0.462	1.20	U		1	WG2424998
1,2-Dichloroethane	107-06-2	99	0.296	0.810	U		1	WG2424998
1,1-Dichloroethane	75-34-3	98	0.285	0.802	U		1	WG2424998
1,1-Dichloroethene	75-35-4	96.90	0.296	0.793	U		1	WG2424998
cis-1,2-Dichloroethene	156-59-2	96.90	0.315	0.793	U		1	WG2424998
trans-1,2-Dichloroethene	156-60-5	96.90	0.291	0.793	U		1	WG2424998
1,2-Dichloropropane	78-87-5	113	0.348	0.924	U		1	WG2424998
cis-1,3-Dichloropropene	10061-01-5	111	0.337	0.908	U		1	WG2424998
trans-1,3-Dichloropropene	10061-02-6	111	0.361	0.908	U		1	WG2424998
1,4-Dioxane	123-91-1	88.10	0.591	2.27	U		1	WG2424998
Ethanol	64-17-5	46.10	4.47	4.71	924	E	1	WG2424998
Ethylbenzene	100-41-4	106	0.337	0.867	49.9		1	WG2424998
4-Ethyltoluene	622-96-8	120	0.435	0.982	19.3		1	WG2424998
Trichlorofluoromethane	75-69-4	137.40	0.433	1.12	1.38		1	WG2424998
Dichlorodifluoromethane	75-71-8	120.92	0.399	0.989	2.77		1	WG2424998
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.576	1.53	U		1	WG2424998
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.529	1.40	U		1	WG2424998
Heptane	142-82-5	100	46.6	81.8	438		100	WG2426811
Hexachloro-1,3-butadiene	87-68-3	261	0.854	6.73	U		1	WG2424998
n-Hexane	110-54-3	86.20	50.4	222	32300		100	WG2426811
Isopropylbenzene	98-82-8	120.20	0.355	0.983	U		1	WG2424998
Methylene Chloride	75-09-2	84.90	0.587	0.694	U		1	WG2424998
Methyl Butyl Ketone	591-78-6	100	0.544	5.11	U		1	WG2424998
2-Butanone (MEK)	78-93-3	72.10	34.2	369	425		100	WG2426811
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	0.434	5.12	U		1	WG2424998
Methyl methacrylate	80-62-6	100.12	0.692	0.819	U		1	WG2424998
MTBE	1634-04-4	88.10	0.293	0.721	U		1	WG2424998
Naphthalene	91-20-3	128	3.23	3.30	U		1	WG2424998
2-Propanol	67-63-0	60.10	1.67	3.07	1840	E	1	WG2424998
Propene	115-07-1	42.10	0.368	2.15	U		1	WG2424998
Styrene	100-42-5	104	0.341	1.70	U		1	WG2424998
1,1,2,2-Tetrachloroethane	79-34-5	168	0.478	1.37	U		1	WG2424998
Tetrachloroethylene	127-18-4	166	0.754	1.36	U		1	WG2424998
Tetrahydrofuran	109-99-9	72.10	0.484	0.590	U		1	WG2424998
Toluene	108-88-3	92.10	0.490	1.88	22.9		1	WG2424998

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	MDL ug/m3	RDL ug/m3	Result ug/m3	Qualifier	Dilution	Batch
1,2,4-Trichlorobenzene	120-82-1	181	3.42	4.66	U		1	WG2424998
1,1,1-Trichloroethane	71-55-6	133	0.391	1.09	U		1	WG2424998
1,1,2-Trichloroethane	79-00-5	133	0.372	1.09	U		1	WG2424998
Trichloroethylene	79-01-6	131	0.364	1.07	U		1	WG2424998
1,2,4-Trimethylbenzene	95-63-6	120	0.455	0.982	15.6		1	WG2424998
1,3,5-Trimethylbenzene	108-67-8	120	0.419	0.982	5.50		1	WG2424998
2,2,4-Trimethylpentane	540-84-1	114.22	0.420	0.934	U		1	WG2424998
Vinyl chloride	75-01-4	62.50	0.211	0.511	U		1	WG2424998
Vinyl Bromide	593-60-2	106.95	0.328	0.875	U		1	WG2424998
Vinyl acetate	108-05-4	86.10	0.341	2.22	U		1	WG2424998
m&p-Xylene	179601-23-1	106	0.754	1.73	186		1	WG2424998
o-Xylene	95-47-6	106	0.385	0.867	64.2		1	WG2424998
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*			*150*	J1	*60.0-140*	WG2424998
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*			*96.2*		*60.0-140*	WG2426811

Sample Narrative:

L1812794-01 WG2424998: Surrogate failure due to matrix interference

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	MDL ug/m3	RDL ug/m3	Result ug/m3	Qualifier	Dilution	Batch
TPH (GC/MS) Low Fraction	8006-61-9	101	282	826	2470		1	WG2424998
Acetone	67-64-1	58.10	1.24	2.97	1380	E	1	WG2424998
Allyl chloride	107-05-1	76.53	0.582	0.626	U		1	WG2424998
Benzene	71-43-2	78.10	0.351	0.639	2.26		1	WG2424998
Benzyl Chloride	100-44-7	127	0.461	1.04	U		1	WG2424998
Bromodichloromethane	75-27-4	164	0.466	1.34	U		1	WG2424998
Bromoform	75-25-2	253	0.781	6.52	U		1	WG2424998
Bromomethane	74-83-9	94.90	0.364	0.776	U		1	WG2424998
1,3-Butadiene	106-99-0	54.10	0.350	4.43	U		1	WG2424998
Carbon disulfide	75-15-0	76.10	0.498	1.24	U		1	WG2424998
Carbon tetrachloride	56-23-5	154	0.470	1.26	U		1	WG2424998
Chlorobenzene	108-90-7	113	0.545	0.924	U		1	WG2424998
Chloroethane	75-00-3	64.50	0.290	0.528	U		1	WG2424998
Chloroform	67-66-3	119	0.506	0.973	U		1	WG2424998
Chloromethane	74-87-3	50.50	0.227	0.413	U		1	WG2424998
2-Chlorotoluene	95-49-8	126	0.406	1.03	U		1	WG2424998
Cyclohexane	110-82-7	84.20	0.585	0.689	4.34		1	WG2424998
Dibromochloromethane	124-48-1	208	0.592	1.70	U		1	WG2424998
1,2-Dibromoethane	106-93-4	188	0.531	1.54	U		1	WG2424998
1,2-Dichlorobenzene	95-50-1	147	0.441	1.20	U		1	WG2424998
1,3-Dichlorobenzene	541-73-1	147	0.453	1.20	U		1	WG2424998
1,4-Dichlorobenzene	106-46-7	147	0.462	1.20	U		1	WG2424998
1,2-Dichloroethane	107-06-2	99	0.296	0.810	U		1	WG2424998
1,1-Dichloroethane	75-34-3	98	0.285	0.802	U		1	WG2424998
1,1-Dichloroethene	75-35-4	96.90	0.296	0.793	U		1	WG2424998
cis-1,2-Dichloroethene	156-59-2	96.90	0.315	0.793	U		1	WG2424998
trans-1,2-Dichloroethene	156-60-5	96.90	0.291	0.793	U		1	WG2424998
1,2-Dichloropropane	78-87-5	113	0.348	0.924	U		1	WG2424998
cis-1,3-Dichloropropene	10061-01-5	111	0.337	0.908	U		1	WG2424998
trans-1,3-Dichloropropene	10061-02-6	111	0.361	0.908	U		1	WG2424998
1,4-Dioxane	123-91-1	88.10	0.591	2.27	U		1	WG2424998
Ethanol	64-17-5	46.10	4.47	4.71	46.0		1	WG2424998
Ethylbenzene	100-41-4	106	0.337	0.867	3.56		1	WG2424998
4-Ethyltoluene	622-96-8	120	0.435	0.982	4.54		1	WG2424998
Trichlorofluoromethane	75-69-4	137.40	0.433	1.12	2.48		1	WG2424998
Dichlorodifluoromethane	75-71-8	120.92	0.399	0.989	2.61		1	WG2424998
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.576	1.53	0.642	J	1	WG2424998
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.529	1.40	U		1	WG2424998
Heptane	142-82-5	100	2.33	4.09	8.18		5	WG2426811
Hexachloro-1,3-butadiene	87-68-3	261	0.854	6.73	U		1	WG2424998
n-Hexane	110-54-3	86.20	2.52	11.1	367		5	WG2426811
Isopropylbenzene	98-82-8	120.20	0.355	0.983	U		1	WG2424998
Methylene Chloride	75-09-2	84.90	0.587	0.694	U		1	WG2424998
Methyl Butyl Ketone	591-78-6	100	0.544	5.11	U		1	WG2424998
2-Butanone (MEK)	78-93-3	72.10	1.71	18.4	19.0		5	WG2426811
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	0.434	5.12	U		1	WG2424998
Methyl methacrylate	80-62-6	100.12	0.692	0.819	U		1	WG2424998
MTBE	1634-04-4	88.10	0.293	0.721	U		1	WG2424998
Naphthalene	91-20-3	128	3.23	3.30	U		1	WG2424998
2-Propanol	67-63-0	60.10	1.67	3.07	693	E	1	WG2424998
Propene	115-07-1	42.10	0.368	2.15	U		1	WG2424998
Styrene	100-42-5	104	0.341	1.70	U		1	WG2424998
1,1,2,2-Tetrachloroethane	79-34-5	168	0.478	1.37	U		1	WG2424998
Tetrachloroethylene	127-18-4	166	0.754	1.36	U		1	WG2424998
Tetrahydrofuran	109-99-9	72.10	0.484	0.590	U		1	WG2424998
Toluene	108-88-3	92.10	0.490	1.88	4.48		1	WG2424998

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.	MDL ug/m3	RDL ug/m3	Result ug/m3	Qualifier	Dilution	Batch
1,2,4-Trichlorobenzene	120-82-1	181	3.42	4.66	U		1	WG2424998
1,1,1-Trichloroethane	71-55-6	133	0.391	1.09	U		1	WG2424998
1,1,2-Trichloroethane	79-00-5	133	0.372	1.09	U		1	WG2424998
Trichloroethylene	79-01-6	131	0.364	1.07	U		1	WG2424998
1,2,4-Trimethylbenzene	95-63-6	120	0.455	0.982	5.89		1	WG2424998
1,3,5-Trimethylbenzene	108-67-8	120	0.419	0.982	2.04		1	WG2424998
2,2,4-Trimethylpentane	540-84-1	114.22	0.420	0.934	U		1	WG2424998
Vinyl chloride	75-01-4	62.50	0.211	0.511	U		1	WG2424998
Vinyl Bromide	593-60-2	106.95	0.328	0.875	U		1	WG2424998
Vinyl acetate	108-05-4	86.10	0.341	2.22	U		1	WG2424998
m&p-Xylene	179601-23-1	106	0.754	1.73	14.3		1	WG2424998
o-Xylene	95-47-6	106	0.385	0.867	5.90		1	WG2424998
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*			*102*		*60.0-140*	WG2424998
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*			*99.5*		*60.0-140*	WG2426811

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	MDL ug/m3	RDL ug/m3	Result ug/m3	Qualifier	Dilution	Batch
TPH (GC/MS) Low Fraction	8006-61-9	101	282	826	U		1	WG2424998
Acetone	67-64-1	58.10	1.24	2.97	383	E	1	WG2424998
Allyl chloride	107-05-1	76.53	0.582	0.626	U		1	WG2424998
Benzene	71-43-2	78.10	0.351	0.639	0.760		1	WG2424998
Benzyl Chloride	100-44-7	127	0.461	1.04	U		1	WG2424998
Bromodichloromethane	75-27-4	164	0.466	1.34	U		1	WG2424998
Bromoform	75-25-2	253	0.781	6.52	U		1	WG2424998
Bromomethane	74-83-9	94.90	0.364	0.776	U		1	WG2424998
1,3-Butadiene	106-99-0	54.10	0.350	4.43	U		1	WG2424998
Carbon disulfide	75-15-0	76.10	0.498	1.24	U		1	WG2424998
Carbon tetrachloride	56-23-5	154	0.470	1.26	U		1	WG2424998
Chlorobenzene	108-90-7	113	0.545	0.924	U		1	WG2424998
Chloroethane	75-00-3	64.50	0.290	0.528	U		1	WG2424998
Chloroform	67-66-3	119	0.506	0.973	U		1	WG2424998
Chloromethane	74-87-3	50.50	0.227	0.413	U		1	WG2424998
2-Chlorotoluene	95-49-8	126	0.406	1.03	U		1	WG2424998
Cyclohexane	110-82-7	84.20	0.585	0.689	U		1	WG2424998
Dibromochloromethane	124-48-1	208	0.592	1.70	U		1	WG2424998
1,2-Dibromoethane	106-93-4	188	0.531	1.54	U		1	WG2424998
1,2-Dichlorobenzene	95-50-1	147	0.441	1.20	U		1	WG2424998
1,3-Dichlorobenzene	541-73-1	147	0.453	1.20	U		1	WG2424998
1,4-Dichlorobenzene	106-46-7	147	0.462	1.20	U		1	WG2424998
1,2-Dichloroethane	107-06-2	99	0.296	0.810	U		1	WG2424998
1,1-Dichloroethane	75-34-3	98	0.285	0.802	U		1	WG2424998
1,1-Dichloroethene	75-35-4	96.90	0.296	0.793	U		1	WG2424998
cis-1,2-Dichloroethene	156-59-2	96.90	0.315	0.793	U		1	WG2424998
trans-1,2-Dichloroethene	156-60-5	96.90	0.291	0.793	U		1	WG2424998
1,2-Dichloropropane	78-87-5	113	0.348	0.924	U		1	WG2424998
cis-1,3-Dichloropropene	10061-01-5	111	0.337	0.908	U		1	WG2424998
trans-1,3-Dichloropropene	10061-02-6	111	0.361	0.908	U		1	WG2424998
1,4-Dioxane	123-91-1	88.10	0.591	2.27	U		1	WG2424998
Ethanol	64-17-5	46.10	4.47	4.71	47.3		1	WG2424998
Ethylbenzene	100-41-4	106	0.337	0.867	1.79		1	WG2424998
4-Ethyltoluene	622-96-8	120	0.435	0.982	5.35		1	WG2424998
Trichlorofluoromethane	75-69-4	137.40	0.433	1.12	1.43		1	WG2424998
Dichlorodifluoromethane	75-71-8	120.92	0.399	0.989	2.74		1	WG2424998
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.576	1.53	U		1	WG2424998
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.529	1.40	U		1	WG2424998
Heptane	142-82-5	100	0.466	0.818	U		1	WG2424998
Hexachloro-1,3-butadiene	87-68-3	261	0.854	6.73	U		1	WG2424998
n-Hexane	110-54-3	86.20	0.504	2.22	6.49		1	WG2424998
Isopropylbenzene	98-82-8	120.20	0.355	0.983	U		1	WG2424998
Methylene Chloride	75-09-2	84.90	0.587	0.694	U		1	WG2424998
Methyl Butyl Ketone	591-78-6	100	0.544	5.11	U		1	WG2424998
2-Butanone (MEK)	78-93-3	72.10	0.342	3.69	13.2		1	WG2424998
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	0.434	5.12	3.68	J	1	WG2424998
Methyl methacrylate	80-62-6	100.12	0.692	0.819	U		1	WG2424998
MTBE	1634-04-4	88.10	0.293	0.721	U		1	WG2424998
Naphthalene	91-20-3	128	3.23	3.30	U		1	WG2424998
2-Propanol	67-63-0	60.10	33.4	61.5	2950		20	WG2426811
Propene	115-07-1	42.10	0.368	2.15	U		1	WG2424998
Styrene	100-42-5	104	0.341	1.70	U		1	WG2424998
1,1,2,2-Tetrachloroethane	79-34-5	168	0.478	1.37	U		1	WG2424998
Tetrachloroethylene	127-18-4	166	0.754	1.36	1.09	J	1	WG2424998
Tetrahydrofuran	109-99-9	72.10	0.484	0.590	U		1	WG2424998
Toluene	108-88-3	92.10	0.490	1.88	4.52		1	WG2424998

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	MDL ug/m3	RDL ug/m3	Result ug/m3	Qualifier	Dilution	Batch
1,2,4-Trichlorobenzene	120-82-1	181	3.42	4.66	U		1	WG2424998
1,1,1-Trichloroethane	71-55-6	133	0.391	1.09	U		1	WG2424998
1,1,2-Trichloroethane	79-00-5	133	0.372	1.09	U		1	WG2424998
Trichloroethylene	79-01-6	131	0.364	1.07	U		1	WG2424998
1,2,4-Trimethylbenzene	95-63-6	120	0.455	0.982	8.69		1	WG2424998
1,3,5-Trimethylbenzene	108-67-8	120	0.419	0.982	3.09		1	WG2424998
2,2,4-Trimethylpentane	540-84-1	114.22	0.420	0.934	U		1	WG2424998
Vinyl chloride	75-01-4	62.50	0.211	0.511	U		1	WG2424998
Vinyl Bromide	593-60-2	106.95	0.328	0.875	U		1	WG2424998
Vinyl acetate	108-05-4	86.10	0.341	2.22	U		1	WG2424998
m&p-Xylene	179601-23-1	106	0.754	1.73	9.41		1	WG2424998
o-Xylene	95-47-6	106	0.385	0.867	4.55		1	WG2424998
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*			*95.9*		*60.0-140*	WG2424998
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*			*91.5*		*60.0-140*	WG2426811

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

Method Blank (MB)

(MB) R4163361-3 12/26/24 10:05

Analyte	MB Result ug/m3	MB Qualifier	MB MDL ug/m3	MB RDL ug/m3
TPH (GC/MS) Low Fraction	U		282	826
Acetone	U		1.24	2.97
Allyl chloride	U		0.582	0.626
Benzene	U		0.351	0.639
Benzyl Chloride	U		0.461	1.04
Bromodichloromethane	U		0.466	1.34
Bromoform	U		0.781	6.52
Bromomethane	U		0.364	0.776
1,3-Butadiene	U		0.350	4.43
Carbon disulfide	U		0.498	1.24
Carbon tetrachloride	U		0.470	1.26
Chlorobenzene	U		0.545	0.924
Chloroethane	U		0.290	0.528
Chloroform	U		0.506	0.973
Chloromethane	U		0.227	0.413
2-Chlorotoluene	U		0.406	1.03
Cyclohexane	U		0.585	0.689
Dibromochloromethane	U		0.592	1.70
1,2-Dibromoethane	U		0.531	1.54
1,2-Dichlorobenzene	U		0.441	1.20
1,3-Dichlorobenzene	U		0.453	1.20
1,4-Dichlorobenzene	U		0.462	1.20
1,2-Dichloroethane	U		0.296	0.810
1,1-Dichloroethane	U		0.285	0.802
1,1-Dichloroethene	U		0.296	0.793
cis-1,2-Dichloroethene	U		0.315	0.793
trans-1,2-Dichloroethene	U		0.291	0.793
1,2-Dichloropropane	U		0.348	0.924
cis-1,3-Dichloropropene	U		0.337	0.908
trans-1,3-Dichloropropene	U		0.361	0.908
1,4-Dioxane	U		0.591	2.27
Ethanol	U		4.47	4.71
Ethylbenzene	U		0.337	0.867
4-Ethyltoluene	U		0.435	0.982
Trichlorofluoromethane	U		0.433	1.12
Dichlorodifluoromethane	U		0.399	0.989
1,1,2-Trichlorotrifluoroethane	U		0.576	1.53
1,2-Dichlorotetrafluoroethane	U		0.529	1.40
Heptane	U		0.466	0.818
Hexachloro-1,3-butadiene	U		0.854	6.73

Method Blank (MB)

(MB) R4163361-3 12/26/24 10:05

Analyte	MB Result ug/m3	MB Qualifier	MB MDL ug/m3	MB RDL ug/m3
n-Hexane	U		0.504	2.22
Isopropylbenzene	U		0.355	0.983
Methylene Chloride	U		0.587	0.694
Methyl Butyl Ketone	U		0.544	5.11
2-Butanone (MEK)	U		0.342	3.69
4-Methyl-2-pentanone (MIBK)	U		0.434	5.12
Methyl methacrylate	U		0.692	0.819
MTBE	U		0.293	0.721
Naphthalene	U		3.23	3.30
2-Propanol	U		1.67	3.07
Propene	U		0.368	2.15
Styrene	U		0.341	1.70
1,1,2,2-Tetrachloroethane	U		0.478	1.37
Tetrachloroethylene	U		0.754	1.36
Tetrahydrofuran	U		0.484	0.590
Toluene	U		0.490	1.88
1,2,4-Trichlorobenzene	U		3.42	4.66
1,1,1-Trichloroethane	U		0.391	1.09
1,1,2-Trichloroethane	U		0.372	1.09
Trichloroethylene	U		0.364	1.07
1,2,4-Trimethylbenzene	U		0.455	0.982
1,3,5-Trimethylbenzene	U		0.419	0.982
2,2,4-Trimethylpentane	U		0.420	0.934
Vinyl chloride	U		0.211	0.511
Vinyl Bromide	U		0.328	0.875
Vinyl acetate	U		0.341	2.22
m&p-Xylene	U		0.754	1.73
o-Xylene	U		0.385	0.867
(S) 1,4-Bromofluorobenzene	*86.3*			*60.0-140*

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

(LCS) R4163361-1 12/26/24 08:48 • (LCSD) R4163361-2 12/26/24 09:27

Analyte	Spike Amount ug/m3	LCS Result ug/m3	LCSD Result ug/m3	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/MS) Low Fraction	777	723	727	93.1	93.6	70.0-130	J	J	0.570	25
Acetone	8.91	9.22	9.20	103	103	70.0-130			0.258	25
Allyl chloride	11.7	9.83	9.89	83.7	84.3	70.0-130			0.635	25
Benzene	12.0	13.5	13.6	113	113	70.0-130			0.472	25

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

(LCS) R4163361-1 12/26/24 08:48 • (LCSD) R4163361-2 12/26/24 09:27

Analyte	Spike Amount ug/m3	LCS Result ug/m3	LCSD Result ug/m3	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzyl Chloride	19.5	22.9	22.8	117	117	70.0-152			0.456	25
Bromodichloromethane	25.2	29.2	29.0	116	115	70.0-130			0.922	25
Bromoform	38.8	45.6	45.8	118	118	70.0-130			0.452	25
Bromomethane	14.6	17.1	16.8	118	115	70.0-130			1.83	25
1,3-Butadiene	8.30	8.85	8.78	107	106	70.0-130			0.753	25
Carbon disulfide	23.3	26.2	26.2	112	112	70.0-130			0.119	25
Carbon tetrachloride	23.6	27.6	27.7	117	117	70.0-130			0.456	25
Chlorobenzene	17.3	19.5	19.5	113	113	70.0-130			0.000	25
Chloroethane	9.89	11.1	11.1	112	112	70.0-130			0.238	25
Chloroform	18.3	21.1	21.4	116	117	70.0-130			1.15	25
Chloromethane	7.75	8.12	8.01	105	103	70.0-130			1.28	25
2-Chlorotoluene	19.3	22.5	22.2	116	115	70.0-130			1.15	25
Cyclohexane	12.9	14.9	14.6	116	113	70.0-130			2.33	25
Dibromochloromethane	31.9	37.1	37.3	116	117	70.0-130			0.458	25
1,2-Dibromoethane	28.8	33.4	33.8	116	117	70.0-130			0.915	25
1,2-Dichlorobenzene	22.5	26.8	26.7	119	118	70.0-130			0.449	25
1,3-Dichlorobenzene	22.5	26.7	27.0	118	120	70.0-130			1.12	25
1,4-Dichlorobenzene	22.5	26.6	27.0	118	120	70.0-130			1.35	25
1,2-Dichloroethane	15.2	17.4	17.4	115	114	70.0-130			0.233	25
1,1-Dichloroethane	15.0	16.8	17.4	111	116	70.0-130			3.99	25
1,1-Dichloroethene	14.9	16.8	17.0	113	114	70.0-130			0.703	25
cis-1,2-Dichloroethene	14.9	16.5	16.8	111	113	70.0-130			1.43	25
trans-1,2-Dichloroethene	14.9	16.7	15.3	112	103	70.0-130			8.67	25
1,2-Dichloropropane	17.3	19.1	18.9	110	109	70.0-130			0.971	25
cis-1,3-Dichloropropene	17.0	18.8	19.3	110	114	70.0-130			2.86	25
trans-1,3-Dichloropropene	17.0	18.7	19.1	110	112	70.0-130			2.17	25
1,4-Dioxane	13.5	15.8	16.0	117	118	70.0-140			0.907	25
Ethanol	7.07	7.52	7.71	106	109	55.0-148			2.48	25
Ethylbenzene	16.3	18.8	18.7	115	115	70.0-130			0.231	25
4-Ethyltoluene	18.4	22.0	22.1	119	120	70.0-130			0.667	25
Trichlorofluoromethane	21.1	24.8	24.5	118	116	70.0-130			1.37	25
Dichlorodifluoromethane	18.5	21.7	21.6	117	116	64.0-139			0.686	25
1,1,2-Trichlorotrifluoroethane	28.7	33.6	33.7	117	117	70.0-130			0.456	25
1,2-Dichlorotetrafluoroethane	26.2	30.3	30.1	115	115	70.0-130			0.695	25
Heptane	15.3	17.5	17.2	114	112	70.0-130			2.12	25
Hexachloro-1,3-butadiene	40.0	46.6	46.8	117	117	70.0-151			0.229	25
n-Hexane	13.2	14.6	14.7	110	111	70.0-130			0.964	25
Isopropylbenzene	18.4	21.5	21.5	117	117	70.0-130			0.000	25
Methylene Chloride	13.0	14.5	14.7	111	113	70.0-130			1.43	25
Methyl Butyl Ketone	15.3	17.3	18.0	113	117	70.0-149			3.70	25

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

(LCS) R4163361-1 12/26/24 08:48 • (LCSD) R4163361-2 12/26/24 09:27

Analyte	Spike Amount ug/m3	LCS Result ug/m3	LCSD Result ug/m3	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2-Butanone (MEK)	11.1	12.6	12.8	114	116	70.0-130			2.09	25
4-Methyl-2-pentanone (MIBK)	15.4	17.1	17.2	111	112	70.0-139			0.955	25
Methyl methacrylate	15.4	16.7	16.9	109	110	70.0-130			1.22	25
MTBE	13.5	15.3	15.3	113	113	70.0-130			0.000	25
Naphthalene	19.6	22.5	22.3	115	114	70.0-159			0.935	25
2-Propanol	9.22	9.76	10.2	106	110	70.0-139			3.95	25
Propene	6.46	6.34	6.46	98.1	100	64.0-144			1.88	25
Styrene	31.9	38.0	37.4	119	117	70.0-130			1.47	25
1,1,2,2-Tetrachloroethane	25.8	29.2	29.3	113	114	70.0-130			0.469	25
Tetrachloroethylene	25.5	29.8	29.8	117	117	70.0-130			0.000	25
Tetrahydrofuran	11.1	11.7	12.4	106	113	70.0-137			6.36	25
Toluene	14.1	16.2	16.0	114	114	70.0-130			0.702	25
1,2,4-Trichlorobenzene	27.8	31.2	31.3	113	113	70.0-160			0.237	25
1,1,1-Trichloroethane	20.4	24.3	24.3	119	119	70.0-130			0.224	25
1,1,2-Trichloroethane	20.4	23.5	23.4	115	115	70.0-130			0.464	25
Trichloroethylene	20.1	22.5	23.2	112	115	70.0-130			3.05	25
1,2,4-Trimethylbenzene	18.4	21.8	21.6	118	118	70.0-130			0.678	25
1,3,5-Trimethylbenzene	18.4	22.0	22.2	119	121	70.0-130			0.889	25
2,2,4-Trimethylpentane	17.5	19.4	19.2	111	110	70.0-130			0.726	25
Vinyl chloride	9.59	10.7	10.9	111	113	70.0-130			1.90	25
Vinyl Bromide	16.4	19.5	18.8	119	115	70.0-130			3.65	25
Vinyl acetate	13.2	10.1	10.9	76.3	82.4	70.0-130			7.73	25
m&p-Xylene	32.5	37.4	37.1	115	114	70.0-130			0.698	25
o-Xylene	16.3	18.9	18.9	117	116	70.0-130			0.459	25
(S) 1,4-Bromofluorobenzene				*97.6*	*97.7*	*60.0-140*				

Method Blank (MB)

(MB) R4163302-3 12/31/24 09:34

Analyte	MB Result ug/m3	MB Qualifier	MB MDL ug/m3	MB RDL ug/m3
TPH (GC/MS) Low Fraction	U		282	826
Acetone	U		1.24	2.97
Heptane	U		0.466	0.818
n-Hexane	U		0.504	2.22
2-Butanone (MEK)	U		0.342	3.69
2-Propanol	U		1.67	3.07
(S) 1,4-Bromofluorobenzene	*90.6*			*60.0-140*

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

(LCS) R4163302-1 12/31/24 08:32 • (LCSD) R4163302-2 12/31/24 09:04

Analyte	Spike Amount ug/m3	LCS Result ug/m3	LCSD Result ug/m3	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/MS) Low Fraction	777	785	785	101	101	70.0-130	J	J	0.000	25
Acetone	8.91	9.17	9.12	103	102	70.0-130			0.519	25
Heptane	15.3	17.7	17.1	115	111	70.0-130			3.76	25
n-Hexane	13.2	14.2	14.2	107	107	70.0-130			0.248	25
2-Butanone (MEK)	11.1	11.5	11.4	104	103	70.0-130			0.257	25
2-Propanol	9.22	9.54	9.78	103	106	70.0-139			2.54	25
(S) 1,4-Bromofluorobenzene				*103*	*102*	*60.0-140*				

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
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Pace® Location Requested (City/State):

Air CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

M002

L1812794

Scan QR code for instructions

Company Name: **Alpha Environmental Services, Inc**	Contact/Report To: **Jim Cooper**
Street Address: **11080 SW Allen Blvd.**	Phone #: **503-292-5346**
	E-Mail: **jim@alphaenvironmental.net**
City, State Zip:	Cc E-Mail:
Customer Project #: **24-63060**	Invoice to:
Project Name: 3939 NW St. Helens Rd.	Invoice E-Mail:
Site Collection Info/Facility ID (as applicable): **ALPHAENVBOR-AIR**	Purchase Order # (if applicable):
	Quote #:
Time Zone Collected: [ ] AK [X] PT [ ] MT [ ] CT [ ] ET	State origin of sample(s):

Data Deliverables:

[ ] Level II [ ] Level III [ ] Level IV

[ ] EQUIS

[ ] Other_____

Regulatory Program (CAA, RCRA, etc.) as applicable:

Rush (Pre-approval required): 2 Day 3 day 5 day Other_____

Date Results Requested:

Permit # as applicable:

Units for Reporting: ug/m³ PPBV mg/m³ PPMV

Field Information

Analyses Requested

12/11/19

Proj. Manager: **942 - Jordan N Zito**

AcctNum / Client ID: **ALPHAENVBO**

Table #:

Profile / Template: **T264030**

Prelog / Bottle Ord. ID: **P1114527**

Lab Use Only

* Matrix Codes (Insert in Matrix box below): Ambient (A), Indoor (I), Soil Vapor (SV), Other (O)

Customer Sample ID	Matrix *	Summa Canister ID	Flow Controller ID	Begin Collection Date	Begin Collection Time	End Collection Date	End Collection Time	Canister Pressure / Vacuum: Start Pressure / Vacuum (in Hg)	Canister Pressure / Vacuum: End Pressure / Vacuum (in Hg)	PUF / FILTER: Duration (minutes)	PUF / FILTER: Flow Rate m³/min or L/min	PUF / FILTER: Total Volume Sampled m³ or L	TO-15 Summa	VOC's	TPH		Sample Comment
SS1	SV	15031	6411	12/23	13:25	12/23	13:30	29.5	5	5			X	X	X		-01
SS2	SV	21611	6433	12/23	13:40	12/23	13:44	28	5	4.5			X	X	X		-02
SS3	SV	21549	13172	12/23	13:47	12/23	13:51	30	5	4.5			X	X	X		-04

Sample Receipt Checklist

COC Seal Present/Intact: Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Unused: _____
Airs Size: 1L 6L 1.4L
Tage Color: G W P B
Tubing ___ Shunt ___
T/P#: _____

Customer Remarks / Special Conditions / Possible Hazards:

Collected By:

Printed Name:

Signature:

Additional Instructions from Pace®:

Coolers: Thermometer ID: Correction Factor (°C): Obs. Temp (°C): 4.1 Corrected Temp. (°C): 4.1

Relinquished by/Company: (Signature) Matt Halvorsen Alpha	Date/Time: 12/23 04:00 PM	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time: 12/26 0900

Tracking Number: 4072 9199 3945

Delivered by: In- Person Courier FedEX UPS Other

Page: 1 of: 1

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Monday, January 6, 2025

Jim Cooper
Alpha Environmental
11080 SW Allen Blvd, Suite 100
Beaverton, OR 97005

RE: A4L1669 - Default- Env Dept. - 3939 NW St. Helens Rd 24-63060

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A4L1669, which was received by the laboratory on 12/23/2024 at 4:00:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: cobrien@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information
Acceptable Receipt Temperature is less than, or equal to, 6 degC (not frozen), or received on ice the same day as sampling.
(See Cooler Receipt Form for details)
Default Cooler 1.9 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

Apex Laboratories

Cameron O'Brien, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
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Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Alpha Environmental	Project: **Default- Env Dept.**	
11080 SW Allen Blvd, Suite 100	Project Number: **3939 NW St. Helens Rd 24-(**	**Report ID:**
Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
24-63060 D8-12'	A4L1669-01	Soil	12/23/24 10:00	12/23/24 16:00
24-63060 D8-15'	A4L1669-02	Soil	12/23/24 10:10	12/23/24 16:00
24-63060 D8-17'	A4L1669-03	Soil	12/23/24 10:15	12/23/24 16:00
24-63060 D8-17'-Dup	A4L1669-04	Soil	12/23/24 10:15	12/23/24 16:00
24-63060 D8-20'	A4L1669-05	Soil	12/23/24 10:20	12/23/24 16:00
24-63060 D11-12'	A4L1669-06	Soil	12/23/24 11:30	12/23/24 16:00
24-63060 D11-15'	A4L1669-07	Soil	12/23/24 11:35	12/23/24 16:00
24-63060 D11-20'	A4L1669-08	Soil	12/23/24 11:40	12/23/24 16:00
24-63060 D9	A4L1669-09	Water	12/23/24 11:00	12/23/24 16:00
24-63060 D10	A4L1669-10	Water	12/23/24 11:30	12/23/24 16:00
24-63060 D9 DUP	A4L1669-11	Water	12/23/24 11:00	12/23/24 16:00

Apex Laboratories

Cameron O'Brien, Project Manager

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ORELAP ID: **OR100062**

ANALYTICAL REPORT

Alpha Environmental	Project: **Default- Env Dept.**	
11080 SW Allen Blvd, Suite 100	Project Number: **3939 NW St. Helens Rd 24-(**	**Report ID:**
Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
24-63060 D8-12' (A4L1669-01)				**Matrix: Soil**		**Batch: 24L0900**		
Gasoline Range Organics	**4370**	---	349	mg/kg dry	2000	12/25/24 01:07	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		*Recovery: 104 %*	*Limits: 50-150 %*		*1*	*12/25/24 01:07*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*99 %*	*50-150 %*	*1*	*12/25/24 01:07*	*NWTPH-Gx (MS)*	
24-63060 D8-15' (A4L1669-02)				**Matrix: Soil**		**Batch: 24L0900**		
Gasoline Range Organics	**2410**	---	170	mg/kg dry	1000	12/24/24 23:44	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		*Recovery: 100 %*	*Limits: 50-150 %*		*1*	*12/24/24 23:44*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*100 %*	*50-150 %*	*1*	*12/24/24 23:44*	*NWTPH-Gx (MS)*	
24-63060 D8-17' (A4L1669-03RE2)				**Matrix: Soil**		**Batch: 24L1029**		
Gasoline Range Organics	**932**	---	36.3	mg/kg dry	200	12/30/24 23:17	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		*Recovery: 104 %*	*Limits: 50-150 %*		*1*	*12/30/24 23:17*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*99 %*	*50-150 %*	*1*	*12/30/24 23:17*	*NWTPH-Gx (MS)*	
24-63060 D8-17'-Dup (A4L1669-04)				**Matrix: Soil**		**Batch: 24L0900**		
Gasoline Range Organics	**24.3**	---	8.83	mg/kg dry	50	12/24/24 22:50	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		*Recovery: 105 %*	*Limits: 50-150 %*		*1*	*12/24/24 22:50*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*100 %*	*50-150 %*	*1*	*12/24/24 22:50*	*NWTPH-Gx (MS)*	
24-63060 D8-20' (A4L1669-05RE2)				**Matrix: Soil**		**Batch: 24L1029**		
Gasoline Range Organics	**142**	---	8.14	mg/kg dry	50	12/30/24 22:49	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		*Recovery: 106 %*	*Limits: 50-150 %*		*1*	*12/30/24 22:49*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*99 %*	*50-150 %*	*1*	*12/30/24 22:49*	*NWTPH-Gx (MS)*	
24-63060 D11-12' (A4L1669-06)				**Matrix: Soil**		**Batch: 24L0900**		
Gasoline Range Organics	ND	---	9.38	mg/kg dry	50	12/24/24 21:28	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		*Recovery: 106 %*	*Limits: 50-150 %*		*1*	*12/24/24 21:28*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*99 %*	*50-150 %*	*1*	*12/24/24 21:28*	*NWTPH-Gx (MS)*	
24-63060 D11-15' (A4L1669-07)				**Matrix: Soil**		**Batch: 24L0900**		
Gasoline Range Organics	ND	---	10.5	mg/kg dry	50	12/24/24 21:55	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		*Recovery: 105 %*	*Limits: 50-150 %*		*1*	*12/24/24 21:55*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*99 %*	*50-150 %*	*1*	*12/24/24 21:55*	*NWTPH-Gx (MS)*	

Apex Laboratories

Cameron O'Brien, Project Manager

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Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Alpha Environmental	Project: **Default- Env Dept.**	
11080 SW Allen Blvd, Suite 100	Project Number: **3939 NW St. Helens Rd 24-(**	**Report ID:**
Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
24-63060 D11-20' (A4L1669-08)				**Matrix: Soil**		**Batch: 24L0900**		
Gasoline Range Organics	ND	---	8.57	mg/kg dry	50	12/24/24 22:22	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		*Recovery:*	*104 %*	*Limits:* *50-150 %*	*1*	*12/24/24 22:22*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*100 %*	*50-150 %*	*1*	*12/24/24 22:22*	*NWTPH-Gx (MS)*	
24-63060 D9 (A4L1669-09RE1)				**Matrix: Water**		**Batch: 24L0985**		
Gasoline Range Organics	ND	---	100	ug/L	1	12/27/24 15:59	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		*Recovery:*	*96 %*	*Limits:* *50-150 %*	*1*	*12/27/24 15:59*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*111 %*	*50-150 %*	*1*	*12/27/24 15:59*	*NWTPH-Gx (MS)*	
24-63060 D10 (A4L1669-10RE1)				**Matrix: Water**		**Batch: 24L0985**		
Gasoline Range Organics	ND	---	100	ug/L	1	12/27/24 16:22	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		*Recovery:*	*98 %*	*Limits:* *50-150 %*	*1*	*12/27/24 16:22*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*113 %*	*50-150 %*	*1*	*12/27/24 16:22*	*NWTPH-Gx (MS)*	
24-63060 D9 DUP (A4L1669-11)				**Matrix: Water**		**Batch: 24L0985**		
Gasoline Range Organics	ND	---	100	ug/L	1	12/27/24 15:37	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		*Recovery:*	*96 %*	*Limits:* *50-150 %*	*1*	*12/27/24 15:37*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*111 %*	*50-150 %*	*1*	*12/27/24 15:37*	*NWTPH-Gx (MS)*	

Apex Laboratories

Cameron O'Brien, Project Manager

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

ANALYTICAL REPORT

Alpha Environmental	Project: **Default- Env Dept.**	
11080 SW Allen Blvd, Suite 100	Project Number: **3939 NW St. Helens Rd 24-(**	**Report ID:**
Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

ANALYTICAL SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
24-63060 D9 (A4L1669-09RE1)				**Matrix: Water**		**Batch: 24L0985**		
Benzene	ND	---	0.200	ug/L	1	12/27/24 15:59	EPA 8260D	
Toluene	ND	---	1.00	ug/L	1	12/27/24 15:59	EPA 8260D	
Ethylbenzene	ND	---	0.500	ug/L	1	12/27/24 15:59	EPA 8260D	
Xylenes, total	ND	---	1.50	ug/L	1	12/27/24 15:59	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	12/27/24 15:59	EPA 8260D	
Naphthalene	ND	---	5.00	ug/L	1	12/27/24 15:59	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	12/27/24 15:59	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	12/27/24 15:59	EPA 8260D	
Isopropylbenzene	ND	---	1.00	ug/L	1	12/27/24 15:59	EPA 8260D	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	12/27/24 15:59	EPA 8260D	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	12/27/24 15:59	EPA 8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*106 %*	*Limits: 80-120 %*	*1*	*12/27/24 15:59*	*EPA 8260D*	
Toluene-d8 (Surr)			*107 %*	*80-120 %*	*1*	*12/27/24 15:59*	*EPA 8260D*	
4-Bromofluorobenzene (Surr)			*104 %*	*80-120 %*	*1*	*12/27/24 15:59*	*EPA 8260D*	
24-63060 D10 (A4L1669-10RE1)				**Matrix: Water**		**Batch: 24L0985**		
Benzene	ND	---	0.200	ug/L	1	12/27/24 16:22	EPA 8260D	
Toluene	ND	---	1.00	ug/L	1	12/27/24 16:22	EPA 8260D	
Ethylbenzene	ND	---	0.500	ug/L	1	12/27/24 16:22	EPA 8260D	
Xylenes, total	ND	---	1.50	ug/L	1	12/27/24 16:22	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	12/27/24 16:22	EPA 8260D	
Naphthalene	ND	---	5.00	ug/L	1	12/27/24 16:22	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	12/27/24 16:22	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	12/27/24 16:22	EPA 8260D	
Isopropylbenzene	ND	---	1.00	ug/L	1	12/27/24 16:22	EPA 8260D	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	12/27/24 16:22	EPA 8260D	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	12/27/24 16:22	EPA 8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*105 %*	*Limits: 80-120 %*	*1*	*12/27/24 16:22*	*EPA 8260D*	
Toluene-d8 (Surr)			*107 %*	*80-120 %*	*1*	*12/27/24 16:22*	*EPA 8260D*	
4-Bromofluorobenzene (Surr)			*104 %*	*80-120 %*	*1*	*12/27/24 16:22*	*EPA 8260D*	
24-63060 D9 DUP (A4L1669-11)				**Matrix: Water**		**Batch: 24L0985**		
Benzene	ND	---	0.200	ug/L	1	12/27/24 15:37	EPA 8260D	
Toluene	ND	---	1.00	ug/L	1	12/27/24 15:37	EPA 8260D	
Ethylbenzene	ND	---	0.500	ug/L	1	12/27/24 15:37	EPA 8260D	
Xylenes, total	ND	---	1.50	ug/L	1	12/27/24 15:37	EPA 8260D	

Apex Laboratories

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Cameron O'Brien, Project Manager

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

ANALYTICAL REPORT

Alpha Environmental	Project: **Default- Env Dept.**	
11080 SW Allen Blvd, Suite 100	Project Number: **3939 NW St. Helens Rd 24-(**	**Report ID:**
Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

ANALYTICAL SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
24-63060 D9 DUP (A4L1669-11)				**Matrix: Water**		**Batch: 24L0985**		
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	12/27/24 15:37	EPA 8260D	
Naphthalene	ND	---	5.00	ug/L	1	12/27/24 15:37	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	12/27/24 15:37	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	12/27/24 15:37	EPA 8260D	
Isopropylbenzene	ND	---	1.00	ug/L	1	12/27/24 15:37	EPA 8260D	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	12/27/24 15:37	EPA 8260D	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	12/27/24 15:37	EPA 8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*105 %*	*Limits: 80-120 %*	*1*	*12/27/24 15:37*	*EPA 8260D*	
Toluene-d8 (Surr)			*106 %*	*80-120 %*	*1*	*12/27/24 15:37*	*EPA 8260D*	
4-Bromofluorobenzene (Surr)			*104 %*	*80-120 %*	*1*	*12/27/24 15:37*	*EPA 8260D*	

Apex Laboratories

Cameron O'Brien, Project Manager

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6700 S.W. Sandburg Street
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503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Alpha Environmental	Project: **Default- Env Dept.**	
11080 SW Allen Blvd, Suite 100	Project Number: **3939 NW St. Helens Rd 24-(**	**Report ID:**
Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

ANALYTICAL SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 5035A/8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
24-63060 D8-12' (A4L1669-01)				**Matrix: Soil**		**Batch: 24L0900**		
Benzene	ND	---	0.698	mg/kg dry	2000	12/25/24 01:07	5035A/8260D	
Toluene	ND	---	3.49	mg/kg dry	2000	12/25/24 01:07	5035A/8260D	
Ethylbenzene	**176**	---	1.74	mg/kg dry	2000	12/25/24 01:07	5035A/8260D	
Xylenes, total	ND	---	5.23	mg/kg dry	2000	12/25/24 01:07	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	3.49	mg/kg dry	2000	12/25/24 01:07	5035A/8260D	
Naphthalene	**24.0**	---	6.98	mg/kg dry	2000	12/25/24 01:07	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	3.49	mg/kg dry	2000	12/25/24 01:07	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	1.74	mg/kg dry	2000	12/25/24 01:07	5035A/8260D	
Isopropylbenzene	**21.5**	---	3.49	mg/kg dry	2000	12/25/24 01:07	5035A/8260D	
1,2,4-Trimethylbenzene	**71.8**	---	3.49	mg/kg dry	2000	12/25/24 01:07	5035A/8260D	
1,3,5-Trimethylbenzene	**7.26**	---	3.49	mg/kg dry	2000	12/25/24 01:07	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*106 %*	*Limits: 80-120 %*	*1*	*12/25/24 01:07*	*5035A/8260D*	
Toluene-d8 (Surr)			*95 %*	*80-120 %*	*1*	*12/25/24 01:07*	*5035A/8260D*	
4-Bromofluorobenzene (Surr)			*99 %*	*79-120 %*	*1*	*12/25/24 01:07*	*5035A/8260D*	
24-63060 D8-15' (A4L1669-02)				**Matrix: Soil**		**Batch: 24L0900**		
Benzene	ND	---	0.339	mg/kg dry	1000	12/24/24 23:44	5035A/8260D	
Toluene	ND	---	1.70	mg/kg dry	1000	12/24/24 23:44	5035A/8260D	
Ethylbenzene	**71.8**	---	0.848	mg/kg dry	1000	12/24/24 23:44	5035A/8260D	
Xylenes, total	**108**	---	2.54	mg/kg dry	1000	12/24/24 23:44	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	1.70	mg/kg dry	1000	12/24/24 23:44	5035A/8260D	
Naphthalene	**8.38**	---	3.39	mg/kg dry	1000	12/24/24 23:44	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	1.70	mg/kg dry	1000	12/24/24 23:44	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	0.848	mg/kg dry	1000	12/24/24 23:44	5035A/8260D	
Isopropylbenzene	**6.72**	---	1.70	mg/kg dry	1000	12/24/24 23:44	5035A/8260D	
1,2,4-Trimethylbenzene	**96.6**	---	1.70	mg/kg dry	1000	12/24/24 23:44	5035A/8260D	
1,3,5-Trimethylbenzene	**28.0**	---	1.70	mg/kg dry	1000	12/24/24 23:44	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*106 %*	*Limits: 80-120 %*	*1*	*12/24/24 23:44*	*5035A/8260D*	
Toluene-d8 (Surr)			*97 %*	*80-120 %*	*1*	*12/24/24 23:44*	*5035A/8260D*	
4-Bromofluorobenzene (Surr)			*97 %*	*79-120 %*	*1*	*12/24/24 23:44*	*5035A/8260D*	
24-63060 D8-17' (A4L1669-03RE2)				**Matrix: Soil**		**Batch: 24L1029**		
Benzene	ND	---	0.0727	mg/kg dry	200	12/30/24 23:17	5035A/8260D	
Toluene	ND	---	0.363	mg/kg dry	200	12/30/24 23:17	5035A/8260D	
Ethylbenzene	**24.5**	---	0.182	mg/kg dry	200	12/30/24 23:17	5035A/8260D	
Xylenes, total	**40.5**	---	0.545	mg/kg dry	200	12/30/24 23:17	5035A/8260D	

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Cameron O'Brien, Project Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

Alpha Environmental	Project: **Default- Env Dept.**	
11080 SW Allen Blvd, Suite 100	Project Number: **3939 NW St. Helens Rd 24-(**	**Report ID:**
Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

ANALYTICAL SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 5035A/8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
24-63060 D8-17' (A4L1669-03RE2)				**Matrix: Soil**		**Batch: 24L1029**		
Methyl tert-butyl ether (MTBE)	ND	---	0.363	mg/kg dry	200	12/30/24 23:17	5035A/8260D	
Naphthalene	**3.46**	---	0.727	mg/kg dry	200	12/30/24 23:17	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	0.363	mg/kg dry	200	12/30/24 23:17	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	0.182	mg/kg dry	200	12/30/24 23:17	5035A/8260D	
Isopropylbenzene	**2.64**	---	0.363	mg/kg dry	200	12/30/24 23:17	5035A/8260D	
1,2,4-Trimethylbenzene	**35.3**	---	0.363	mg/kg dry	200	12/30/24 23:17	5035A/8260D	
1,3,5-Trimethylbenzene	**10.3**	---	0.363	mg/kg dry	200	12/30/24 23:17	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*106 %*	*Limits: 80-120 %*	*1*	*12/30/24 23:17*	*5035A/8260D*	
Toluene-d8 (Surr)			*95 %*	*80-120 %*	*1*	*12/30/24 23:17*	*5035A/8260D*	
4-Bromofluorobenzene (Surr)			*99 %*	*79-120 %*	*1*	*12/30/24 23:17*	*5035A/8260D*	
24-63060 D8-17'-Dup (A4L1669-04)				**Matrix: Soil**		**Batch: 24L0900**		
Benzene	ND	---	0.0177	mg/kg dry	50	12/24/24 22:50	5035A/8260D	
Toluene	ND	---	0.0883	mg/kg dry	50	12/24/24 22:50	5035A/8260D	
Ethylbenzene	**1.66**	---	0.0442	mg/kg dry	50	12/24/24 22:50	5035A/8260D	
Xylenes, total	**2.14**	---	0.133	mg/kg dry	50	12/24/24 22:50	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	0.0883	mg/kg dry	50	12/24/24 22:50	5035A/8260D	
Naphthalene	ND	---	0.177	mg/kg dry	50	12/24/24 22:50	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	0.0883	mg/kg dry	50	12/24/24 22:50	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	0.0442	mg/kg dry	50	12/24/24 22:50	5035A/8260D	
Isopropylbenzene	ND	---	0.0883	mg/kg dry	50	12/24/24 22:50	5035A/8260D	
1,2,4-Trimethylbenzene	**0.710**	---	0.0883	mg/kg dry	50	12/24/24 22:50	5035A/8260D	
1,3,5-Trimethylbenzene	**0.185**	---	0.0883	mg/kg dry	50	12/24/24 22:50	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*107 %*	*Limits: 80-120 %*	*1*	*12/24/24 22:50*	*5035A/8260D*	
Toluene-d8 (Surr)			*97 %*	*80-120 %*	*1*	*12/24/24 22:50*	*5035A/8260D*	
4-Bromofluorobenzene (Surr)			*95 %*	*79-120 %*	*1*	*12/24/24 22:50*	*5035A/8260D*	
24-63060 D8-20' (A4L1669-05RE2)				**Matrix: Soil**		**Batch: 24L1029**		
Benzene	ND	---	0.0163	mg/kg dry	50	12/30/24 22:49	5035A/8260D	
Toluene	ND	---	0.0814	mg/kg dry	50	12/30/24 22:49	5035A/8260D	
Ethylbenzene	**4.76**	---	0.0407	mg/kg dry	50	12/30/24 22:49	5035A/8260D	
Xylenes, total	**1.43**	---	0.122	mg/kg dry	50	12/30/24 22:49	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	0.0814	mg/kg dry	50	12/30/24 22:49	5035A/8260D	
Naphthalene	**0.568**	---	0.163	mg/kg dry	50	12/30/24 22:49	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	0.0814	mg/kg dry	50	12/30/24 22:49	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	0.0407	mg/kg dry	50	12/30/24 22:49	5035A/8260D	

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Cameron O'Brien, Project Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

ANALYTICAL REPORT

Alpha Environmental	Project: **Default- Env Dept.**	
11080 SW Allen Blvd, Suite 100	Project Number: **3939 NW St. Helens Rd 24-(**	**Report ID:**
Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

ANALYTICAL SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 5035A/8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
24-63060 D8-20' (A4L1669-05RE2)				**Matrix: Soil**		**Batch: 24L1029**		
Isopropylbenzene	**0.587**	---	0.0814	mg/kg dry	50	12/30/24 22:49	5035A/8260D	
1,2,4-Trimethylbenzene	**3.73**	---	0.0814	mg/kg dry	50	12/30/24 22:49	5035A/8260D	
1,3,5-Trimethylbenzene	**0.120**	---	0.0814	mg/kg dry	50	12/30/24 22:49	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*105 %*	*Limits: 80-120 %*	*1*	*12/30/24 22:49*	*5035A/8260D*	
Toluene-d8 (Surr)			*94 %*	*80-120 %*	*1*	*12/30/24 22:49*	*5035A/8260D*	
4-Bromofluorobenzene (Surr)			*99 %*	*79-120 %*	*1*	*12/30/24 22:49*	*5035A/8260D*	
24-63060 D11-12' (A4L1669-06)				**Matrix: Soil**		**Batch: 24L0900**		
Benzene	ND	---	0.0188	mg/kg dry	50	12/24/24 21:28	5035A/8260D	
Toluene	ND	---	0.0938	mg/kg dry	50	12/24/24 21:28	5035A/8260D	
Ethylbenzene	ND	---	0.0469	mg/kg dry	50	12/24/24 21:28	5035A/8260D	
Xylenes, total	ND	---	0.141	mg/kg dry	50	12/24/24 21:28	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	0.0938	mg/kg dry	50	12/24/24 21:28	5035A/8260D	
Naphthalene	ND	---	0.188	mg/kg dry	50	12/24/24 21:28	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	0.0938	mg/kg dry	50	12/24/24 21:28	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	0.0469	mg/kg dry	50	12/24/24 21:28	5035A/8260D	
Isopropylbenzene	ND	---	0.0938	mg/kg dry	50	12/24/24 21:28	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	0.0938	mg/kg dry	50	12/24/24 21:28	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	0.0938	mg/kg dry	50	12/24/24 21:28	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*104 %*	*Limits: 80-120 %*	*1*	*12/24/24 21:28*	*5035A/8260D*	
Toluene-d8 (Surr)			*95 %*	*80-120 %*	*1*	*12/24/24 21:28*	*5035A/8260D*	
4-Bromofluorobenzene (Surr)			*99 %*	*79-120 %*	*1*	*12/24/24 21:28*	*5035A/8260D*	
24-63060 D11-15' (A4L1669-07)				**Matrix: Soil**		**Batch: 24L0900**		
Benzene	ND	---	0.0210	mg/kg dry	50	12/24/24 21:55	5035A/8260D	
Toluene	ND	---	0.105	mg/kg dry	50	12/24/24 21:55	5035A/8260D	
Ethylbenzene	ND	---	0.0526	mg/kg dry	50	12/24/24 21:55	5035A/8260D	
Xylenes, total	ND	---	0.158	mg/kg dry	50	12/24/24 21:55	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	0.105	mg/kg dry	50	12/24/24 21:55	5035A/8260D	
Naphthalene	ND	---	0.210	mg/kg dry	50	12/24/24 21:55	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	0.105	mg/kg dry	50	12/24/24 21:55	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	0.0526	mg/kg dry	50	12/24/24 21:55	5035A/8260D	
Isopropylbenzene	ND	---	0.105	mg/kg dry	50	12/24/24 21:55	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	0.105	mg/kg dry	50	12/24/24 21:55	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	0.105	mg/kg dry	50	12/24/24 21:55	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*105 %*	*Limits: 80-120 %*	*1*	*12/24/24 21:55*	*5035A/8260D*	

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6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Alpha Environmental	Project: **Default- Env Dept.**	
11080 SW Allen Blvd, Suite 100	Project Number: **3939 NW St. Helens Rd 24-(**	**Report ID:**
Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

ANALYTICAL SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 5035A/8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
24-63060 D11-15' (A4L1669-07)				**Matrix: Soil**		**Batch: 24L0900**		
Surrogate: Toluene-d8 (Surr)		*Recovery:*	*95 %*	*Limits: 80-120 %*	*1*	*12/24/24 21:55*	*5035A/8260D*	
4-Bromofluorobenzene (Surr)			*99 %*	*79-120 %*	*1*	*12/24/24 21:55*	*5035A/8260D*	
24-63060 D11-20' (A4L1669-08)				**Matrix: Soil**		**Batch: 24L0900**		
Benzene	ND	---	0.0171	mg/kg dry	50	12/24/24 22:22	5035A/8260D	
Toluene	ND	---	0.0857	mg/kg dry	50	12/24/24 22:22	5035A/8260D	
Ethylbenzene	ND	---	0.0429	mg/kg dry	50	12/24/24 22:22	5035A/8260D	
Xylenes, total	ND	---	0.129	mg/kg dry	50	12/24/24 22:22	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	0.0857	mg/kg dry	50	12/24/24 22:22	5035A/8260D	
Naphthalene	ND	---	0.171	mg/kg dry	50	12/24/24 22:22	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	0.0857	mg/kg dry	50	12/24/24 22:22	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	0.0429	mg/kg dry	50	12/24/24 22:22	5035A/8260D	
Isopropylbenzene	ND	---	0.0857	mg/kg dry	50	12/24/24 22:22	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	0.0857	mg/kg dry	50	12/24/24 22:22	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	0.0857	mg/kg dry	50	12/24/24 22:22	5035A/8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*106 %*	*Limits: 80-120 %*	*1*	*12/24/24 22:22*	*5035A/8260D*	
Toluene-d8 (Surr)			*96 %*	*80-120 %*	*1*	*12/24/24 22:22*	*5035A/8260D*	
4-Bromofluorobenzene (Surr)			*97 %*	*79-120 %*	*1*	*12/24/24 22:22*	*5035A/8260D*	

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ANALYTICAL REPORT

Alpha Environmental	Project: **Default- Env Dept.**	
11080 SW Allen Blvd, Suite 100	Project Number: **3939 NW St. Helens Rd 24-(**	**Report ID:**
Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
24-63060 D8-12' (A4L1669-01)				**Matrix: Soil**		**Batch: 24L0936**		
% Solids	**69.8**	---	1.00	%	1	12/27/24 05:06	EPA 8000D	
24-63060 D8-15' (A4L1669-02)				**Matrix: Soil**		**Batch: 24L0936**		
% Solids	**68.1**	---	1.00	%	1	12/27/24 05:06	EPA 8000D	
24-63060 D8-17' (A4L1669-03)				**Matrix: Soil**		**Batch: 24L0936**		
% Solids	**68.7**	---	1.00	%	1	12/27/24 05:06	EPA 8000D	
24-63060 D8-17'-Dup (A4L1669-04)				**Matrix: Soil**		**Batch: 24L0936**		
% Solids	**69.9**	---	1.00	%	1	12/27/24 05:06	EPA 8000D	
24-63060 D8-20' (A4L1669-05)				**Matrix: Soil**		**Batch: 24L0936**		
% Solids	**71.2**	---	1.00	%	1	12/27/24 05:06	EPA 8000D	
24-63060 D11-12' (A4L1669-06)				**Matrix: Soil**		**Batch: 24L0936**		
% Solids	**67.3**	---	1.00	%	1	12/27/24 05:06	EPA 8000D	
24-63060 D11-15' (A4L1669-07)				**Matrix: Soil**		**Batch: 24L0936**		
% Solids	**79.3**	---	1.00	%	1	12/27/24 05:06	EPA 8000D	
24-63060 D11-20' (A4L1669-08)				**Matrix: Soil**		**Batch: 24L0936**		
% Solids	**70.6**	---	1.00	%	1	12/27/24 05:06	EPA 8000D	

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11080 SW Allen Blvd, Suite 100	Project Number: **3939 NW St. Helens Rd 24-(**	**Report ID:**
Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24L0900 - EPA 5035A							**Soil**					
Blank (24L0900-BLK1)		Prepared: 12/24/24 13:08 Analyzed: 12/24/24 15:31										
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	5.00	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		*Recovery: 100 %*		*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*99 %*		*50-150 %*		*"*					
LCS (24L0900-BS2)		Prepared: 12/24/24 13:08 Analyzed: 12/24/24 15:04										
NWTPH-Gx (MS)												
Gasoline Range Organics	22.5	---	5.00	mg/kg wet	50	25.0	---	90	80 - 120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		*Recovery: 101 %*		*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*97 %*		*50-150 %*		*"*					
Duplicate (24L0900-DUP1)		Prepared: 12/23/24 10:15 Analyzed: 12/25/24 00:39										
QC Source Sample: 24-63060 D8-17' (A4L1669-03)												
NWTPH-Gx (MS)												
Gasoline Range Organics	**938**	---	182	mg/kg dry	1000	---	906	---	---	3	30%	
Surr: 4-Bromofluorobenzene (Sur)		*Recovery: 98 %*		*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*99 %*		*50-150 %*		*"*					
Duplicate (24L0900-DUP2)		Prepared: 12/23/24 10:00 Analyzed: 12/25/24 01:34										
QC Source Sample: 24-63060 D8-12' (A4L1669-01)												
NWTPH-Gx (MS)												
Gasoline Range Organics	**4470**	---	349	mg/kg dry	2000	---	4370	---	---	2	30%	
Surr: 4-Bromofluorobenzene (Sur)		*Recovery: 105 %*		*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*99 %*		*50-150 %*		*"*					
Batch 24L0911 - EPA 5030C							**Water**					
Blank (24L0911-BLK1)		Prepared: 12/24/24 15:00 Analyzed: 12/24/24 18:21										
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	100	ug/L	1	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		*Recovery: 100 %*		*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*110 %*		*50-150 %*		*"*					

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ORELAP ID: **OR100062**

Alpha Environmental	Project: **Default- Env Dept.**	
11080 SW Allen Blvd, Suite 100	Project Number: **3939 NW St. Helens Rd 24-(**	**Report ID:**
Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24L0911 - EPA 5030C									Water			
LCS (24L0911-BS2)		Prepared: 12/24/24 15:00 Analyzed: 12/24/24 17:47										
NWTPH-Gx (MS)												
Gasoline Range Organics	481	---	100	ug/L	1	500	---	96	80 - 120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		*Recovery: 97 %*		*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)		*104 %*		*50-150 %*			*"*					

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

Apex Laboratories

Cameron O'Brien, Project Manager

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

ANALYTICAL REPORT

Alpha Environmental	Project: **Default- Env Dept.**	
11080 SW Allen Blvd, Suite 100	Project Number: **3939 NW St. Helens Rd 24-(**	**Report ID:**
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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24L0985 - EPA 5030C												**Water**
Blank (24L0985-BLK1)		Prepared: 12/27/24 10:00 Analyzed: 12/27/24 15:14										
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	100	ug/L	1	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		*Recovery: 88 %*		*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)		*109 %*		*50-150 %*			*"*					
LCS (24L0985-BS2)		Prepared: 12/27/24 10:00 Analyzed: 12/27/24 14:52										
NWTPH-Gx (MS)												
Gasoline Range Organics	496	---	100	ug/L	1	500	---	99	80 - 120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		*Recovery: 97 %*		*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)		*109 %*		*50-150 %*			*"*					

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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Cameron O'Brien, Project Manager

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503-718-2323
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ANALYTICAL REPORT

Alpha Environmental	Project: **Default- Env Dept.**	
11080 SW Allen Blvd, Suite 100	Project Number: **3939 NW St. Helens Rd 24-(**	**Report ID:**
Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24L0991 - EPA 5035A												**Soil**
Blank (24L0991-BLK1)		Prepared: 12/27/24 11:56 Analyzed: 12/27/24 17:32										
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	5.00	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		*Recovery: 94 %*		*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*92 %*		*50-150 %*			*"*				
LCS (24L0991-BS2)		Prepared: 12/27/24 11:56 Analyzed: 12/27/24 17:05										
NWTPH-Gx (MS)												
Gasoline Range Organics	20.8	---	5.00	mg/kg wet	50	25.0	---	83	80 - 120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		*Recovery: 96 %*		*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*92 %*		*50-150 %*			*"*				

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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Cameron O'Brien, Project Manager

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Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24L1029 - EPA 5035A												**Soil**
Blank (24L1029-BLK1)		Prepared: 12/30/24 10:00 Analyzed: 12/30/24 12:19										
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	5.00	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		*Recovery: 99 %*		*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*98 %*		*50-150 %*		*"*					
LCS (24L1029-BS2)		Prepared: 12/30/24 10:00 Analyzed: 12/30/24 11:52										
NWTPH-Gx (MS)												
Gasoline Range Organics	24.0	---	5.00	mg/kg wet	50	25.0	---	96	80 - 120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		*Recovery: 102 %*		*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*98 %*		*50-150 %*		*"*					

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

QUALITY CONTROL (QC) SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24L0911 - EPA 5030C							**Water**					
Blank (24L0911-BLK1)		Prepared: 12/24/24 15:00		Analyzed: 12/24/24 18:21								
EPA 8260D												
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Toluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Xylenes, total	ND	---	1.50	ug/L	1	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
Isopropylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery: 106 %*		*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)		*105 %*		*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)		*103 %*		*80-120 %*			*"*					
LCS (24L0911-BS1)		Prepared: 12/24/24 15:00		Analyzed: 12/24/24 17:20								
EPA 8260D												
Benzene	20.2	---	0.200	ug/L	1	20.0	---	101	80 - 120%	---	---	
Toluene	19.8	---	1.00	ug/L	1	20.0	---	99	80 - 120%	---	---	
Ethylbenzene	21.6	---	0.500	ug/L	1	20.0	---	108	80 - 120%	---	---	
Xylenes, total	58.6	---	1.50	ug/L	1	60.0	---	98	80 - 120%	---	---	
Methyl tert-butyl ether (MTBE)	20.0	---	1.00	ug/L	1	20.0	---	100	80 - 120%	---	---	
Naphthalene	17.4	---	5.00	ug/L	1	20.0	---	87	80 - 120%	---	---	
1,2-Dibromoethane (EDB)	20.7	---	0.500	ug/L	1	20.0	---	103	80 - 120%	---	---	
1,2-Dichloroethane (EDC)	20.6	---	0.400	ug/L	1	20.0	---	103	80 - 120%	---	---	
Isopropylbenzene	18.5	---	1.00	ug/L	1	20.0	---	92	80 - 120%	---	---	
1,2,4-Trimethylbenzene	20.2	---	1.00	ug/L	1	20.0	---	101	80 - 120%	---	---	
1,3,5-Trimethylbenzene	21.8	---	1.00	ug/L	1	20.0	---	109	80 - 120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery: 100 %*		*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)		*101 %*		*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)		*95 %*		*80-120 %*			*"*					

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Cameron O'Brien, Project Manager

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ORELAP ID: OR100062

ANALYTICAL REPORT

Alpha Environmental	Project: **Default- Env Dept.**	
11080 SW Allen Blvd, Suite 100	Project Number: **3939 NW St. Helens Rd 24-(**	**Report ID:**
Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

QUALITY CONTROL (QC) SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

QUALITY CONTROL (QC) SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24L0985 - EPA 5030C							**Water**					
Blank (24L0985-BLK1)		Prepared: 12/27/24 10:00		Analyzed: 12/27/24 15:14								
EPA 8260D												
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Toluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Xylenes, total	ND	---	1.50	ug/L	1	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
Isopropylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery: 105 %*		*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)		*107 %*		*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)		*111 %*		*80-120 %*			*"*					
LCS (24L0985-BS1)		Prepared: 12/27/24 10:00		Analyzed: 12/27/24 14:19								
EPA 8260D												
Benzene	21.2	---	0.200	ug/L	1	20.0	---	106	80 - 120%	---	---	
Toluene	21.0	---	1.00	ug/L	1	20.0	---	105	80 - 120%	---	---	
Ethylbenzene	22.7	---	0.500	ug/L	1	20.0	---	114	80 - 120%	---	---	
Xylenes, total	65.1	---	1.50	ug/L	1	60.0	---	109	80 - 120%	---	---	
Methyl tert-butyl ether (MTBE)	21.0	---	1.00	ug/L	1	20.0	---	105	80 - 120%	---	---	
Naphthalene	16.8	---	5.00	ug/L	1	20.0	---	84	80 - 120%	---	---	
1,2-Dibromoethane (EDB)	21.5	---	0.500	ug/L	1	20.0	---	107	80 - 120%	---	---	
1,2-Dichloroethane (EDC)	23.3	---	0.400	ug/L	1	20.0	---	117	80 - 120%	---	---	
Isopropylbenzene	20.3	---	1.00	ug/L	1	20.0	---	102	80 - 120%	---	---	
1,2,4-Trimethylbenzene	22.4	---	1.00	ug/L	1	20.0	---	112	80 - 120%	---	---	
1,3,5-Trimethylbenzene	22.6	---	1.00	ug/L	1	20.0	---	113	80 - 120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery: 102 %*		*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)		*102 %*		*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)		*89 %*		*80-120 %*			*"*					

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503-718-2323
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ANALYTICAL REPORT

Alpha Environmental	Project: **Default- Env Dept.**	
11080 SW Allen Blvd, Suite 100	Project Number: **3939 NW St. Helens Rd 24-(**	**Report ID:**
Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

QUALITY CONTROL (QC) SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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11080 SW Allen Blvd, Suite 100	Project Number: **3939 NW St. Helens Rd 24-(**	**Report ID:**
Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

QUALITY CONTROL (QC) SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 5035A/8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24L0900 - EPA 5035A							**Soil**					
Blank (24L0900-BLK1)		Prepared: 12/24/24 13:08 Analyzed: 12/24/24 15:31										
5035A/8260D												
Benzene	**0.0120**	---	0.0100	mg/kg wet	50	---	---	---	---	---	---	B
Toluene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Xylenes, total	ND	---	0.0750	mg/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	---	0.100	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery:*	*105 %*	*Limits:*	*80-120 %*		*Dilution:*	*1x*				
Toluene-d8 (Surr)			*96 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*99 %*		*79-120 %*			*"*				
LCS (24L0900-BS1)		Prepared: 12/24/24 13:08 Analyzed: 12/24/24 14:36										
5035A/8260D												
Benzene	1.01	---	0.0100	mg/kg wet	50	1.00	---	101	80 - 120%	---	---	B
Toluene	0.958	---	0.0500	mg/kg wet	50	1.00	---	96	80 - 120%	---	---	
Ethylbenzene	1.03	---	0.0250	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
Xylenes, total	3.07	---	0.0750	mg/kg wet	50	3.00	---	102	80 - 120%	---	---	
Methyl tert-butyl ether (MTBE)	1.01	---	0.0500	mg/kg wet	50	1.00	---	101	80 - 120%	---	---	
Naphthalene	0.918	---	0.100	mg/kg wet	50	1.00	---	92	80 - 120%	---	---	
1,2-Dibromoethane (EDB)	1.08	---	0.0500	mg/kg wet	50	1.00	---	108	80 - 120%	---	---	
1,2-Dichloroethane (EDC)	0.998	---	0.0250	mg/kg wet	50	1.00	---	100	80 - 120%	---	---	
Isopropylbenzene	1.02	---	0.0500	mg/kg wet	50	1.00	---	102	80 - 120%	---	---	
1,2,4-Trimethylbenzene	1.03	---	0.0500	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
1,3,5-Trimethylbenzene	1.04	---	0.0500	mg/kg wet	50	1.00	---	104	80 - 120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery:*	*103 %*	*Limits:*	*80-120 %*		*Dilution:*	*1x*				
Toluene-d8 (Surr)			*97 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*97 %*		*79-120 %*			*"*				
Duplicate (24L0900-DUP1)		Prepared: 12/23/24 10:15 Analyzed: 12/25/24 00:39										

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Cameron O'Brien, Project Manager

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Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

QUALITY CONTROL (QC) SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 5035A/8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24L0900 - EPA 5035A							**Soil**					
Duplicate (24L0900-DUP1)			Prepared: 12/23/24 10:15 Analyzed: 12/25/24 00:39									
QC Source Sample: 24-63060 D8-17' (A4L1669-03)												
5035A/8260D												
Benzene	ND	---	0.363	mg/kg dry	1000	---	ND	---	---	---	30%	
Toluene	ND	---	1.82	mg/kg dry	1000	---	ND	---	---	---	30%	
Ethylbenzene	**25.3**	---	0.908	mg/kg dry	1000	---	24.6	---	---	3	30%	
Xylenes, total	**38.9**	---	2.72	mg/kg dry	1000	---	38.2	---	---	2	30%	
Methyl tert-butyl ether (MTBE)	ND	---	1.82	mg/kg dry	1000	---	ND	---	---	---	30%	
Naphthalene	ND	---	3.63	mg/kg dry	1000	---	2.82	---	---	***	30%	
1,2-Dibromoethane (EDB)	ND	---	1.82	mg/kg dry	1000	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	0.908	mg/kg dry	1000	---	ND	---	---	---	30%	
Isopropylbenzene	**2.34**	---	1.82	mg/kg dry	1000	---	2.34	---	---	0	30%	
1,2,4-Trimethylbenzene	**33.8**	---	1.82	mg/kg dry	1000	---	33.1	---	---	2	30%	
1,3,5-Trimethylbenzene	**9.76**	---	1.82	mg/kg dry	1000	---	9.88	---	---	1	30%	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 105 %*	*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)			*98 %*	*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)			*97 %*	*79-120 %*			*"*					
Duplicate (24L0900-DUP2)			Prepared: 12/23/24 10:00 Analyzed: 12/25/24 01:34									
QC Source Sample: 24-63060 D8-12' (A4L1669-01)												
5035A/8260D												
Benzene	ND	---	0.698	mg/kg dry	2000	---	ND	---	---	---	30%	
Toluene	ND	---	3.49	mg/kg dry	2000	---	ND	---	---	---	30%	
Ethylbenzene	**175**	---	1.74	mg/kg dry	2000	---	176	---	---	0.7	30%	
Xylenes, total	ND	---	5.23	mg/kg dry	2000	---	3.98	---	---	***	30%	
Methyl tert-butyl ether (MTBE)	ND	---	3.49	mg/kg dry	2000	---	ND	---	---	---	30%	
Naphthalene	**24.7**	---	6.98	mg/kg dry	2000	---	24.0	---	---	3	30%	
1,2-Dibromoethane (EDB)	ND	---	3.49	mg/kg dry	2000	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	1.74	mg/kg dry	2000	---	ND	---	---	---	30%	
Isopropylbenzene	**22.0**	---	3.49	mg/kg dry	2000	---	21.5	---	---	2	30%	
1,2,4-Trimethylbenzene	**70.1**	---	3.49	mg/kg dry	2000	---	71.8	---	---	2	30%	
1,3,5-Trimethylbenzene	**6.88**	---	3.49	mg/kg dry	2000	---	7.26	---	---	5	30%	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 105 %*	*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)			*95 %*	*80-120 %*			*"*					

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Cameron O'Brien, Project Manager

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6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

Alpha Environmental	Project: **Default- Env Dept.**	
11080 SW Allen Blvd, Suite 100	Project Number: **3939 NW St. Helens Rd 24-(**	**Report ID:**
Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

QUALITY CONTROL (QC) SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 5035A/8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24L0900 - EPA 5035A												**Soil**
Duplicate (24L0900-DUP2)	Prepared: 12/23/24 10:00 Analyzed: 12/25/24 01:34											
QC Source Sample: 24-63060 D8-12' (A4L1669-01)												
Surr: 4-Bromofluorobenzene (Surr)	*Recovery: 99 %*		*Limits: 79-120 %*		*Dilution: 1x*							

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Cameron O'Brien, Project Manager

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Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

QUALITY CONTROL (QC) SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 5035A/8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24L0991 - EPA 5035A							**Soil**					
Blank (24L0991-BLK1)		Prepared: 12/27/24 11:56 Analyzed: 12/27/24 17:32										
5035A/8260D												
Benzene	ND	---	0.0100	mg/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Xylenes, total	ND	---	0.0750	mg/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	---	0.100	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery: 119 %*		*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)		*96 %*		*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)		*105 %*		*79-120 %*			*"*					
LCS (24L0991-BS1)		Prepared: 12/27/24 11:56 Analyzed: 12/27/24 16:34										
5035A/8260D												
Benzene	1.09	---	0.0100	mg/kg wet	50	1.00	---	109	80 - 120%	---	---	
Toluene	0.912	---	0.0500	mg/kg wet	50	1.00	---	91	80 - 120%	---	---	
Ethylbenzene	0.961	---	0.0250	mg/kg wet	50	1.00	---	96	80 - 120%	---	---	
Xylenes, total	2.87	---	0.0750	mg/kg wet	50	3.00	---	96	80 - 120%	---	---	
Methyl tert-butyl ether (MTBE)	0.967	---	0.0500	mg/kg wet	50	1.00	---	97	80 - 120%	---	---	
Naphthalene	0.974	---	0.100	mg/kg wet	50	1.00	---	97	80 - 120%	---	---	
1,2-Dibromoethane (EDB)	1.03	---	0.0500	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
1,2-Dichloroethane (EDC)	0.874	---	0.0250	mg/kg wet	50	1.00	---	87	80 - 120%	---	---	
Isopropylbenzene	0.999	---	0.0500	mg/kg wet	50	1.00	---	100	80 - 120%	---	---	
1,2,4-Trimethylbenzene	0.985	---	0.0500	mg/kg wet	50	1.00	---	99	80 - 120%	---	---	
1,3,5-Trimethylbenzene	1.01	---	0.0500	mg/kg wet	50	1.00	---	101	80 - 120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery: 119 %*		*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)		*97 %*		*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)		*102 %*		*79-120 %*			*"*					

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Cameron O'Brien, Project Manager

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ORELAP ID: OR100062

ANALYTICAL REPORT

Alpha Environmental	Project: **Default- Env Dept.**	
11080 SW Allen Blvd, Suite 100	Project Number: **3939 NW St. Helens Rd 24-(**	**Report ID:**
Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

QUALITY CONTROL (QC) SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 5035A/8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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Cameron O'Brien, Project Manager

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Tigard, OR 97223
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Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

QUALITY CONTROL (QC) SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 5035A/8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24L1029 - EPA 5035A							**Soil**					
Blank (24L1029-BLK1)		Prepared: 12/30/24 10:00 Analyzed: 12/30/24 12:19										
5035A/8260D												
Benzene	ND	---	0.0100	mg/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Xylenes, total	ND	---	0.0750	mg/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	---	0.100	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery: 104 %*		*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)		*96 %*		*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)		*99 %*		*79-120 %*			*"*					
LCS (24L1029-BS1)		Prepared: 12/30/24 10:00 Analyzed: 12/30/24 11:25										
5035A/8260D												
Benzene	1.04	---	0.0100	mg/kg wet	50	1.00	---	104	80 - 120%	---	---	
Toluene	0.947	---	0.0500	mg/kg wet	50	1.00	---	95	80 - 120%	---	---	
Ethylbenzene	0.992	---	0.0250	mg/kg wet	50	1.00	---	99	80 - 120%	---	---	
Xylenes, total	2.98	---	0.0750	mg/kg wet	50	3.00	---	99	80 - 120%	---	---	
Methyl tert-butyl ether (MTBE)	1.04	---	0.0500	mg/kg wet	50	1.00	---	104	80 - 120%	---	---	
Naphthalene	0.908	---	0.100	mg/kg wet	50	1.00	---	91	80 - 120%	---	---	
1,2-Dibromoethane (EDB)	1.10	---	0.0500	mg/kg wet	50	1.00	---	110	80 - 120%	---	---	
1,2-Dichloroethane (EDC)	1.02	---	0.0250	mg/kg wet	50	1.00	---	102	80 - 120%	---	---	
Isopropylbenzene	0.983	---	0.0500	mg/kg wet	50	1.00	---	98	80 - 120%	---	---	
1,2,4-Trimethylbenzene	1.01	---	0.0500	mg/kg wet	50	1.00	---	101	80 - 120%	---	---	
1,3,5-Trimethylbenzene	1.02	---	0.0500	mg/kg wet	50	1.00	---	102	80 - 120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery: 104 %*		*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)		*98 %*		*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)		*99 %*		*79-120 %*			*"*					

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Cameron O'Brien, Project Manager

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6700 S.W. Sandburg Street
Tigard, OR 97223
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ORELAP ID: OR100062

ANALYTICAL REPORT

Alpha Environmental	Project: **Default- Env Dept.**	
11080 SW Allen Blvd, Suite 100	Project Number: **3939 NW St. Helens Rd 24-(**	**Report ID:**
Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

QUALITY CONTROL (QC) SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 5035A/8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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Cameron O'Brien, Project Manager

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ANALYTICAL REPORT

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Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24L0936 - Dry Weight Prep (EPA 8000D)							**Soil**					

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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Cameron O'Brien, Project Manager

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ANALYTICAL REPORT

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Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

SAMPLE PREPARATION INFORMATION

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5030C

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24L0985							
A4L1669-09RE1	Water	NWTPH-Gx (MS)	12/23/24 11:00	12/27/24 15:01	5mL/5mL	5mL/5mL	1.00
A4L1669-10RE1	Water	NWTPH-Gx (MS)	12/23/24 11:30	12/27/24 15:01	5mL/5mL	5mL/5mL	1.00
A4L1669-11	Water	NWTPH-Gx (MS)	12/23/24 11:00	12/27/24 15:01	5mL/5mL	5mL/5mL	1.00

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24L0900							
A4L1669-01	Soil	NWTPH-Gx (MS)	12/23/24 10:00	12/23/24 10:00	5.46g/5mL	5g/5mL	0.92
A4L1669-02	Soil	NWTPH-Gx (MS)	12/23/24 10:10	12/23/24 10:10	5.97g/5mL	5g/5mL	0.84
A4L1669-04	Soil	NWTPH-Gx (MS)	12/23/24 10:15	12/23/24 10:15	5.35g/5mL	5g/5mL	0.94
A4L1669-06	Soil	NWTPH-Gx (MS)	12/23/24 11:30	12/23/24 11:30	5.34g/5mL	5g/5mL	0.94
A4L1669-07	Soil	NWTPH-Gx (MS)	12/23/24 11:35	12/23/24 11:35	3.42g/5mL	5g/5mL	1.46
A4L1669-08	Soil	NWTPH-Gx (MS)	12/23/24 11:40	12/23/24 11:40	5.45g/5mL	5g/5mL	0.92
Batch: 24L1029							
A4L1669-03RE2	Soil	NWTPH-Gx (MS)	12/23/24 10:15	12/23/24 10:15	5.34g/5mL	5g/5mL	0.94
A4L1669-05RE2	Soil	NWTPH-Gx (MS)	12/23/24 10:20	12/23/24 10:20	5.74g/5mL	5g/5mL	0.87

Selected Volatile Organic Compounds by EPA 8260D

Prep: EPA 5030C

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24L0985							
A4L1669-09RE1	Water	EPA 8260D	12/23/24 11:00	12/27/24 15:01	5mL/5mL	5mL/5mL	1.00
A4L1669-10RE1	Water	EPA 8260D	12/23/24 11:30	12/27/24 15:01	5mL/5mL	5mL/5mL	1.00
A4L1669-11	Water	EPA 8260D	12/23/24 11:00	12/27/24 15:01	5mL/5mL	5mL/5mL	1.00

Selected Volatile Organic Compounds by EPA 5035A/8260D

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24L0900							
A4L1669-01	Soil	5035A/8260D	12/23/24 10:00	12/23/24 10:00	5.46g/5mL	5g/5mL	0.92
A4L1669-02	Soil	5035A/8260D	12/23/24 10:10	12/23/24 10:10	5.97g/5mL	5g/5mL	0.84
A4L1669-04	Soil	5035A/8260D	12/23/24 10:15	12/23/24 10:15	5.35g/5mL	5g/5mL	0.94
A4L1669-06	Soil	5035A/8260D	12/23/24 11:30	12/23/24 11:30	5.34g/5mL	5g/5mL	0.94

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Alpha Environmental	Project: **Default- Env Dept.**	
11080 SW Allen Blvd, Suite 100	Project Number: **3939 NW St. Helens Rd 24-(**	**Report ID:**
Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

SAMPLE PREPARATION INFORMATION

Selected Volatile Organic Compounds by EPA 5035A/8260D

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A4L1669-07	Soil	5035A/8260D	12/23/24 11:35	12/23/24 11:35	3.42g/5mL	5g/5mL	1.46
A4L1669-08	Soil	5035A/8260D	12/23/24 11:40	12/23/24 11:40	5.45g/5mL	5g/5mL	0.92
Batch: 24L1029							
A4L1669-03RE2	Soil	5035A/8260D	12/23/24 10:15	12/23/24 10:15	5.34g/5mL	5g/5mL	0.94
A4L1669-05RE2	Soil	5035A/8260D	12/23/24 10:20	12/23/24 10:20	5.74g/5mL	5g/5mL	0.87

Percent Dry Weight

Prep: Dry Weight Prep (EPA 8000D)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24L0936							
A4L1669-01	Soil	EPA 8000D	12/23/24 10:00	12/26/24 10:28	1g	1g	1.00
A4L1669-02	Soil	EPA 8000D	12/23/24 10:10	12/26/24 10:28	1g	1g	1.00
A4L1669-03	Soil	EPA 8000D	12/23/24 10:15	12/26/24 10:28	1g	1g	1.00
A4L1669-04	Soil	EPA 8000D	12/23/24 10:15	12/26/24 10:28	1g	1g	1.00
A4L1669-05	Soil	EPA 8000D	12/23/24 10:20	12/26/24 10:28	1g	1g	1.00
A4L1669-06	Soil	EPA 8000D	12/23/24 11:30	12/26/24 10:28	1g	1g	1.00
A4L1669-07	Soil	EPA 8000D	12/23/24 11:35	12/26/24 10:28	1g	1g	1.00
A4L1669-08	Soil	EPA 8000D	12/23/24 11:40	12/26/24 10:28	1g	1g	1.00

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Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

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B	Analyte detected in an associated blank at a level above the MRL. (See Notes and Conventions below.)

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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported.

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) are not included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to one half of the Reporting Limit (RL).
Blank results for gravimetric analyses are evaluated to the Reporting Level, not to half of the Reporting Level.
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.

Apex Laboratories

Cameron O'Brien, Project Manager

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Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

Alpha Environmental	Project: **Default- Env Dept.**	
11080 SW Allen Blvd, Suite 100	Project Number: **3939 NW St. Helens Rd 24-(**	**Report ID:**
Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.
'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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Decanted Samples:

Soils/Sediments:
Unless TCLP analysis is required or there is notification otherwise for a specific project, all Soil and Sediments containing excess water are decanted prior to analysis in order to provide the most representative sample for analysis.

Water Samples:
Water samples containing solids and sediment may need to be decanted in order to eliminate these particulates from the water extractions. In the case of organics extractions, a solvent rinse of the container will not be performed.

Volatiles Soils (5035s)
Samples that are field preserved by 5035 for volatiles are dry weight corrected using the same dry weight corretion as for normal analyses. In the case of decanted samples, the dry weight may be performed on a decanted sample, while the aliquot for 5035 may not have been treated the same way. If this is a concern, please submit separate containers for dry weight analysis for volatiles can be provided.

All samples decanted in the laboratory are noted in this report with the DCNT qualifier indicating the sample was decanted.

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ANALYTICAL REPORT

Alpha Environmental	Project: **Default- Env Dept.**	
11080 SW Allen Blvd, Suite 100	Project Number: **3939 NW St. Helens Rd 24-(**	**Report ID:**
Beaverton, OR 97005	Project Manager: **Jim Cooper**	**A4L1669 - 01 06 25 1856**

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation)
EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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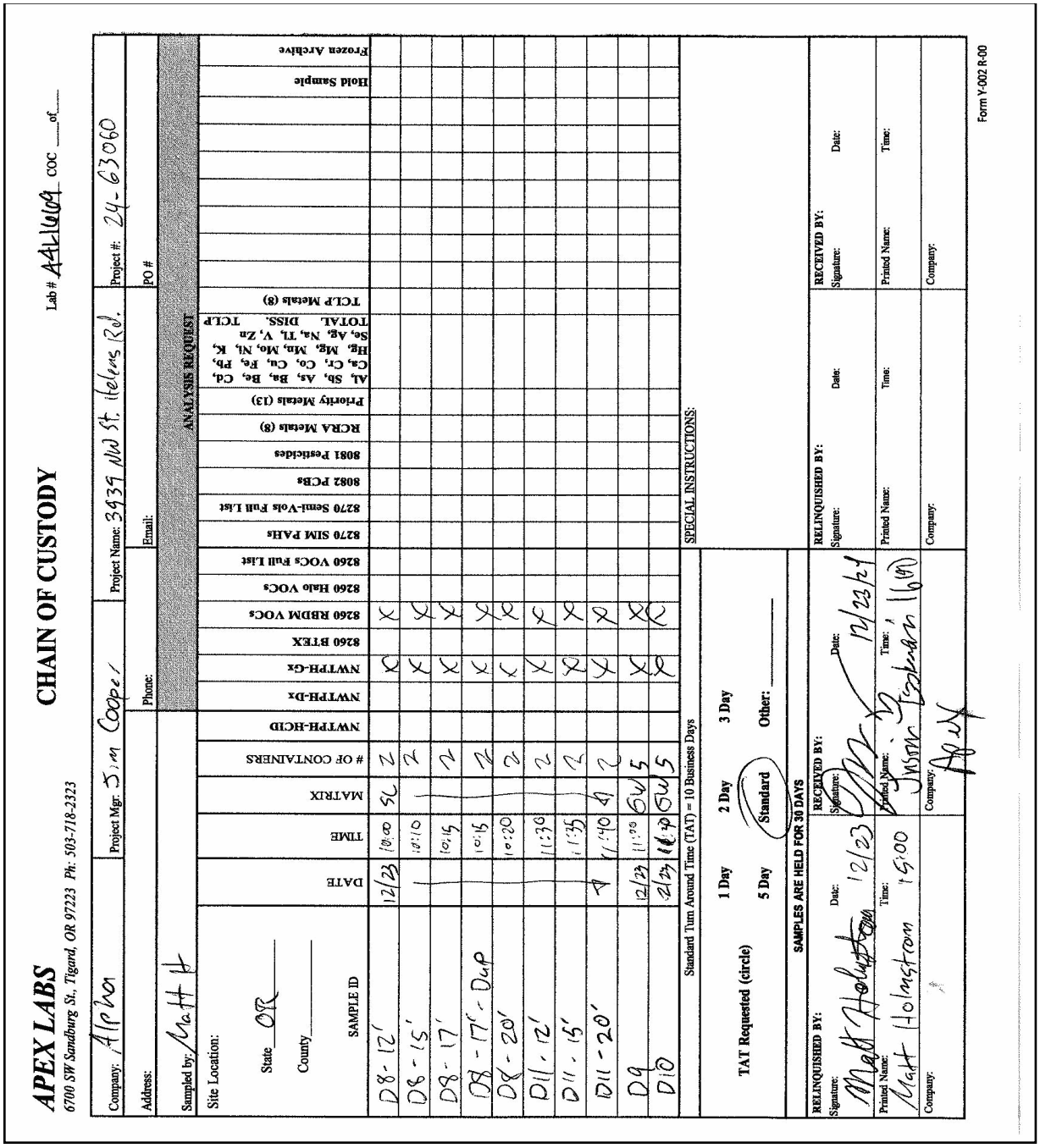

APEX LABS — 6700 SW Sandburg St. Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY — Lab # A4L1669 COC ___of___

Company: Alpha — Project Mgr: Jim Cooper — Project Name: 3939 NW St. Helens Rd. — Project #: 24-63060
Address: — Phone: — Email: — PO #
Sampled by: Matt H — ANALYSIS REQUEST

Site Location: State OR County

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTFH-HCID	NWTFH-Dx	NWTFH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
D8-12'	12/23	10:00	SL	2			X		X												
D8-15'		10:10		2			X		X												
D8-17'		10:15		2			X		X												
D8-17'-Dup		10:15		2			X		X												
D8-20'		10:20		2			X		X												
D11-12'		11:30		2			X		X												
D11-15'		11:35		2			X		X												
D11-20'		11:40		2			X		X												
D9	12/23	11:30	SL	5			X		X												
D10	12/23	11:40	SL	5			X		X												

SPECIAL INSTRUCTIONS:

Standard Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): 1 Day 2 Day 3 Day 5 Day Standard Other: _____

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature:	Signature:	Signature:	Signature:
Printed Name: Matt Holmstrom	Printed Name: Justin Fishburn	Printed Name:	Printed Name:
Company:	Company:	Company:	Company:
Date: 12/23	Date: 12/23/24	Date:	Date:
Time: 15:00	Time: 1600	Time:	Time:

Form Y-002 R-00

Apex Laboratories

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APEX LABS COOLER RECEIPT FORM

Client: Alpha Element WO#: A4L1669

Project/Project #: 3439 NW ST HELENS RD 124-63060

Delivery Info:

Date/time received: 12/23/24 @ 1600 By: JPE

Delivered by: Apex✓ Client__ ESS__ FedEx__ UPS__ Radio__ Morgan__ SDS__ Evergreen__ Other__

From USDA Regulated Origin? Yes_____ No X

Cooler Inspection Date/time inspected: 12/23/24@ 1628 By: JPE

Chain of Custody included? Yes X No_____

Signed/dated by client? Yes X No_____

Contains USDA Reg. Soils? Yes_____ No X Unsure (email RegSoils)_____

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	1.9						
Custody seals? (Y/N)	N						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	Y						
Ice type: (Gel/Real/Other)	GEL/REAL						
Condition (In/Out):	IN						

Cooler out of temp? (Y/N) Possible reason why:

Green dots applied to out of temperature samples? Yes/No

Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 12/23/24@1637 By: KN

All samples intact? Yes ✓ No___ Comments:

Bottle labels/COCs agree? Yes ✓ No___ Comments:

COC/container discrepancies form initiated? Yes___ No ✓

Containers/volumes received appropriate for analysis? Yes ✓ No___ Comments:

Do VOA vials have visible headspace? Yes___ No ✓ NA___

Comments 3/3 VOAs have Seal for D9 and D10

Water samples: pH checked: Yes ✓ No___ NA___ pH appropriate? Yes ✓ No___ NA___ pH ID: A23I172

Comments:

Labeled by: KN Witness: ZAM Cooler Inspected by: KN

Form Y-003 R-02

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