



FOCUSED SUB-SLAB VAPOR INVESTIGATION



FUTURE KIDDIE ACADEMY PROPERTY

8701 Greenwood Avenue North
Seattle, WA 98103

Prepared for:



Attn: Maninder Singh

1260 NE 85th Street, Suite 108
Kirkland, Washington 98033

Issued on:

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EVREN NORTHWEST, INC.
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Offices in Portland and Bend, OR / San Rafael, CA
P.O. Box 14488, Portland, Oregon 97293
T. 503-452-5561 / E. ENW@EVREN-NW.com

This

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Seattle, Washington 98103

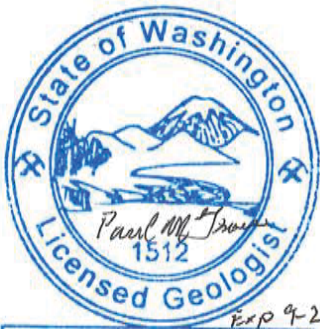
Report for:

KIDDIE  **ACADEMY.**
EDUCATIONAL CHILD CARE

Attn: Maninder Singh
12620 NE 85th Street
Suite-112
Kirkland, Washington 98033

and its assignees

Issued February 23, 2022 by:



EVRENNORTHWEST INC.
environmental natural resource consultants



Lynn D. Green

Paul M. Trone

Paul M. Trone 2022

Paul M. Trone L.G.
Principal Geologist

Lynn D. Green, L.E.G.
Principal Engineering Geologist

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List of Acronyms and Abbreviations

amsl	above mean sea level
bgs	below ground surface
Client	Kiddie Academy
COPC	constituent of potential concern
CSM	conceptual site model
CULs	cleanup levels
cVOCs	chlorinated volatile organic constituents
DRO	diesel-range organics
EAS	Environmental Analytical Services, Inc.
Ecology	Washington Department of Ecology
ENW	EVREN Northwest, Inc.
EPA	US Environmental Protection Agency
FSDS	Field Sampling Data Sheet
GRO	gasoline-range organics
IPA	isopropyl alcohol (or 2-propanol)
mL/min	milliliters per minute
µg/m ³	micrograms per cubic meter
MTCA	Model Toxics Control Act
PAHs	polynuclear aromatic hydrocarbons
PID	photoionization detector
ppmv	parts per million by volume
PVI	petroleum vapor intrusion
RRO	residual (oil)-range organics
SOW	scope of work
TMB	trimethylbenzene
USGS	U.S. Geological Survey
VI	vapor intrusion
VOCs	volatile organic constituents

1.0 Introduction

At the request of Kiddie Academy (Client), EVREN Northwest, Inc. (ENW) conducted a Focused Sub-Slab Vapor Investigation (FSSVI) at the commercial property located at 8701 Greenwood Avenue North in Seattle, Washington (Subject Site, Figures 1 and 2). The scope of work completed during this investigation further assesses the data gaps identified in ENW's Work Plan¹ to fulfill Washington Department of Ecology's (Ecology's) site closure² pursuant to Client's plans to redevelop the subject property as a child daycare facility.

This report summarizes previous environmental work and describes the sub-slab vapor survey at the on-site building and evaluates the vapor intrusion (VI) potential of selected petroleum-related volatile organic constituents (VOCs) and selected chlorinated VOCs (cVOCs) at the subject site. This work was authorized by the Client on December 29, 2021.

2.0 Background

Site background is detailed in ENW's previously submitted work plan¹. Based on this history, ENW prepared the *Data Gap Investigation Work Plan* (Work Plan),¹ which is the basis of the Scope of Work (SOW) outlined in the following section and followed in the sub-slab vapor sampling activities presented in this report.

2.1 Scope of Work

This work was performed in accordance with the SOW provided in ENW's proposal dated December 7, 2021.

The SOW included the following tasks:

- Prepared an internal Sample/Analysis Plan for sample collection.
- Ordered a utility clearance to identify public utilities in the area.
- Collected six sub-slab vapor samples beneath the current commercial building.
- Submitted samples to an independent laboratory for analysis.
- Evaluated analytical data against MTCA's Method B screening levels.
- Completed this report describing the above activities and findings.

Appendix A presents photos of work conducted on site during this SOW.

¹ ENW, December 8, 2021. *December 2021 Work Plan for Focused Data Gap Investigation*, Future Kiddie Academy, Former Texaco #2111544, 8701 Greenwood Avenue North, Seattle, Washington, Facility/Site ID# 6416: Prepared for Kiddie Academy.

² Ecology, March 8, 2021. *Response to Change of Use Request at the Following Cleanup Site*: Name: Texaco 211544, Address: 8701 Greenwood Ave N, Seattle, Washington, Facility/Site No.: 63538329, Cleanup Site ID No.: 6416.

3.0 Site Description

A conceptual site model (CSM) is presented in ENW's *Work Plan*.¹ Key elements of the CSM are summarized in this section.

Site and Vicinity General Description. The subject property is located on the northwest corner of the intersection of Greenwood Avenue N and N 87th Street in the Greenwood neighborhood of North Seattle, Washington. The site is located approximately six miles north-northwest of downtown Seattle, Washington and approximately four miles west of Lake Washington. The King County Assessor's Office identifies the site as Parcel #2920700030 and describes the property as rectangular in shape and 32,728 square feet in area.

The subject property is in a mixed residential and commercial area of King County. The site is bordered to the north by single-family residence, west by an alley beyond which are single-family residences, to the east by Greenwood Avenue North, beyond which is a vacant commercial building and parking lot, and to the south by N 87th Avenue, beyond which is a multi-family residential building and street-level retail businesses.

The subject property was developed in 1997 with the current commercial building in the southern portion of the site. Other site improvements include an asphalt-paved parking lot in the northern portion of the site, drainage features and landscaped areas.

Geographic Setting. According to the U.S. Geological Survey (USGS) Seattle North, Washington 7.5-minute quadrangle (Figure 1), the subject property lies at an approximate elevation of 260 feet above mean sea level (amsl). Topography in the area of the subject property is indicated as sloping gently to the west-southwest.

Geologic Setting. Seattle is within the Puget Lowland, an elongate structural and topographic basin between the Cascade Range and Olympic Mountains. The Seattle area has experienced repeated glacial advancements during the past 2 million years causing cyclic glacial scouring and deposition and later modified by landslides and stream erosion. Seattle is located on a complex succession of glacial and nonglacial deposits that overlie an irregular bedrock surface. According to the Geologic Map of Northeastern Seattle (Part of the Seattle North 7.5' x 15' Quadrangle),³ the upper most geology beneath the site is mapped as Holocene age Peat deposits, which are accumulations of wood and other plant material forming layers of greater than about 1 meter and of mappable extent. These units are gradational within other non-glacial deposits. The mapped stratigraphy underlying these surficial deposits are mapped as Pleistocene age glacial deposits consisting of glacially transported silt, sand and sub-rounded to well-rounded gravel.

Previous investigations have identified a silt and peat layer present between approximately seven (7) and 15 feet bgs that appears to act as a confining layer separating lower saturated soils from the overlying vadose zone. Between 14 and 17 feet bgs across the site there is a transition to a gray gravel/silt hard pan layer with relatively high density compared to overlying native sediments.

³ Booth, D.B., Goetz, K., Schimel, S.A., 2009, Geologic Map of Northeastern Seattle (Part of the Seattle North 7.5' x 15' Quadrangle), King County, Washington: U.S. Geological Survey Scientific Investigations Map 3065, Map 1:24,000.

Hydrogeology. No surface water bodies, lagoons, or manmade drainages are located on the subject property. The nearest surface water body is Green Lake, located approximately 0.95 miles southeast of the site. Well log data in the area indicates ground water occurs as shallow as four feet bgs. Previous investigations reported first ground water in borings occurring at the site between nine and 17 feet bgs. Shallow ground water has been reported to occur within a silty/sandy layer located directly above a sand and gravel hardpan layer at depth. Shallow ground water within glacial deposits in the Seattle area commonly occurs as a seasonal perched ground water table recharged primarily by infiltrating precipitation during the wet season. At the subject site, first ground water was generally encountered within silts and sands below the overlying peat layer. Ground water has been reported to recharge slowly into existing monitoring wells. Stabilized static ground water levels in monitoring wells have been reported ranging from approximately 0.5 feet bgs to seven feet bgs. Relying on results from historical ground water monitoring data at the property, the shallow ground water flows generally to the west-northwest, consistent with surface topography.

Constituents of Potential Concern (COPCs). According to ENW's Work Plan,¹ COPCs are as follows:

- On-site dry-cleaning-related COPCs include gasoline-range organics (GRO), diesel-range organics (DRO), and cVOCs.
- On-site gasoline service station-related COPCs and off-site COPCs from the north-adjointing property include GRO, DRO, residual (oil)-range organics (RRO), VOCs, and polynuclear aromatic hydrocarbons (PAHs).

Nature and Extent and Associated Data Gaps. Data gaps¹ being addressed in this SOW are associated with the further evaluation of the VI pathway as follows:

- **Soil Vapor.** The building is located within the 30-foot exclusion zone around the area of known soil contamination. Previous soil gas and sub-slab vapor sampling suggest benzene, bromodichloromethane, xylenes, 1,2,4-trimethylbenzene (TMB) and naphthalene are COPCs in soil vapor. Potential preferential migration pathways along utility corridors have not been investigated (data gap) and will be address as part of this work scope.

4.0 Methods

This section describes the methods used to conduct the SOW. Field activities for this project are documented in the photographic log included as Appendix A.

4.1 Work Objectives

The objective of this work was to quantitatively determine whether petroleum-related VOCs and/or cVOCs may be present in the sub-slab beneath the building at the site at concentrations that present a vapor encroachment condition. In addition, the following general objectives were followed:

- To perform the work efficiently and cost-effectively, minimizing interference with any site operations.
- To perform the work in a safe manner for technical personnel and site employees / visitors.

- To document information and data generated in a professional manner that is valid for the intended use.

4.2 Preparation Activities

ENW performed or coordinated the following activities prior to conducting site characterization activities:

Plan Preparation. An in-house Sampling and Analysis Plan was prepared for the project.

One Call Notification. Prior to any subsurface site work, a call was placed with One Call Utility Notification Service to identify and locate all public utilities near each of the proposed sampling locations.

Planning. ENW scheduled and coordinated with the Client to begin site work.

4.3 Scope of Work

ENW conducted the following SOW for this project:

- Collected six sub-slab vapor samples according to established environmental procedures for analysis of the full scan of VOCs, GRO and isopropyl alcohol (IPA) by EPA Method TO-15 Modified.
- Submitted samples to an approved, independent laboratory for analysis.
- Evaluated analytical data with regard to risk associated with vapor intrusion of petroleum-related VOCs and cVOCs into the commercial building.
- Completed this report describing the above work and findings.

4.4 Sub-Slab Vapor Sampling Locations

Sampling locations are summarized in Table 4-1 and shown on Figure 3.

Table 4-1. Summary of Sampling Locations

Location ID	Date Sampled	Depth Sampled (feet bgs)	Sampled by:	Location and Comments
SUB01	1/25/2022	0.5	ENW	Slab beneath NE building corner
SUB02	1/25/2022	0.5	ENW	Slab beneath E central part of building
SUB03	1/25/2022	0.5	ENW	Slab beneath SE building corner
SUB04	1/25/2022	0.5	ENW	Slab beneath SW building corner
SUB05	1/25/2022	0.5	ENW	Slab beneath W central part of building
SUB06	1/25/2022	0.5	ENW	Slab beneath NW building corner

4.5 Sub-Slab Vapor Sampling Methodology

To evaluate the VI pathway beneath the building at the site, ENW installed and collected samples from six sub-slab vapor pins (SUB01 through SUB06) installed in the building’s interior slab floor. Field sampling activities were conducted in general accordance with the methods and procedures presented in Ecology’s

Draft Guidance for Evaluating Vapor Intrusion in Washington State (Ecology Guidance),⁴ Updated Process for Initially Assessing the Potential for Petroleum Vapor Intrusion Implementation (Appendix B in Ecology Guidance⁴) and Petroleum Vapor Intrusion (PVI): Updated Screening Levels, Cleanup Levels, and Assessing PVI Threats to Future Buildings (Appendix E in Ecology Guidance⁴).

Sub-slab vapor samples SUB01 through SUB06 were collected beneath the existing building and analyzed for petroleum and non-petroleum-related VOCs. Sample locations are presented on Figure 3.

Vapor Pin Installation. Sub-slab vapor samples were collected from temporary stainless-steel Vapor Pin[®] inserts installed through the floor slab of the building. A roto-hammer was used to drill a 5/8-inch hole through the concrete slab at each sample location, into which a Vapor Pin[®] with disposable silicon seal was installed. A section of Teflon[®] tubing secured to the Vapor Pin[®] provided a sealed vapor pathway to the sampling manifold.

Leak Testing. Leak testing was performed over a minimum of five minutes. Sampling manifolds were tested for leaks by shutting the inlet valve on the manifold and applying a vacuum using a pre-evacuated SUMMA cannister. Pressure was monitored using the attached vacuum gauge. Any drop in pressure suggested a potential leak in the system. If pressure was not maintained, all connections were rechecked, and the leak test repeated until no drop in vacuum was observed over the 5-minute period.

Sample Collection. The Teflon sample tubing from each sampling point was connected to a sample manifold, which in turn was connected to two laboratory-supplied SUMMA cannisters. One 6-liter SUMMA cannister served as a purging vessel and one 3-liter batch-certified Summa cannister was used at each location for collecting the sample.

Prior to the start of sample collection, each system was purged to remove at least three volumes of stagnant air from the sample train.

Sampling was initiated by opening the valve on the batch-certified SUMMA canisters. Sampling rates were maintained at a flow rate ranging from 100 to 150 milliliters per minute (mL/min) by a calibrated flow regulator attached to the SUMMA cannister. Rags treated with isopropyl alcohol (2-propanol or IPA) were placed over sample train connections and Vapor Pin[®] to provide secondary leak detection during sample collection.

Soil sampling was terminated when a sufficient volume of sample had been collected, indicated by negative pressure readings of -5 inches mercury or less. Sample data recorded by the ENW personnel were recorded onto Field Sampling Data Sheets (FSDS) included in Appendix B.

Sub-slab vapor samples were uniquely labelled, packaged, and shipped to the laboratory under chain-of-custody protocols. Following sample collection, a photoionization detector (PID) was used to screen soil gas for VOCs. Initial screening results of the samples are presented on Table 4-2.

⁴ Ecology, October 2009. *Draft Guidance for Evaluating Vapor Intrusion in Washington State, Investigation and Remedial Action: WDOE Toxics Cleanup Program Publication No. 09-09-047*, last revised April 2018, draft for public comment November 2021.

Table 4-2.
Sub-slab Vapor Screening Results

Sample ID	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06
Date Sampled	01/25/2022	01/25/2022	01/25/2022	01/25/2022	01/25/2022	01/25/2022
Depth Sampled (ft)	0.5	0.5	0.5	0.5	0.5	0.5
Sampled by	ENW	ENW	ENW	ENW	ENW	ENW
Location	Slab beneath NE building corner	Slab beneath E central part of building	Slab beneath SE building corner	Slab beneath SW building corner	Slab beneath W central part of building	Slab beneath NW building corner
Parameter of interest	Note:	ppmv	ppmv	ppmv	ppmv	ppmv
PID (Total Volatiles)	1	0.3	0.6	0.6	0.7	0.4

1 = Photoionization detector

All sampling equipment was decontaminated before and after sampling by undergoing a wash sequence of Alconox® solution, tap water, and then deionized water final rinse. Clean Nitrile gloves were used during sample collection.

4.5.1 Waste Management and Disposal

Equipment decontamination water generated during sub-slab vapor sampling activities was placed into a 55-gallon drum, labeled, and left on-site in a secure location pending receipt of sample laboratory results. Sampling gloves, rags, and tubing, which were disposed of as solid waste.

4.6 Analytical Methods

Table 4-3. Analytical Methods

Analytical Method	Constituents	Sub-slab/Soil Gas
Environmental Protection Agency (EPA) Method TO-15 Modified	Full scan VOCs, gasoline-range organics (GRO) and 2-Propanol (as leak detection)	All samples

4.7 Cleanup Standards

The State of Washington MTCA Regulations (Chapter 173-340-750 of the Washington Administrative Code) sets numeric cleanup standards to determine if air emissions at a site pose a threat to human health or the environment. These standards apply to ambient (outdoor) air and air within any building, utility vault, manhole or other structure large enough for a person to fit into, and concentrations of hazardous substances in the air originating from other contaminated media or a remedial action at the site. Cleanup levels (CULs) to protect air quality shall be based on estimates of the reasonable maximum exposure expected to occur under both current and future site use conditions. The department has determined that residential site use will generally require the most protective air cleanup levels and that exposure to hazardous substances under these conditions represents the reasonable maximum exposure. Air cleanup levels shall use this presumed exposure scenario and be established in accordance with Method B air CULs unless the site qualifies for a Method C air CUL.

Method B air CULs consist of standard and modified cleanup levels, either of which may be used at any site. Standard Method B air CULs for air shall be at least as stringent as all of the following:

- Applicable state and federal laws. Concentrations established under applicable state and federal laws; and
- Human health protection. Ecology's Equation 750-1 shall be used for hazardous substances for which sufficiently protective health-based criteria or standards have not been established under applicable state and federal laws.

Modified Method B air CULs are standard Method B air cleanup levels modified with chemical-specific or site-specific data. When making these adjustments, the resultant cleanup levels shall meet applicable state and federal laws, health risk levels and explosive limit limitations required for standard Method B air CULs. Modified Method B air CULs are not used in this report.

5.0 Findings

Elevated levels of VOCs were not suggested while screening sub-slab vapor points following sample collection with a PID (max. 0.7 parts per million by volume ([ppmv])).

5.1 Laboratory Results

5.1.1 Sub-Slab Vapor Sample Results

Laboratory analytical sub-slab vapor results are presented in Table 1 (after the text).

GRO. As indicated in Table 1, GRO was detected at a maximum concentration of 994.71 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) (SUB06), which is less than the MTCA Method B generic cleanup level for total petroleum hydrocarbons of 4,700 $\mu\text{g}/\text{m}^3$.

VOCs. Several VOCs were detected in sub-slab vapor samples. However, only benzene in the sample from SUB04 was detected at a concentration exceeding the MTCA Method B screening level for sub-slab vapor.

IPA concentrations were less than ENW's in-house screening level of 5,000 $\mu\text{g}/\text{m}^3$, which represents approximately 5-percent contribution of ambient air into the sample, and conservatively assumes an initial ambient air concentration of 100-percent 2-propanol. Leak detection compound concentrations suggest sampling integrity was preserved in all samples during this sampling event.

6.0 Discussion

Benzene (Sub-slab). Current data shows that benzene is the only VOC in sub-slab vapor exceeding a MTCA Method B screening level. This is consistent with February 2021 sub-slab vapor sampling results, which also reported benzene in two of three samples (SS1 and SS2) at concentrations greater than MTCA Method B screening levels. Error! Bookmark not defined.

Benzene (Sub-slab Isoleths). Figure 4 is a benzene isopleth map compiled from current sub-slab vapor data and February 2021 sub-slab vapor data. This data suggests a possible benzene vapor source west of the former tank farm on the southern part of the site.

Benzene (exposure point concentration). Data collected during this investigation was further evacuated using the EPA's ProUCL software to determine the exposure point concentration for benzene in sub-slab

vapor. Only data collected during this investigation were utilized in this calculation since this sampling event including previous sub-slab sample locations. The exposure point concentration calculated in sub-slab vapor beneath the building was $11.5 \mu\text{g}/\text{m}^3$, which is essentially equal to the MTCA cleanup level and therefore concentrations of benzene in sub-slab vapor are not currently an unacceptable vapor intrusion risk.

Benzene (Air). An 8-hour time-weighted sample collected inside the building (sample “1”) and outside the building (sample “2”) detected benzene at concentrations greater than the MTCA Method B air screening level. None of the other detected VOCs exceeded a MTCA air screening level. Upon subtracting the level of benzene in outdoor air from indoor air, the contribution of benzene from sub-slab vapor to indoor air is less than the screening level. This further suggests that sub-slab concentrations of benzene are not likely leading to unacceptable exposure in indoor air to future receptors.

7.0 Conclusions and Recommendations

Benzene in one of six sub-slab vapor samples exceeds the MTCA Method B sub-slab/soil gas screening level, suggesting that benzene may be a vapor intrusion risk at the site. However, based on the following:

- The exposure point concentration calculated in sub-slab vapor beneath the building was $11.5 \mu\text{g}/\text{m}^3$, which is essentially equal to the MTCA cleanup level and therefore concentrations of benzene in sub-slab vapor are not currently an unacceptable vapor intrusion risk.
- April 2021 ambient indoor and outdoor air sampling results suggest that when the proportion of benzene contributed from outdoor air is subtracted from indoor air, the net indoor air benzene concentrations is less than the MTCA air screening level. This further suggests that sub-slab concentrations of benzene are not likely leading to unacceptable exposure in indoor air to future receptors.

Based on sub-slab benzene vapor isopleths, the potential source of benzene in sub-slab vapor may be west of the former tank farm on the southern part of the site. While concentrations of benzene in sub-slab vapor do not appear to be a current concern that require mitigation, since the building will be undergoing extensive renovations as part of the redevelopment of the site, ENW recommends installation of a vapor barrier throughout the building floor area, to mitigate potential vapor intrusion concerns.

We recommend this report is kept as part of the permanent property records.

8.0 Limitations

The scope of this report is limited to observations made during on-site work; interviews with knowledgeable sources; and review of readily available published and unpublished reports and literature. As a result, these conclusions are based on information supplied by others as well as interpretations by qualified parties.

The focus of the site closure does not extend to the presence of the following conditions unless they were the express concerns of contacted personnel, report and literature authors or the work scope.

- Naturally occurring toxic or hazardous substances in the subsurface soils, geology and water,

- Toxicity of substances common in current habitable environments, such as stored chemicals, products, building materials and consumables,
- Contaminants or contaminant concentrations that are not a concern now but may be under future regulatory standards,
- Unpredictable events that may occur after ENW's site work, such as illegal dumping or accidental spillage.

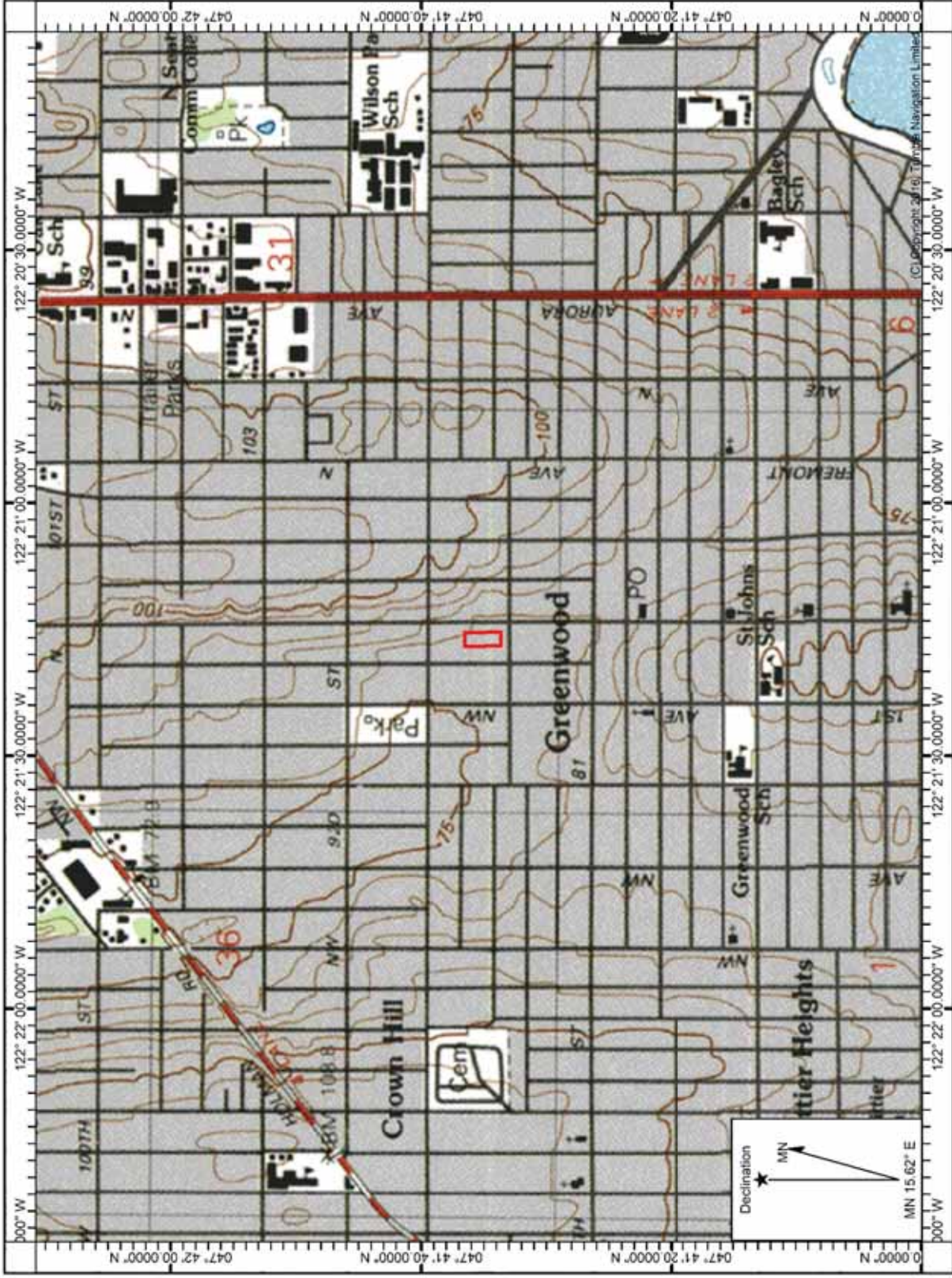
There is no practice that is thorough enough to absolutely identify the presence of all hazardous substances that may be present at a given site. ENW's investigation has been focused only on the potential for contamination that was specifically identified in the Scope of Work. Therefore, if contamination other than that specifically mentioned is present and not identified as part of a limited Scope of Work, ENW's environmental investigation shall not be construed as a guaranteed absence of such materials. ENW have endeavored to collect representative analytical samples for the locations and depths indicated in this report. However, no sampling program can thoroughly identify all variations in contaminant distribution.

We have performed our services for this project in accordance with our agreement and understanding with the client. This document and the information contained herein have been prepared solely for the use of the client.

ENW performed this study under a limited scope of services per our agreement. It is possible, despite the use of reasonable care and interpretation, that ENW may have failed to identify regulation violations related to the presence of hazardous substances other than those specifically mentioned at the closure site. ENW assumes no responsibility for conditions that we did not specifically evaluate or conditions that were not generally recognized as environmentally unacceptable at the time this report was prepared.

Table 1. Summary of Analytical Data, Sub-Slab Vapor and Soil Gas

Location ID	Location	Depth Sampled (ft)	Date Sampled	BS-SG	BS-SG	BS-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	Maximum Soil Gas/Sub-Slab Concentration	MTCAL Sub-Slab Soil Gas Screening Method B1	Contribution of Potential (COPC)?
Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	Sample ID	ugm ³	ugm ³	Y/N
Location	Location	Location	Location	Location	Location	Location	Location	Location	Location	Location	Location	Location	Location	Location	Location	Location	ugm ³	ugm ³	Y/N
Volatile Organic Constituents (VOCs)																			
Acetone	nc,v	29.0	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	613.00	470000	N
Benzene	c,v	2.58	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	770	1.0	N
Bromochloroethane	c,w	4.31	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	4.31	76	N
Bromobromine	nc,v	-0.776 (ND)	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	-0.776 (ND)	76	N
Carbon tetrachloride	c,v	-1.26 (ND)	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	-1.26 (ND)	14	N
Chlorobenzene	nc,v	-0.924 (ND)	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	-0.924 (ND)	700	N
Chloroethane	nc,v	-0.973 (ND)	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	-0.973 (ND)	700	N
Chloroethane, 1,1-	nc,v	1.90	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	1.90	3.6	N
Chloroethane, 1,2-	nc,v	-1.2 (ND)	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	-1.2 (ND)	1400	N
Dichlorobenzene, 1,3-	nc,v	-1.2 (ND)	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	-1.2 (ND)	3000	N
Dichlorobenzene, 1,4-	c,v	-0.852 (ND)	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	-0.852 (ND)	7	N
Dichloroethane, 1,1-	c,v	-0.793 (ND)	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	-0.793 (ND)	52	N
Dichloroethane, 1,2-	nc,v	-0.793 (ND)	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	-0.793 (ND)	3000	N
Dichloroethane, trans-1,2-	nc,v	-0.793 (ND)	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	-0.793 (ND)	3000	N
Diethyl ether	c,v	-1.54 (ND)	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	-1.54 (ND)	810	N
EDC (1,2-dichloroethane)	c,v	-0.81 (ND)	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	-0.81 (ND)	614	N
Ethylbenzene	c,v	902	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	902	32	N
MTBE (methyl-tert-butyl ether)	c,v	-0.721 (ND)	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	-0.721 (ND)	15000	N
o-Xylene	c,v	-1.36 (ND)	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	-1.36 (ND)	320	N
o-Xylene (methyl-ethyl ether)	c,v	-1.36 (ND)	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	-1.36 (ND)	320	N
Toluene	nc,v	4970	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	4970	7000	N
Trichloro-1,2,2-trifluoroethane, 1,1,2-	nc,v	-1.53 (ND)	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	-1.53 (ND)	76000	N
Trichloroethane, 1,1,1-	nc,v	-1.09 (ND)	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	-1.09 (ND)	76000	N
Trichloroethane, 1,1,2-	nc,v	-1.07 (ND)	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	-1.07 (ND)	11.0	N
Trichloroethylene	c,v	-1.07 (ND)	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	-1.07 (ND)	11.0	N
Trichlorofluoromethane (Freon 11)	nc,v	1.96	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	1.96	11000	N
Trichlorofluoromethane, 1,2,4-	nc,v	239	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	239	910	N
Trimethylbenzene, 1,3,5-	nc,v	130	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	130	910	N
Trimethylbenzene, 1,3,5-	nc,v	-0.973 (ND)	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	-0.973 (ND)	31.0	N
Xylenes	nc,v	5191	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	5191	1500	N
Non-Volatile Organic Constituents (SVOCs)																			
Dioxane, 1,4-	c,w	-0.721 (ND)	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	-0.721 (ND)	1.35	N
Styrene	nc,v	-0.851 (ND)	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	-0.851 (ND)	15000	N
Total Petroleum Hydrocarbons																			
GHG	nc,v	---	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	---	---	N
Leak Detection																			
2-Propanol	nc,v	-5.07 (ND)	2/18/2021	84-SG	84-SG	84-SG	SS1	SS2	SS3	3	SUB01	SUB02	SUB03	SUB04	SUB05	SUB06	-5.07 (ND)	403.45	N
Notes:																			
ND = not detected or not applicable.																			
NE = not established, or above the method reporting limit shown.																			
ugm ³ = micrograms per cubic meter																			
c = carcinogenic																			
nc = noncarcinogenic																			
V1 indicates analyte not detected, but detection limit is above screening concentration.																			
Bolded concentrations exceed MTCAL Method B1 Screening Levels																			



Name: SEATTLE NORTH
 Date: 09/20/21
 Location: 047° 41' 35.3419" N, 122° 21' 15.9186" W
 Contour Interval: 16 ft

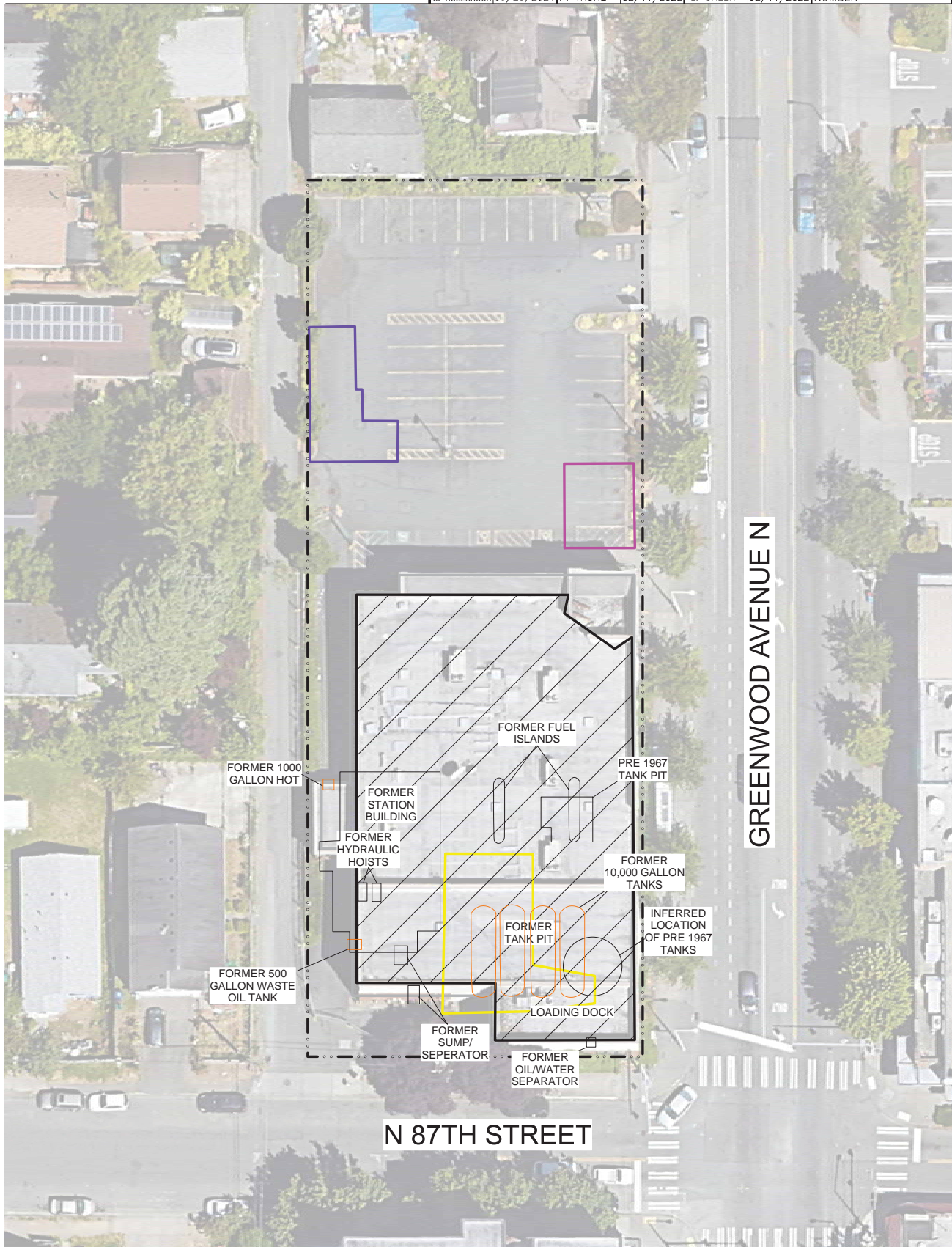


Date Drawn: 2/8/2022
 CAD File Name: 1581-21001-01_fig1sv_map
 Drawn By: CLR
 Approved By: LDG






Commercial Property
 8701 Greenwood Avenue N
 Seattle, Washington

Project No.
 1581-21001
 Figure No.
 1

Site Vicinity Map



LEGEND:


-  SUBJECT BUILDINGS
-  SUBJECT PROPERTY BOUNDARIES
-  FORMER GAS STATION PER 1950 HISTORICAL SANBORN MAP
-  FORMER VANITY CLEANERS PER CITY DIRECTORY 1951-1955, LOCATION BASED ON 1950-1966 SANBORN MAP
-  FORMER LAUNDRY PER 1930 HISTORICAL SANBORN MAP

* FORMER FEATURES PER 1994 EMCON NORTHWEST INC. AND TEXACO 1991 AND ENVIRO. RESOLUTION INC. 1994 AND 1996

NOTES:

1. BASE MAP DEVELOPED FROM AN AERIAL PHOTOGRAPH MAP DATED 2019 AND ENW FIELD NOTES.
2. ALL BUILDING, STREET, AND FEATURE LOCATIONS ARE APPROXIMATE.
3. SYMBOLS REPRESENT LOCATION AND DO NOT ALWAYS REPRESENT EXACT SHAPE, SIZE, OR ORIENTATION.

APPROXIMATE SCALE




PO BOX 14488, PORTLAND, OREGON 97293
P: (503)452-5561, E: ENW@EVREN-NW.COM

FIGURE 2
SITE PLAN WITH HISTORICAL FEATURES OF INTEREST
COMMERCIAL PROPERTY
8701 GREENWOOD AVENUE N
SEATTLE, WASHINGTON

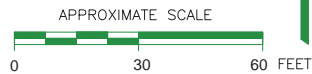


UTILITY LINES	
	GAS LINE
	STORM SYSTEM
	WATER LINE
	SANITARY SEWER PIPE

LEGEND:	
	SUBJECT BUILDING
	SUBJECT PROPERTY BOUNDARIES
	PRIOR PCS EXCAVATION MARGINS
	ENW SUB-SLAB VAPOR SAMPLE LOCATION

NOTES:

1. BASE MAP DEVELOPED FROM AN AERIAL PHOTOGRAPH MAP DATED 2019 AND ENW FIELD NOTES.
2. ALL BUILDING, STREET, AND FEATURE LOCATIONS ARE APPROXIMATE.
3. SYMBOLS REPRESENT LOCATION AND DO NOT ALWAYS REPRESENT EXACT SHAPE, SIZE, OR ORIENTATION.



PO BOX 14488, PORTLAND, OREGON 97293
P. (503)452-5561, E. ENW@EVRENNOR&WEST.COM

FIGURE 3
SAMPLE LOCATION DIAGRAM

COMMERCIAL PROPERTY
8701 GREENWOOD AVENUE N
SEATTLE, WASHINGTON



LEGEND:	
	FORMER GAS STATION PER 1950 HISTORICAL SANBORN MAP
	FORMER VANITY CLEANERS PER CITY DIRECTORY 1951-1955, LOCATION BASED ON 1950-1966 SANBORN MAP
	FORMER LAUNDRY PER 1930 HISTORICAL SANBORN MAP
	PARTNER SOIL BORING LOCATION MARCH 2021
	PARTNER SUB-SLAB SOIL GAS PROBE LOCATION MARCH 2021
	ENVIRONMENTAL SPECIALTIES SOIL GAS PROBE LOCATION MARCH 2021
	ENVIRONMENTAL SPECIALTIES SOIL BORING LOCATION MAY 2021

	SUBJECT BUILDING
	SUBJECT PROPERTY BOUNDARIES
	MONITORING WELL LOCATION PER ENVIRONMENTAL SPECIALTIES MAY 2021
	MONITORING WELL LOCATION PER ENVIRO RESOLUTIONS INC.
	PRIOR PCS EXCAVATION MARGINS
	BENZENE ISOPLETH CONTOURS (UG/M3)
	ENW SUB-SLAB VAPOR SAMPLE LOCATION

NOTES:

- BASE MAP DEVELOPED FROM AN AERIAL PHOTOGRAPH MAP DATED 2019 AND ENW FIELD NOTES.
- ALL BUILDING, STREET, AND FEATURE LOCATIONS ARE APPROXIMATE.
- SYMBOLS REPRESENT LOCATION AND DO NOT ALWAYS REPRESENT EXACT SHAPE, SIZE, OR ORIENTATION.

APPROXIMATE SCALE

EVRENNORWEST
ENVIRONMENTAL & GEOTECHNICAL CONSULTANTS

PO BOX 14488, PORTLAND, OREGON 97293
P: (503)452-5561, E: ENW@EVRENNORWEST.COM

FIGURE 4
BENZENE SUB-SLAB VAPOR ISOPLETH DIAGRAM
 COMMERCIAL PROPERTY
 8701 GREENWOOD AVENUE N
 SEATTLE, WASHINGTON

Appendix A

Site Photographs



Using a Hilti roto-hammer to drill a 5/8-inch hole through the slab at SUB01 – NE building corner looking south.



Installing a temporary Vapor Pin at SUB01.



Sampling SUB01 using a certified 3-L SUMMA canister. Isopropyl alcohol (IPA) -saturated rags placed over fittings and vapor pin for leak checking.



Commercial Property
8701 Greenwood Avenue N
Seattle, Washington

Site
Photographs

Project No.
1581-21001-02
Appendix
A



SUB02 (foreground) and SUB03 (background, red arrow). View looking south.



Sampling train set up on SUB04 (foreground) and SUB05 (background, yellow arrow). View north.



Sampling train at SUB06 (foreground), SUB05 (middle, yellow arrow), and SUB04 (background, red arrow). View south.



Measuring sub-slab VOCs using a PID following sample collection.



Commercial Property
8701 Greenwood Avenue N
Seattle, Washington

Site
Photographs

Project No.
1581-21001-02
Appendix
A

Appendix B

Field Sampling Data Sheets

FIELD SAMPLING DATA SHEET

EVREN NORTHWEST PO Box 14488
Portland, Oregon, 97293
503-452-5561 Fax: 503-452-7669

PROJECT NAME/NUMBER: 1581-21001-07 SAMPLE LOCATION: SUB φ1-210125

SITE ADDRESS: 8701 Greenwood Ave N DUP ID: _____

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY	Temp., C	Humidity (%)
WEATHER:	SUNNY	CLOUDY	?	RAIN	?								

SOIL GAS SETUP DATA

Container Type	Date	Volume (L)	Sample Depth (ft.)	Sample ID	Summa ID	Flow Controller	Flow Meter ID	Purge Vessel ID
Tedlar/Summa	12-17-22	0.5L, 1L, 3L, 5L, 6L	4.5	4UB01-220125 935		YES	2625	

100-150 m³/m

SOIL GAS SAMPLING DATA

Action	Start Time	Finish Time	Init Pressure (mmHg)	Final Pressure (mmHg)
Leak-Test	11:30	11:36	28	28
Purge	12:17	12:19	28	27
Sample	12:20	12:49	27	5

SOIL GAS SCREENING

Date	Time	Depth (ft)	PID (ppm)	O ₂ (ppm)	CO (ppm)	CO ₂ (ppm)
01/25/27	12:51	5.03	0.3			
	12:52	↓	0.3			
	12:53	↓	0.3			
	12:54	↓	0.3			
	12:55	↓	0.3			

CONTAINER TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
STEALTH (TO-3)	PESTICIDES/PCBS (TO-4) ALDEHYDES/KEYTONES (TO-5) PESTICIDES/PCBS (TO-10) ALDEHYDES/KEYTONES (TO-11)
	NON-METHANE ORGANIC COMPOUNDS (TO-12) PAHs/SVOCs (TO-13) VOCs (TO-15)
	TPH as Diesel (TO-17)
	SPECIFIC CHEMICAL ANALYSIS [_____]

NOTES:

SAMPLER: Dan Sajo (PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

PO Box 14488
 Portland, Oregon, 97293
 503-452-5561 Fax: 503-452-7669

EVREN NORTHWEST

PROJECT NAME/NUMBER: 501-2001-02 SAMPLE LOCATION: SUB 02-220125

SITE ADDRESS: 8701 Greenwood Ave N, Seattle DUP ID: _____

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY	
WEATHER:	SUNNY						CLOUDY		RAIN ?			

Temp., °C	Humidity (%)

SOIL GAS SETUP DATA

Container Type	Date	Volume (L)	Sample Depth (ft.)	Sample ID	Summa ID	Flow Controller	Flow Meter ID	Purge Vessel ID
Tedlar/Summa	12/22	0.5L, 1.3L, 5L, 6L	5.5	SUB 02-220125	364	YES NO	2660	

100-150 mL/min

SOIL GAS SAMPLING DATA

Action	Start Time	Finish Time	Init Pressure (mmHg)	Final Pressure (mmHg)
Leak-Test	1228	1233	730	730
Purge	1228	1230	29	28
Sample	1230	1301	730	5

SOIL GAS SCREENING

Date	Time	Depth (ft)	PID (ppm)	O ₂ (ppm)	CO (ppm)	CO ₂ (ppm)
01/25/22	1302	Subs	0.6			
	1303	"	0.6			
	1304	"	0.6			
	1305	"	0.6			
	1306	"	0.6			

CONTAINER TYPE

TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)

BTEXPH (TO-3)
 PESTICIDES/PCBs (TO-4)
 ALDEHYDES/KETONES (TO-5)
 PESTICIDES/PCBs (TO-10)
 ALDEHYDES/KETONES (TO-11)

NON-METHANE ORGANIC COMPOUNDS (TO-12)
 PAHs/VOCS (TO-13)
 VOCs (TO-15)

TPH as Diesel (TO-17)

SPECIFIC CHEMICAL ANALYSIS [_____]

NOTES:

SAMPLER: _____

Dan Safir

(PRINTED NAME)

[Signature]

(SIGNATURE)

FIELD SAMPLING DATA SHEET

EVREN NORTHWEST
 PO Box 14488
 Portland, Oregon, 97293
 503-452-5561 Fax: 503-452-7669

PROJECT NAME/NUMBER: **1501-21001-02** SAMPLE LOCATION: **Sub03**

SITE ADDRESS: **B701 NE Greenwood Ave N Seattle** DUP ID:

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	<input checked="" type="checkbox"/> SUNNY <input checked="" type="checkbox"/> CLOUDY <input type="checkbox"/> RAIN ?										
	Temp., C										
	Humidity (%)										

SOIL GAS SETUP DATA

Container Type	Date	Volume (L)	Sample Depth (ft.)	Sample ID	Summa ID	Flow Controller	Flow Meter ID	Purge Vessel ID
Tedlar/Summa	/ /	0.5L, 1L, 3L, 5L, 6L	Sub	Sub03-22025	311	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	2669	

SOIL GAS SAMPLING DATA

Action	Start Time	Finish Time	Init Pressure (mmHg)	Final Pressure (mmHg)
Leak-Test	11:36	11:41	29	27
Purge	12:59	13:01	26	25
Sample	13:01	13:26	29	5

SOIL GAS SCREENING

Date	Time	Depth (ft)	PID (ppm)	O ₂ (ppm)	CO (ppm)	CO ₂ (ppm)
1/25/22	13:27		0.6			
	13:28		0.6			
	13:29		0.6			
	13:30		0.6			
	13:31		0.6			

CONTAINER TYPE: TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)

Analysis Allowed per Bottle Type

BTEX/TPH (TO-3) PESTICIDES (TO-4) ALDEHYDES/KETONES (TO-5) PESTICIDES/PCBs (TO-10) ALDEHYDES/KETONES (TO-11)

NON-METHANE ORGANIC COMPOUNDS (TO-12) PAHs/SVOCs (TO-13) VOCs (TO-15)

TPH as Diesel (TO-17)

SPECIFIC CHEMICAL ANALYSIS I

NOTES:

SAMPLER: **Dan Sayko** (PRINTED NAME)  (SIGNATURE)

FIELD SAMPLING DATA SHEET

EVREN NORTHWEST
 PO Box 14488
 Portland, Oregon, 97293
 503-452-5561 enw@evren-nw.com

PROJECT NAME/NUMBER: 1501-2001-02
 SAMPLE LOCATION / ID: SUBP4

SITE ADDRESS: 8701 - Greenwood Ave North

SAMPLE DATE: 01/25/22

Temp., C	Humidity (%)

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY	CLOUDY	RAIN	OTHER:							

SCREENING

Purge Time (start)	Start Time	Stop Depth (ft)	Start Purge Time (min)	Finish (min)	CO (ppm)	CO (ppm)	CO (ppm)
01/25/22 1310		1320	29	26	1400	1400	0.7
01/25/22 1320		1358	730	5	1401	1402	0.6
					1403	1404	0.5

Sample ID = 221 372
 Reg = 2603
 Leak check = start 27 end 28
 sample time start end

SAMPLING DATA

Date	Sample ID	Tube ID	Sample Depth	Sample Time (start)	Sample Time (finish)	Total Volume (L)

CONTAINER TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
	PESTICIDES/PCBs (TO-9) ALDEHYDES/KEYTONES (TO-9) PESTICIDES/PCBs (TO-10) ALDEHYDES/KEYTONES (TO-11)
	TPH as Diesel (TO-17)
	SPECIFIC CHEMICAL ANALYSIS []

change to extra gamma/Reg

NOTES:

Leak check 11:40 - 11:45
 Start time = end time =

gamma 345
 Reg 2550
 start end 30
 30

SAMPLER:

(PRINTED NAME)

(SIGNATURE)

FIELD SAMPLING DATA SHEET

EVREN NORTHWEST
 PO Box 14488
 Portland, Oregon, 97293
 503-452-5561 Fax: 503-452-7669

PROJECT NAME/NUMBER: 1581-2001-02
 SAMPLE LOCATION: SUB 45
 SITE ADDRESS: 8701 Greenwood Ave N.
 DUP ID: _____

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY	CLOUDY	RAIN	?							

Temp., C: _____ Humidity (%): _____

SOIL GAS SETUP DATA

Container Type	Date	Volume (L)	Sample Depth (ft.)	Sample ID	Summa ID	Flow Controller	Flow Meter ID	Purge Vessel ID
Tedlar/Summa	01/24/20	0.5L, 1L, 3L, 5L, 6L	SUB	WB05-220125	513	YES	NO 2548	

SOIL GAS SAMPLING DATA

Action	Start Time	Finish Time	Init Pressure (mmHg)	Final Pressure (mmHg)
Leak-Test	11:33	11:39	29	29
Purge	13:38	13:41	28	23
Sample	13:41	14:20	28	5

SOIL GAS SCREENING

Date	Time	Depth (ft)	PID (ppm)	O ₂ (ppm)	CO (ppm)	CO ₂ (ppm)
7/25/22	1420		0.4			
	1421		0.4			
	1422		0.3			
	1423		0.3			
	1424		0.3			

CONTAINER TYPE: TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)

Analysis Allowed per Bottle Type: BTEX/TPH (TO-3) PESTICIDE/PCBs (TO-4) ALDEHYDES/KETONES (TO-5) PESTICIDES/PCBs (TO-10) ALDEHYDES/KETONES (TO-11)

NON-METHANE ORGANIC CMPOS (TO-12) PAHs/SVOCS (TO-13) VOCs (TO-15)

TPH as Diesel (TO-17)

SPECIFIC CHEMICAL ANALYSIS [_____]

NOTES: _____

SAMPLER: Dan Sayko (PRINTED NAME)  (SIGNATURE)

FIELD SAMPLING DATA SHEET

EVREN NORTHWEST PO Box 14488
Portland, Oregon, 97293
503-452-5561 Fax: 503-452-7669

PROJECT NAME/NUMBER: 1581-21001-02 SAMPLE LOCATION: SUBPC

SITE ADDRESS: 8701 Greenwood Ave N. Seattle DUP ID:

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY	CLOUDY	RAIN	?							
									Temp., C		Humidity (%)

SOIL GAS SETUP DATA

Container Type	Date	Volume (L)	Sample Depth (ft.)	Sample ID	Summa ID	Flow Controller	Flow Meter ID	Purge Vessel ID
Tedlar/Summa	<u>01 15122</u>	<u>0.5L, 1L, 3L, 6L</u>	<u>5m3</u>	<u>SUBPC-</u>	<u>310</u>	YES NO	<u>2531</u>	

SOIL GAS SAMPLING DATA

Action	Start Time	Finish Time	Init Pressure (mmHg)	Final Pressure (mmHg)
Leak-Test	<u>11:32</u>	<u>11:38</u>	<u>30</u>	<u>80</u>
Purge	<u>13:51</u>	<u>13:53</u>	<u>24</u>	<u>23</u>
Sample	<u>13:54</u>	<u>14:26</u>	<u>30</u>	<u>5</u>

SOIL GAS SCREENING


Date	Time	Depth (ft)	PID (ppm)	O ₂ (ppm)	CO (ppm)	CO ₂ (ppm)
<u>1/25/02</u>	<u>14:26</u>		<u>0.2</u>			
	<u>14:27</u>		<u>0.1</u>			
	<u>14:28</u>		<u>0.1</u>			
	<u>14:29</u>		<u>0.0</u>			
	<u>14:30</u>		<u>0.0</u>			

CONTAINER TYPE
per Bottle Type

TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
 BTEX/TPH (TO-3) PESTICIDES/PCBs (TO-4) ALDEHYDES/KEYTONES (TO-5) PESTICIDES/PCBs (TO-10) ALDEHYDES/KEYTONES (TO-11)
 NON-METHANE ORGANIC COMPOUNDS (TO-12) PAHs/SVOCs (TO-13) VOCs (TO-15)
 TPH as Diesel (TO-17)
 SPECIFIC CHEMICAL ANALYSIS []

NOTES:

SAMPLER: Dan Safko

(PRINTED NAME) Dan Safko
 (SIGNATURE) 

Appendix C

Laboratory Analytical Report

Analytical Laboratory Data Validation Check Sheet

Project Name: iddie Academy Project Number: 1581-21001-02

Date of Review: 02/11/2022 Lab. Name: S Lab Batch ID : 222042

Chain of Custody

- | | | | |
|--|---|--|--|
| 1.) Are all requested analyses reported? | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no | |
| 2.) Were the requested methods used? | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no | |
| 3.) Trip blank submitted? | <input type="checkbox"/> yes | <input checked="" type="checkbox"/> no | |
| 4.) Field blank submitted? | <input type="checkbox"/> yes | <input checked="" type="checkbox"/> no | |

Timing

- | | | | |
|--|---|-----------------------------|--|
| 5.) Samples extracted within holding times? | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no | |
| If not, are all discrepancies footnoted? | <input type="checkbox"/> yes | <input type="checkbox"/> no | <input checked="" type="checkbox"/> NA |
| 6.) Analysis performed within holding times? | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no | |
| If not, are all discrepancies footnoted? | <input type="checkbox"/> yes | <input type="checkbox"/> no | <input checked="" type="checkbox"/> NA |

Quality Assurance/ Quality Control

- | | | | |
|--|---|--|--|
| 7.) Are the required reporting limits reported? (MRLs vs MDLs/P Ls) | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no | |
| 8.) Are all reported values above either MRL or MDL? | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no | |
| 9.) Are all values between the MDL P L tagged as trace? | <input type="checkbox"/> yes | <input type="checkbox"/> no | <input checked="" type="checkbox"/> NA |
| 10a.) Are reporting limits raised for other reason besides high analyte conc.? | <input type="checkbox"/> yes | <input checked="" type="checkbox"/> no | |
| 10b.) If so, are they footnoted? | <input type="checkbox"/> yes | <input type="checkbox"/> no | <input checked="" type="checkbox"/> NA |
| 11.) Lab method blank completed? | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no | |
| 12.) Lab, Field, or Trip Blank(s) report detections? | <input type="checkbox"/> yes | <input checked="" type="checkbox"/> no | |
- If yes, indicate blank type, chemical(s) and concentration(s): _____

- | | | | |
|---|---|-----------------------------|--|
| 13.) For inorganics and metals, is there one method blank for each analyte? | <input type="checkbox"/> yes | <input type="checkbox"/> no | <input checked="" type="checkbox"/> NA |
| If not, are all discrepancies footnoted? | <input type="checkbox"/> yes | <input type="checkbox"/> no | |
| 14.) For VOCs, is there one method blank for each day of analysis? | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no | <input type="checkbox"/> NA |
| If not, are all discrepancies footnoted? | <input type="checkbox"/> yes | <input type="checkbox"/> no | |
| 15.) For SVOCs, is there one method blank for each extraction batch? | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no | <input type="checkbox"/> NA |
| If not, are all discrepancies footnoted? | <input type="checkbox"/> yes | <input type="checkbox"/> no | |

Accuracy

- | | | | |
|--|---|-----------------------------|--|
| 16.) Is there a surrogate spike recovery for all VOC SVOC samples? | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no | <input type="checkbox"/> NA |
| Do all surrogate spike recoveries meet accepted criteria? | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no | |
| If not, are all discrepancies footnoted? | <input type="checkbox"/> yes | <input type="checkbox"/> no | <input checked="" type="checkbox"/> NA |
| 17.) Is there a spike recovery for all Laboratory Control Samples? | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no | <input type="checkbox"/> NA |
| Do all LCS/LCSD spike recoveries meet accepted criteria? | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no | |
| If not, are all discrepancies footnoted? | <input type="checkbox"/> yes | <input type="checkbox"/> no | <input checked="" type="checkbox"/> NA |
| 18.) Are all LCS/LCSD RPDs within acceptable limits? | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no | <input type="checkbox"/> NA |
| If not, are all discrepancies footnoted? | <input type="checkbox"/> yes | <input type="checkbox"/> no | <input checked="" type="checkbox"/> NA |

Precision

- | | | | |
|---|---|-----------------------------|--|
| 19.) Are all matrix spike/matrix spike duplicate recoveries within acceptable limits? | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no | <input type="checkbox"/> NA |
| If not, are all discrepancies footnoted? | <input type="checkbox"/> yes | <input type="checkbox"/> no | <input checked="" type="checkbox"/> NA |
| 20.) Are all matrix spike/matrix spike duplicate RPDs within acceptable limits? | <input checked="" type="checkbox"/> yes | <input type="checkbox"/> no | <input type="checkbox"/> NA |
| If not, are all discrepancies footnoted? | <input type="checkbox"/> yes | <input type="checkbox"/> no | <input checked="" type="checkbox"/> NA |
| 21.) Do all RPD calculations for Field Duplicates meet accepted criteria? | <input type="checkbox"/> yes | <input type="checkbox"/> no | <input checked="" type="checkbox"/> NA |

Comments:

Initial Review By: CR

Final Review By: _____

ENVIRONMENTAL

Analytical Service, Inc.



Thursday, February 10, 2022

Sample Delivery Group (SDG) 222042
EAS Project Number: 17696

Lynn Green
Evren Northwest Inc.
40 SE 24th Avenue, Suite A
Portland, OR 97214

Lynn,

Enclosed is the analytical report for the samples received and analyzed by Environmental Analytical Service, Inc. for the following Project.

Revised Report

Client Project Name: 8701 Greenwood Ave
PO Number:
Client Project Number 1581-21001-02
Sample Event Date: 01/25/2022

If you have any questions on the report or the analytical data please contact me at (805) 781-3585.

Sincerely

Steven D. Hoyt Ph.D.
Laboratory Director

SDH/LIMS

173 Cross Street
San Luis Obispo
CA
93401-7597
805.781.3585
Fax 805.541.4650

Analytical Report

Project Name:

8701 Greenwood Ave

EAS SDG Number: **222042**

Client Project Manager: Lynn Green

Prepared For:

Evren Northwest Inc.

40 SE 24th Avenue, Suite A

Portland

OR 97214

Project Number: 17696

Sample Event Date: 01/25/2022

Received Date: 1/28/2022

Report Date: 2/2/2022

Revised Report 2/10/2022

Project Number: 1581-21001-02

PO Number:

This is the Laboratory Report for the samples in the indicated Sample Delivery Group (SDG). Each sample received in the group is assigned a Laboratory ID number. The combination of the SDG number and the Lab ID number is an unique identifier for the sample.

This Report Contains:

Laboratory Work Order

Project Sample Media

Laboratory Case Narrative and Chain of Custody

Method Description (when applicable)

Quality Control Reports

Analytical Reports

NELAC Certification: Florida E871125

173 Cross Street, San Luis Obispo, CA 93401 (805) 781-3585

Laboratory Work Order

SDG Number: 222042

Client: Lynn Green

Evren Northwest Inc.

Project Number: 17696

Received: 1/28/2022

SAMPLE DESCRIPTION AND ANALYSIS REQUESTED

Client Sample ID	EAS Lab No.	Analysis Requested	Date Sampled
SUB01-220125	222042 1	EPA TO-15 VOC + IPA	1/25/2022
SUB02-220125	222042 2	EPA TO-15 VOC + IPA	1/25/2022
SUB03-220125	222042 3	EPA TO-15 VOC + IPA	1/25/2022
SUB04-220125	222042 4	EPA TO-15 VOC + IPA	1/25/2022
SUB05-220125	222042 5	EPA TO-15 VOC + IPA	1/25/2022
SUB06-220125	222042 6	EPA TO-15 VOC + IPA	1/25/2022

Project Sample Media

SDG Number: 222042

The following sample media was used for this Sample Delivery Group (SDG). The Sample Media column identifies the type of media. For canisters, the Sample Media Batch gives the canister number followed by the cleaning batch number, which is a unique identification. The initial pressure of the canister when it is received is recorded. If the canister is not pressurized, the final pressure will be the same as the initial pressure. If the canister is pressurized the final pressure will be recorded, and the canister dilution factor is calculated as the ratio of the final to initial pressure. The results are adjusted for the can dilution factor.

SDG	Lab ID	Client Sample No.	Sample		Pressure, torr		Can Factor
			Media	Batch	Initial	Final	
222042	1	SUB01-220125	935	122221B	695	695	1.00
222042	2	SUB02-220125	364	123021A	721	721	1.00
222042	3	SUB03-220125	311	123021A	679	679	1.00
222042	4	SUB04-220125	345	123021A	753	753	1.00
222042	5	SUB05-220125	313	122221B	742	742	1.00
222042	6	SUB06-220125	310	122221B	739	739	1.00

Laboratory Case Narrative

EAS SDG Number: 222042

Project Number: 17696

Client: Evren Northwest Inc.

The Laboratory Case Narrative for the SDG is below. The Chain of Custody form(s) follow the Laboratory Case Narrative.

Sample Control Narrative

The samples were all received in good condition and with proper preservation.

Analytical Methods

The methods used for sample analysis are listed on the Analytical Report header, and have been modified as described in the EAS Quality Manual..

Case Narrative

QC Narrative

All analyses met EAS method criteria as defined in the Quality Manual, except as noted in the report or QC reports with data qualifiers.

Subcontract Narrative

No sample analysis was subcontracted for this project

Laboratory Certification

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness other than the condition(s) noted above. The Laboratory Report is property of EAS and its client. The entire report has been reviewed and approved.



Date Approved: 2/2/2022

Steven D. Hoyt, Ph.D.
Environmental Analytical Service
Laboratory Director

CHAIN OF CUSTODY RECORD

Project Number	1581-21001-02	Project Name	8701 Greenwood Ave	Quote		Requested TAT	Standard										
REPORT TO:																	
Attention	Lynn Green																
Company	Evers Northwest																
Address	PO Box 14088																
City, State, Zip	Portland OR 97293																
Phone/Fax	503 452-5561																
e-mail	lynn.g@evers-nw.com																
Sample Description	Sample Date	Start Time	Stop Date	Stop Time	Canister Number	Flow Reg Number	Matrix	Initial Pressure	Final Pressure	SDG	Laboratory ID	Analytical Tests	Comments				
SUB01-220125	01/15/22	12:20	01/15/22	12:49	935	2625	SG	27	5		01	(VOCs)					
SUB02-220125		12:30		13:01	364	2666	SG	230	5		02	PA (check check)					
SUB03-220125		13:01		13:26	311	2669	SG	29	5		03						
SUB04-220125		13:20		13:58	345	2558	SG	230	5		04						
SUB05-220125		13:41		14:20	313	2548	SG	28	5		05						
SUB06-220125		13:54		14:24	310	2531	SG	30	5		06						
Comments								* Sub06 stop time = 14:26									
BILLING INFORMATION:								SAMPLED BY		Date/Time		COC Number		Cooler Temp		Airbill	
ATTENTION								Barbara Roland		01/27/22						SEE ATTA OMBED	
Company								Evers Northwest		14:00							
Address								Same as above									
City, State, Zip								↓									
Purchase Order								1581-21001-02		1/28/22 1430							

Quality Control Report

EAS SDG Number: 222042

Project Number: 17696

QC Narrative

Samples were analyzed in a daily analytical batch (DAB) designated by a QC batch number, and were analyzed using EAS standard laboratory QC specified in the EAS Quality Manual which may be different than the referenced agency method. Any deviations from the EAS QC criteria are flagged in the Laboratory Control Reports or in the sample Analytical Reports.

Standard Laboratory QC Report

Unless project specific QC was requested, this Section containing the standard laboratory QC (Level 2) supplied with the Analytical Reports. Each sample is analyzed in a Daily Analytical Batch (DAB) which includes the method blank, a laboratory control spike (LCS) and a laboratory control duplicate (LCD). A Daily Analytical Batch QC report is supplied for each method requested.

Method Blank

The method blank is a laboratory generated sample which assesses the degree to which laboratory operations cause a false positive. The target analytes in the analytical reports for a daily analytical batch are "B" flagged if their concentrations are present in the Method Blank above the RL, unless the result is greater than ten times the blank value..

Laboratory Control Spike

A laboratory control spike is a well characterized matrix similar to the sample which is spiked and run in duplicate with each Daily Analytical Batch. The laboratory control spike results are reported as a percent recovery. The QC Criteria for the control spike is listed in the Laboratory Control Report. Any results outside the control limits are flagged with a "Q" on the Laboratory Control Report. The control spike contains an abbreviated list of compounds in the method, and may contain compounds not on the target list for the specified report.

Laboratory Control Duplicate

The laboratory control duplicate is a duplicate analysis of the laboratory control spike, a standard, or a sample depending on the method. The results are reported as a relative percent difference (RPD). The criteria for the duplicate is in the Laboratory Control Report for the Daily Analytical Batch. Any results outside the control limits are flagged with a "Q" on the Laboratory Control Report.

METHOD BLANK REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: LABQC

Laboratory ID: B01312

File Name: B01312D.D
Description: METHOD BLANK
Canister:
QC_Batch: 013122-MA1

Date Sampled:
Date Analyzed: 1/31/2022
Can Dilution Factor: 1.00
Air Volume: 200.00 ml
Time:
Time: 13:47

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.65	1.25	ND	3.22	6.19	ND	
74-87-3	Chloromethane	0.65	1.26	ND	1.34	2.61	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.80	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.22	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.79	ND	
74-83-9	Bromomethane	0.50	1.26	ND	1.94	4.89	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	ND	2.36	7.08	ND	
75-69-4	Trichlorofluoromethane	0.35	1.26	ND	1.97	7.09	ND	
67-64-1	Acetone	1.25	3.75	ND	2.97	8.92	ND	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.92	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.18	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.19	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.90	7.23	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.33	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.06	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.52	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.95	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.53	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.48	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.34	ND	
67-66-3	Chloroform	0.25	1.19	ND	1.22	5.82	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.37	6.06	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.87	3.31	ND	
71-43-2	Benzene	0.50	1.00	ND	1.60	3.20	ND	
56-23-5	Carbon tetrachloride	0.23	1.19	ND	1.42	7.46	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.13	12.43	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.16	5.57	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.61	7.38	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.27	ND	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.68	3.39	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.10	13.86	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.53	ND	
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.14	5.89	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
108-88-3	Toluene	0.50	1.31	ND	1.89	4.92	ND	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.14	5.89	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.37	7.02	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.13	14.55	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.26	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.67	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.13	ND	
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.25	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.30	5.75	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	ND	2.30	5.76	ND	
100-42-5	Styrene	0.52	1.29	ND	2.21	5.52	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.59	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.60	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.08	10.20	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.36	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.25	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.01	5.57	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.71	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.01	5.21	ND	
95-50-1	1,2-Dichlorobenzene	1.00	1.25	ND	6.02	7.53	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.29	12.78	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	0.25	0.32	ND	2.67	3.36	ND	
	Surrogate Recovery				% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				85	70	130	

METHOD BLANK REPORT

EPA Method TO-15 Modified TPH

Analytical Method: TO-15

SDG: LABQC
Laboratory ID: B01312

File Name: B01312D.D
Description: METHOD BLANK
Canister:
QC_Batch: 013122-MA1

Date Sampled:
Date Analyzed: 1/31/2022
Can Dilution Factor: 1.00
Air Volume: 200 ml
Time:
Time: 13:47

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
1330-20-7	Gas Range Organics (C6-C10)	60.00	180.00	ND	284.86	854.59	ND	

METHOD BLANK REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: LABQC

Laboratory ID: B01312

File Name: B01312D.D

Description: METHOD BLANK

Can/Tube#:

QC_Batch: 013122-MA1

Date Sampled:

Date Analyzed: 1/31/2022

Can Dilution Factor: 1.00

Air Volume: 200 ml

Time:

Time: 13:47

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
67-63-0	2-propanol (Isopropyl Alcohol)	1.25	3.75	ND	3.08	9.23	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	85	70	130	

QUALITY CONTROL REPORT

Laboratory Control Spike and Spike Duplicate Report

TO15 Volatile Organic Compounds by GC/MS

QC_Batch: 013122-MA1

Date: 01/31/22

CAS#	Compound	LCS		LCD		Spike Limit		Duplicate		Flag
		Recovery %	Flag	Recovery %	Flag	LCL %	UCL %	Duplicate %	Limit %	
75-01-4	Vinyl chloride	92		86		70	130	7	25	
75-35-4	1,1-Dichloroethene	94		88		70	130	6	25	
75-09-2	Dichloromethane	107		99		70	130	7	25	
75-34-3	1,1-Dichloroethane	96		84		70	130	13	25	
67-66-3	Chloroform	81		82		70	130	1	25	
71-55-6	1,1,1-Trichloroethane	84		77		70	130	8	25	
107-06-2	1,2-Dichloroethane	82		73		70	130	11	25	
71-43-2	Benzene	83		82		70	130	2	25	
56-23-5	Carbon tetrachloride	91		80		70	130	13	25	
79-01-6	Trichloroethene	99		94		70	130	5	25	
108-88-3	Toluene	100		79		70	130	23	25	
106-93-4	1,2-Dibromoethane	119		95		70	130	23	25	
127-18-4	Tetrachloroethene	115		91		70	130	24	25	
100-41-4	Ethylbenzene	87		78		70	130	10	25	
1330-20-7	m,p-Xylenes	85		74		70	130	13	25	
95-47-6	o-Xylene	92		80		70	130	15	25	
108-67-8	1,3,5-Trimethylbenzene	101		84		70	130	18	25	
95-63-6	1,2,4-Trimethylbenzene	94		102		70	130	8	25	

LCS - Laboratory Control Spike

LCD - Laboratory Control Duplicate

Flag - Q indicated out of Limits

Analytical Reports

EAS SDG Number: 222042

Project Number: 17696

The following pages contain the certified Analytical Reports for the samples submitted in the Sample Delivery Group (SDG) and are in order of the EAS Lab ID number. All of the analytical methods used are modifications of the published methods. Procedural method modifications, QC modifications, QC Criteria modifications, target lists, definitions of detection limits, and flags are all explained in detail in the EAS Quality Manual.

The Analytical Report has columns for the method detection limit (MDL), the reporting limit (RL), and the Amount. The Amount is the concentration of the compound in the sample. The report usually has the results reported with two commonly used units. The MDL, RL, and Amount are adjusted for the canister dilution factor and any dilution caused by sample matrix effects.

NELAC CERTIFICATION

EAS is accredited by the National Environmental Laboratory Accreditation (NELAC) with the Florida Department of Health, one of the NELAC certifying states. EAS is certified for the EPA TO-15, EPA TO-11 and EPA TO-4 methods. A list of accredited compounds is available on request.

DETECTION LIMITS

MDL: The MDL is lowest concentration that can be measured to be statistically above the noise level and is determined using the EPA 2016 method which uses the standard deviation of replicate measurements made over time. The method also incorporates systematic instrumentation blank levels. See Quality Manual for detailed explanation.

RL: The reporting limit (RL) is the lowest concentration that can be reliably reported for each compound that meets the QC Criteria for the method, background levels, or project specific considerations. The QC criteria level for the method blank is to be less than the RL. See Quality Manual for more information.

DATA FLAGS

In the standard report, if a compound is not detected above the method detection limit, a "ND" is in the Amount column. The flag column is used for both the not detect flag and for any data flags.

B - This compound was detected in the batch method blank above the reporting limit and is greater than one tenth the amount in the sample.

E - This compound exceeds the calibration range for this sample volume.

J - The amount reported is estimated because it was below the RL and could be below the lowest calibration point, have higher uncertainty, or could be the result of system background

UNITS

PPBV or PPMV: Parts-per-billion (or million) by volume is a mole (volume) ratio of the moles of analyte divided by the moles of air (gas). This is the primary unit used to report air or gas concentrations and is independent of temperature and pressure.

UG/M3 OR MG/M3: The reported result was calculated based on 1 atm pressure and a temperature of 25C. The conversion from PPBV is: $UG/M3 = PPBV \times MW/24.46$ where 24.46 is the gas constant and MW is the Compounds Molecular Weight (sometimes called Formula Weight)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 222042

Analytical Method: TO-15

Laboratory ID: 01

File Name: 2204201A.D
Description: SUB01-220125
Canister: 935
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 12:20
Date Analyzed: 1/31/2022 Time: 17:27
Can Dilution Factor: 1.00
Air Volume: 200.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.65	1.25	ND	3.22	6.19	ND	
74-87-3	Chloromethane	0.65	1.26	ND	1.34	2.61	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.80	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.22	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.79	ND	
74-83-9	Bromomethane	0.50	1.26	ND	1.94	4.89	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	41.86	2.36	7.08	79.03	
75-69-4	Trichlorofluoromethane	0.35	1.26	ND	1.97	7.09	ND	
67-64-1	Acetone	1.25	3.75	29.66	2.97	8.92	70.59	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.92	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.18	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.19	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.90	7.23	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.33	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.06	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.52	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.95	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.53	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.48	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.34	ND	
67-66-3	Chloroform	0.25	1.19	ND	1.22	5.82	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.37	6.06	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.87	3.31	ND	
71-43-2	Benzene	0.50	1.00	1.41	1.60	3.20	4.52	
56-23-5	Carbon tetrachloride	0.23	1.19	ND	1.42	7.46	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.13	12.43	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.16	5.57	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.61	7.38	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.27	ND	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.68	3.39	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.10	13.86	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.53	ND	
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.14	5.89	ND	
108-88-3	Toluene	0.50	1.31	0.79	1.89	4.92	2.96	J
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.14	5.89	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.37	7.02	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.13	14.55	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.26	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.67	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.13	ND	
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.25	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.30	5.75	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	ND	2.30	5.76	ND	
100-42-5	Styrene	0.52	1.29	ND	2.21	5.52	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.59	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.60	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.08	10.20	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.36	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.25	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.01	5.57	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.71	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.01	5.21	ND	
95-50-1	1,2-Dichlorobenzene	1.00	1.25	ND	6.02	7.53	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.29	12.78	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	0.25	0.32	ND	2.67	3.36	ND	
	Surrogate Recovery				% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				78	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified TPH

Analytical Method: TO-15

SDG: 222042
Laboratory ID: 01

File Name: 2204201A.D
Description: SUB01-220125
Canister: 935
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 12:20
Date Analyzed: 1/31/2022 Time: 17:27
Can Dilution Factor: 1.00
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
1330-20-7	Gas Range Organics (C6-C10)	60.00	180.00	ND	284.86	854.59	ND	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 222042
Laboratory ID: 01

File Name: 2204201A.D
Description: SUB01-220125
Can/Tube#: 935
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 12:20
Date Analyzed: 1/31/2022 Time: 17:27
Can Dilution Factor: 1.00
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
67-63-0	2-propanol (Isopropyl Alcohol)	1.25	3.75	ND	3.08	9.23	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	78	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 222042

Analytical Method: TO-15

Laboratory ID: 02

File Name: 2204202A.D
Description: SUB02-220125
Canister: 364
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 12:30
Date Analyzed: 1/31/2022 Time: 18:03
Can Dilution Factor: 1.00
Air Volume: 200.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.65	1.25	ND	3.22	6.19	ND	
74-87-3	Chloromethane	0.65	1.26	ND	1.34	2.61	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.80	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.22	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.79	ND	
74-83-9	Bromomethane	0.50	1.26	ND	1.94	4.89	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	23.40	2.36	7.08	44.18	
75-69-4	Trichlorofluoromethane	0.35	1.26	ND	1.97	7.09	ND	
67-64-1	Acetone	1.25	3.75	68.26	2.97	8.92	162.43	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.92	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.18	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.19	ND	
75-15-0	Carbon disulfide	1.25	2.32	2.62	3.90	7.23	8.17	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.33	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.06	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	4.32	2.95	7.52	12.76	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.95	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.53	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.48	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.34	ND	
67-66-3	Chloroform	0.25	1.19	ND	1.22	5.82	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.37	6.06	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.87	3.31	ND	
71-43-2	Benzene	0.50	1.00	3.43	1.60	3.20	10.96	
56-23-5	Carbon tetrachloride	0.23	1.19	ND	1.42	7.46	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.13	12.43	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.16	5.57	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.61	7.38	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.27	ND	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.68	3.39	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.10	13.86	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.53	ND	
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.14	5.89	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
108-88-3	Toluene	0.50	1.31	2.71	1.89	4.92	10.23	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.14	5.89	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.37	7.02	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.13	14.55	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.26	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.67	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.13	ND	
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.25	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.30	5.75	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	ND	2.30	5.76	ND	
100-42-5	Styrene	0.52	1.29	ND	2.21	5.52	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.59	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.60	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.08	10.20	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.36	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.25	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.01	5.57	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.71	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.01	5.21	ND	
95-50-1	1,2-Dichlorobenzene	1.00	1.25	ND	6.02	7.53	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.29	12.78	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	0.25	0.32	ND	2.67	3.36	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	87	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified TPH

Analytical Method: TO-15

SDG: 222042

Laboratory ID: 02

File Name: 2204202A.D
Description: SUB02-220125
Canister: 364
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 12:30
Date Analyzed: 1/31/2022 Time: 18:03
Can Dilution Factor: 1.00
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
1330-20-7	Gas Range Organics (C6-C10)	60.00	180.00	ND	284.86	854.59	ND	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 222042
Laboratory ID: 02

File Name: 2204202A.D
Description: SUB02-220125
Can/Tube#: 364
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 12:30
Date Analyzed: 1/31/2022 Time: 18:03
Can Dilution Factor: 1.00
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
67-63-0	2-propanol (Isopropyl Alcohol)	1.25	3.75	ND	3.08	9.23	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	87	70	130	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 222042
Laboratory ID: 03

File Name: 2204203A.D
Description: SUB03-220125
Canister: 311
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 13:01
Date Analyzed: 1/31/2022 Time: 18:38
Can Dilution Factor: 1.00
Air Volume: 200.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.65	1.25	ND	3.22	6.19	ND	
74-87-3	Chloromethane	0.65	1.26	ND	1.34	2.61	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.80	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.22	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.79	ND	
74-83-9	Bromomethane	0.50	1.26	ND	1.94	4.89	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	7.90	2.36	7.08	14.92	
75-69-4	Trichlorofluoromethane	0.35	1.26	ND	1.97	7.09	ND	
67-64-1	Acetone	1.25	3.75	40.61	2.97	8.92	96.62	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.92	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.18	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.19	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.90	7.23	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.33	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.06	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.52	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.95	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.53	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.48	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.34	ND	
67-66-3	Chloroform	0.25	1.19	ND	1.22	5.82	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.37	6.06	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.87	3.31	ND	
71-43-2	Benzene	0.50	1.00	3.20	1.60	3.20	10.25	
56-23-5	Carbon tetrachloride	0.23	1.19	ND	1.42	7.46	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.13	12.43	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.16	5.57	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.61	7.38	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.27	ND	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.68	3.39	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.10	13.86	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.53	ND	
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.14	5.89	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
108-88-3	Toluene	0.50	1.31	5.74	1.89	4.92	21.65	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.14	5.89	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.37	7.02	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.13	14.55	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.26	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.67	ND	
127-18-4	Tetrachloroethene	0.15	0.61	0.27	1.02	4.13	1.86	J
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.25	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.30	5.75	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	0.73	2.30	5.76	3.16	J
100-42-5	Styrene	0.52	1.29	ND	2.21	5.52	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.59	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.60	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.08	10.20	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.36	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.25	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.01	5.57	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.71	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.01	5.21	ND	
95-50-1	1,2-Dichlorobenzene	1.00	1.25	ND	6.02	7.53	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.29	12.78	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	0.25	0.32	ND	2.67	3.36	ND	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	82	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified TPH

Analytical Method: TO-15

SDG: 222042

Laboratory ID: 03

File Name: 2204203A.D
Description: SUB03-220125
Canister: 311
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 13:01
Date Analyzed: 1/31/2022 Time: 18:38
Can Dilution Factor: 1.00
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
1330-20-7	Gas Range Organics (C6-C10)	60.00	180.00	137.22	284.86	854.59	658.71	J

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 222042
Laboratory ID: 03

File Name: 2204203A.D
Description: SUB03-220125
Can/Tube#: 311
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 13:01
Date Analyzed: 1/31/2022 Time: 18:38
Can Dilution Factor: 1.00
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
67-63-0	2-propanol (Isopropyl Alcohol)	1.25	3.75	208.91	3.08	9.23	514.20	

Surrogate Recovery		% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8	82	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 222042

Analytical Method: TO-15

Laboratory ID: 04

File Name: 2204204A.D
Description: SUB04-220125
Canister: 345
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 13:20
Date Analyzed: 1/31/2022 Time: 19:14
Can Dilution Factor: 1.00
Air Volume: 200.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.65	1.25	ND	3.22	6.19	ND	
74-87-3	Chloromethane	0.65	1.26	ND	1.34	2.61	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.80	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.22	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.79	ND	
74-83-9	Bromomethane	0.50	1.26	ND	1.94	4.89	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	51.03	2.36	7.08	96.34	
75-69-4	Trichlorofluoromethane	0.35	1.26	ND	1.97	7.09	ND	
67-64-1	Acetone	1.25	3.75	257.87	2.97	8.92	613.60	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.92	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.18	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.19	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.90	7.23	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.33	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.06	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.52	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.95	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.53	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.48	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.34	ND	
67-66-3	Chloroform	0.25	1.19	ND	1.22	5.82	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.37	6.06	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.87	3.31	ND	
71-43-2	Benzene	0.50	1.00	4.97	1.60	3.20	15.89	
56-23-5	Carbon tetrachloride	0.23	1.19	ND	1.42	7.46	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.13	12.43	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.16	5.57	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.61	7.38	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.27	ND	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.68	3.39	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.10	13.86	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.53	ND	
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.14	5.89	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
108-88-3	Toluene	0.50	1.31	2.69	1.89	4.92	10.16	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.14	5.89	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.37	7.02	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.13	14.55	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.26	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.67	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.13	ND	
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.25	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.30	5.75	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	1.03	2.30	5.76	4.49	J
100-42-5	Styrene	0.52	1.29	ND	2.21	5.52	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.59	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.60	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.08	10.20	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.36	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.25	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.01	5.57	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.71	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.01	5.21	ND	
95-50-1	1,2-Dichlorobenzene	1.00	1.25	ND	6.02	7.53	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.29	12.78	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	0.25	0.32	ND	2.67	3.36	ND	
Surrogate Recovery					% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				87	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified TPH

Analytical Method: TO-15

SDG: 222042

Laboratory ID: 04

File Name: 2204204A.D
Description: SUB04-220125
Canister: 345
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 13:20
Date Analyzed: 1/31/2022 Time: 19:14
Can Dilution Factor: 1.00
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
1330-20-7	Gas Range Organics (C6-C10)	60.00	180.00	68.36	284.86	854.59	329.46	J

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 222042
Laboratory ID: 04

File Name: 2204204A.D
Description: SUB04-220125
Can/Tube#: 345
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 13:20
Date Analyzed: 1/31/2022 Time: 19:14
Can Dilution Factor: 1.00
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
67-63-0	2-propanol (Isopropyl Alcohol)	1.25	3.75	99.52	3.08	9.23	244.97	
	Surrogate Recovery				% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				87	70	130	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 222042

Laboratory ID: 05

File Name: 2204205A.D
Description: SUB05-220125
Canister: 313
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 13:41
Date Analyzed: 1/31/2022 Time: 19:51
Can Dilution Factor: 1.00
Air Volume: 200.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.65	1.25	ND	3.22	6.19	ND	
74-87-3	Chloromethane	0.65	1.26	ND	1.34	2.61	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.80	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.22	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.79	ND	
74-83-9	Bromomethane	0.50	1.26	ND	1.94	4.89	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	29.48	2.36	7.08	55.66	
75-69-4	Trichlorofluoromethane	0.35	1.26	ND	1.97	7.09	ND	
67-64-1	Acetone	1.25	3.75	122.35	2.97	8.92	291.13	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.92	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.18	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.19	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.90	7.23	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.33	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.06	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.52	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.95	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.53	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.48	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.34	ND	
67-66-3	Chloroform	0.25	1.19	ND	1.22	5.82	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.37	6.06	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.87	3.31	ND	
71-43-2	Benzene	0.50	1.00	2.34	1.60	3.20	7.50	
56-23-5	Carbon tetrachloride	0.23	1.19	ND	1.42	7.46	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.13	12.43	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.16	5.57	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.61	7.38	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.27	ND	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.68	3.39	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.10	13.86	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.53	ND	
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.14	5.89	ND	

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag	
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3		
108-88-3	Toluene	0.50	1.31	2.28	1.89	4.92	8.59		
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.14	5.89	ND		
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.37	7.02	ND		
591-78-6	2-Hexanone	1.25	3.55	ND	5.13	14.55	ND		
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.26	ND		
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.67	ND		
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.13	ND		
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.25	ND		
100-41-4	Ethylbenzene	0.53	1.32	ND	2.30	5.75	ND		
1330-20-7	m,p-Xylenes	0.53	1.32	0.94	2.30	5.76	4.08	J	
100-42-5	Styrene	0.52	1.29	ND	2.21	5.52	ND		
75-25-2	Bromoform	0.25	0.34	ND	2.59	3.47	ND		
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.60	ND		
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND		
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.08	10.20	ND		
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.36	ND		
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.25	ND		
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.01	5.57	ND		
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.71	ND		
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.01	5.21	ND		
95-50-1	1,2-Dichlorobenzene	1.00	1.25	ND	6.02	7.53	ND		
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.29	12.78	ND		
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND		
87-68-3	Hexachlorobutadiene	0.25	0.32	ND	2.67	3.36	ND		
					QC		Limits		
Surrogate Recovery					% Rec.	LCL	UCL	Flag	
2037-26-5	Toluene-d8				86	70	130		

ANALYTICAL REPORT

EPA Method TO-15 Modified TPH

Analytical Method: TO-15

SDG: 222042

Laboratory ID: 05

File Name: 2204205A.D
Description: SUB05-220125
Canister: 313
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 13:41
Date Analyzed: 1/31/2022 Time: 19:51
Can Dilution Factor: 1.00
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
1330-20-7	Gas Range Organics (C6-C10)	60.00	180.00	ND	284.86	854.59	ND	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 222042
Laboratory ID: 05

File Name: 2204205A.D
Description: SUB05-220125
Can/Tube#: 313
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 13:41
Date Analyzed: 1/31/2022 Time: 19:51
Can Dilution Factor: 1.00
Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
67-63-0	2-propanol (Isopropyl Alcohol)	1.25	3.75	ND	3.08	9.23	ND	
	Surrogate Recovery				% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				86	70	130	

ANALYTICAL REPORT

EPA Method TO-15 Modified Full Scan GC/MS

SDG: 222042

Analytical Method: TO-15

Laboratory ID: 06

File Name: 2204206A.D
Description: SUB06-220125
Canister: 310
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 13:54
Date Analyzed: 1/31/2022 Time: 20:27
Can Dilution Factor: 1.00
Air Volume: 200.00 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
75-71-8	Dichlorodifluoromethane	0.65	1.25	ND	3.22	6.19	ND	
74-87-3	Chloromethane	0.65	1.26	ND	1.34	2.61	ND	
76-14-2	Freon 114	0.25	1.26	ND	1.75	8.80	ND	
75-01-4	Vinyl chloride	0.25	1.26	ND	0.64	3.22	ND	
106-99-0	1,3-Butadiene	0.25	1.26	ND	0.55	2.79	ND	
74-83-9	Bromomethane	0.50	1.26	ND	1.94	4.89	ND	
75-00-3	Chloroethane	0.25	1.26	ND	0.66	3.32	ND	
64-17-5	Ethanol	1.25	3.75	41.75	2.36	7.08	78.83	
75-69-4	Trichlorofluoromethane	0.35	1.26	ND	1.97	7.09	ND	
67-64-1	Acetone	1.25	3.75	163.96	2.97	8.92	390.14	
75-35-4	1,1-Dichloroethene	0.25	1.24	ND	0.99	4.92	ND	
76-13-1	Freon 113	0.25	1.20	ND	1.92	9.18	ND	
75-09-2	Dichloromethane	0.50	1.20	ND	1.74	4.19	ND	
75-15-0	Carbon disulfide	1.25	2.32	ND	3.90	7.23	ND	
156-60-5	trans-1,2-Dichloroethene	0.25	0.90	ND	0.99	3.58	ND	
1634-04-4	Methyl tert butyl ether	0.25	0.92	ND	0.90	3.33	ND	
75-34-3	1,1-Dichloroethane	0.25	1.25	ND	1.01	5.06	ND	
108-05-4	Vinyl acetate	0.25	1.10	ND	0.88	3.87	ND	
78-93-3	2-Butanone	1.00	2.55	ND	2.95	7.52	ND	
141-78-6	Ethyl acetate	0.50	1.10	ND	1.80	3.95	ND	
74-97-5	Bromochloromethane	0.25	0.67	ND	1.32	3.53	ND	
109-99-9	Tetrahydrofuran	0.50	1.26	ND	1.48	3.71	ND	
156-59-2	cis-1,2-Dichloroethene	0.50	1.35	ND	1.98	5.34	ND	
67-66-3	Chloroform	0.25	1.19	ND	1.22	5.82	ND	
71-55-6	1,1,1-Trichloroethane	0.25	1.11	ND	1.37	6.06	ND	
107-06-2	1,2-Dichloroethane	0.25	1.14	ND	1.01	4.62	ND	
110-82-7	Cyclohexane	0.25	0.96	ND	0.87	3.31	ND	
71-43-2	Benzene	0.50	1.00	1.27	1.60	3.20	4.06	
56-23-5	Carbon tetrachloride	0.23	1.19	ND	1.42	7.46	ND	
142-82-5	n-Heptane	1.25	3.03	ND	5.13	12.43	ND	
78-87-5	1,2-Dichloropropane	0.25	1.20	ND	1.16	5.57	ND	
123-91-1	1,4 Dioxane	1.00	2.05	ND	3.61	7.38	ND	
79-01-6	Trichloroethene	0.15	1.16	ND	0.81	6.27	ND	
75-27-4	Bromodichloromethane	0.25	0.51	ND	1.68	3.39	ND	
80-62-6	Methyl methacrylate	1.00	3.38	ND	4.10	13.86	ND	
108-10-1	4-Methyl-2-pentanone	1.00	3.79	ND	4.10	15.53	ND	
10061-01-5	cis-1,3-Dichloropropene	0.25	1.30	ND	1.14	5.89	ND	

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
108-88-3	Toluene	0.50	1.31	3.25	1.89	4.92	12.27	
10061-02-6	trans-1,3-Dichloropropene	0.25	1.30	ND	1.14	5.89	ND	
79-00-5	1,1,2-Trichloroethane	0.25	1.29	ND	1.37	7.02	ND	
591-78-6	2-Hexanone	1.25	3.55	ND	5.13	14.55	ND	
124-48-1	Dibromochloromethane	0.25	0.50	ND	2.13	4.26	ND	
106-93-4	1,2-Dibromoethane	0.25	0.61	ND	1.92	4.67	ND	
127-18-4	Tetrachloroethene	0.15	0.61	ND	1.02	4.13	ND	
108-90-7	Chlorobenzene	0.25	1.14	ND	1.15	5.25	ND	
100-41-4	Ethylbenzene	0.53	1.32	ND	2.30	5.75	ND	
1330-20-7	m,p-Xylenes	0.53	1.32	0.80	2.30	5.76	3.47	J
100-42-5	Styrene	0.52	1.29	ND	2.21	5.52	ND	
75-25-2	Bromoform	0.25	0.34	ND	2.59	3.47	ND	
95-47-6	o-Xylene	0.52	1.29	ND	2.24	5.60	ND	
79-34-5	1,1,2,2-Tetrachloroethane	0.25	0.62	ND	1.70	4.25	ND	
622-96-8	4-Ethyltoluene	0.83	2.07	ND	4.08	10.20	ND	
108-67-8	1,3,5-Trimethylbenzene	0.52	1.29	ND	2.54	6.36	ND	
95-63-6	1,2,4-Trimethylbenzene	0.51	1.27	ND	2.50	6.25	ND	
541-73-1	1,3-Dichlorobenzene	0.50	0.93	ND	3.01	5.57	ND	
100-44-7	Benzyl chloride	0.50	3.03	ND	2.59	15.71	ND	
106-46-7	1,4-Dichlorobenzene	0.50	0.87	ND	3.01	5.21	ND	
95-50-1	1,2-Dichlorobenzene	1.00	1.25	ND	6.02	7.53	ND	
120-82-1	1,2,4-Trichlorobenzene	1.25	1.72	ND	9.29	12.78	ND	
91-20-3	Naphthalene	0.26	0.40	ND	1.34	2.10	ND	
87-68-3	Hexachlorobutadiene	0.25	0.32	ND	2.67	3.36	ND	
Surrogate Recovery					% Rec.	QC LCL	Limits UCL	Flag
2037-26-5	Toluene-d8				82	70	130	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified TPH

Analytical Method: TO-15

SDG: 222042

Laboratory ID: 06

File Name: 2204206A.D

Date Sampled: 1/25/2022

Time: 13:54

Description: SUB06-220125

Date Analyzed: 1/31/2022

Time: 20:27

Canister: 310

Can Dilution Factor: 1.00

QC_Batch: 013122-MA1

Air Volume: 200 ml

CAS#	Compound	MDL PPBV	RL PPBV	Amount PPBV	MDL UG/M3	RL UG/M3	Amount UG/M3	Flag
1330-20-7	Gas Range Organics (C6-C10)	60.00	180.00	206.39	284.86	854.59	994.71	

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified Full Scan GC/MS

Analytical Method: TO-15

SDG: 222042
Laboratory ID: 06

File Name: 2204206A.D
Description: SUB06-220125
Can/Tube#: 310
QC_Batch: 013122-MA1

Date Sampled: 1/25/2022 Time: 13:54
Date Analyzed: 1/31/2022 Time: 20:27
Can Dilution Factor: 1.00
Air Volume: 200 ml

CAS#	Compound	MDL	RL	Amount	MDL	RL	Amount	Flag
		PPBV	PPBV	PPBV	UG/M3	UG/M3	UG/M3	
67-63-0	2-propanol (Isopropyl Alcohol)	1.25	3.75	1,641.12	3.08	9.23	4,039.45	

	Surrogate Recovery	% Rec.	QC	Limits	Flag
			LCL	UCL	
2037-26-5	Toluene-d8	82	70	130	