SITE ASSESSMENT REPORT

Property Identification:

ECSI #6538
10543 SE FULLER ROAD
MILWAUKIE, OREGON 97222

Prepared For:

WINNIE ZHAO
AND
OREGON DEQ

Property Owner:

WINNIE ZHAO

Prepared By:

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Date Issued: March 25, 2024
Alpha Project Number: 23-53145

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1.0 INTRODUCTION

Alpha Environmental Services (Alpha) has conducted an Indoor Air Site Assessment at the property located at 10543 SE Fuller Road, Milwaukie, Oregon (the Property). The purpose of the investigation was to determine if the former use as a dry cleaner has negatively affected indoor air quality. This report summarizes the current scope of work, field investigation activities and laboratory analyses, and provides conclusions and recommendations.

1.1 Site Description

The Property consists of one Tax Lot C222221 located in Township 1 South, Range 2 East, Section 32, Willamette Meridian. The parcel is a total of 0.37-acres. The western part of the Property is occupied by the building and the eastern part is asphalt parking. The site is currently occupied by a restaurant and embroidery shop.

The vicinity of the Property can generally be described as commercial and residential. Current usage of the adjoining properties includes: north – SE King Road with commercial development beyond; south – commercial development; east – E Fuller Road with commercial development beyond; and west – residential development.

1.2 Current Zoning and Future Land Use

The zoning is Retail Commercial (RTL) by Clackamas County. The zoning allows for some residential uses including multi-family residential, triplexes, and single family dwellings and townhouse as an accessory. The future use of the property is anticipated to remain commercial.

1.3 Site Drainage

The majority of the property is covered with the building and asphalt parking. Stormwater from the building discharges to the ground around the building. Stormwater sheet flows across the parking lot to adjacent streets and landscape areas.

1.4 Sewer Connections

The property connected to the sanitary sewer and is serviced by the City of Milwaukie.

1.5 Geology and Groundwater

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

According to the Water Resources Department (WRD) online database and USGS Depth to Groundwater Map, static groundwater appears to be located greater than 100 feet below surface grade (bsg). The flow of groundwater typically imitates the surface topography and ordinarily flows from higher to lower elevations. The near surface flow may be influenced by stratigraphy, water bodies, rainfall, underground utilities and other subsurface features. Based on the topography and site observations, groundwater is anticipated to flow to the northwest.

The nearest major surface water in the vicinity of the Property is the Willamette River, located approximately 3.1 miles west of the Property.

2.0 PREVIOUS INVESTIGATIONS

2.1 Site History

The site history has been reproduced from Evren Northwest (ENW) Additional Site Investigation report dated December 1, 2022.

> The subject property is a commercial property developed with a one-story commercial building with two tenant spaces and an adjoining asphalt parking lot. The building is currently occupied by a restaurant and commercial embroidery shop. ENW has performed several phases of environmental due diligence at the subject property on behalf of Alpha Fuller, LLC, including a Phase I and Phase II Environmental Site Assessment and assessment and decommissioning of an abandoned underground storage tank (UST). The previous investigations are included in the following documents for reference and the findings of these previous assessments are briefly summarized below:
>
> - *Phase I Environmental Site Assessment* (ESA), April 2022.
> - *Phase II Environmental Site Assessment,* June 2022.2
> - *Heating Oil Tank Clean Decommissioning and Closure Report,* October 2022.
>
> Site features and sample locations referenced from previous investigations are illustrated in the Site Plan on Figure 2. A cumulative summary of laboratory analytical results of soil and soil gas/sub-slab vapor samples are presented on Tables 1 and 2, respectively behind the Tables tab following text.
>
> **Historical dry cleaner.** Historical records revealed a dry cleaner operated at the subject property from 1987 through 2010. In June 2022 during ENW's Phase II ESA, trichloroethylene (TCE), a dry-cleaning related constituent, was detected in one of three sub-slab vapor samples collected beneath the former dry cleaner space (SUB01 through SUB03, see Figure 2). The concentration of TCE in sample SUB01, collected in the kitchen of the current restaurant tenant space exceeded the Oregon Department of Environmental Quality (ODEQ) screening level risk-based concentration (SLRBC) for the *Vapor Intrusion Pathway.*
>
> **Abandoned Septic Tank.** During a geophysical survey of the property conducted in June 2022, ENW found evidence of an abandoned septic tank and piping leading back to the former dry-cleaning space. To assess soil and vapor concentrations near the septic tank, ENW collected and analyzed two soil gas samples (SG01 and SG02) and advanced one soil boring (B03) next to the septic tank feature. Elevated concentrations of TCE and tetrachloroethylene (PCE) were one to two orders of magnitude above the levels found beneath the former dry-cleaning building, suggesting a possible source area at or near the abandoned septic tank. Petroleum hydrocarbons were not detected in soil samples collected at 5.5 and 11.5 feet below ground surface (bgs).
>
> **Underground Storage Tank.** During ENW's geophysical survey, an abandoned heating oil tank with product was discovered on the south side of the on-site commercial building. In July 2022, ENW assessed native soils beneath the abandoned UST by advancing two soil borings (B01 and B02) and collecting soil samples for laboratory analysis. Based on assessment soil sample results, it was determined that a release of heating oil had not occurred from the abandoned tank. In October 2022, ENW decommissioned the heating oil UST in-place with control-density fill (CDF) and prepared a Certificate of Voluntary Pleating Oil Tank Decommissioning for submittal to ODEQ.

3.0 PURPOSE AND SCOPE

3.1 Purpose

The purpose of the investigation was to determine if the former use as a dry cleaner has negatively affected indoor air quality. Alpha relied upon the previous reports, maps and communication with the DEQ to develop the scope of work for this investigation. The general scope of work for this investigation consisted of the following activities:

- The laboratory certification of Radiello RAD 145 Passive samplers.
- The collection of air quality samples using Radiello RAD 145 Passive samplers.
- Samples were collected at varying seasons of the year (June and February).
- The presentation of results for the investigation including findings, conclusions and recommendations.

3.2 Accepted Scope of Services

The assessment was performed according to the agreed-upon scope of services between Alpha and Winnie Zhao. The assessment was completed in general accordance with the authorized scope of work listed above.

4.0 FIELD INVESTIGATION AND SAMPLING PROCEDURES

4.1 Preliminary Field Work

Prior to sampling, Alpha performed a site visit to determine appropriate locations to place the passive samplers.

4.2 Location Rationale

The locations were chosen based on the previous sample locations, layout of the building and approved by the DEQ.

4.3 Sampling Activities

Field investigation was conducted on June 8, 2023, and February 22, 2024, under the supervision of Mr. Jim Cooper, senior geologist for Alpha. The air sampling consisted of placing of four passive samplers inside the building (3 standard, one duplicate) and one sampler outside (ambient air).

The passive sample tubes were carefully removed from their protective containers and placed inside passive filters. The sample tube and filter were connected to a labeled holder and clip. The clip was used to attach the sampler to various locations around the building at approximate normal breathing heights. The start time was recorded.

After approximately 8 hours, the sample tubes were removed from the filter and placed back in their protective containers. Containers were labeled with specific sample designations and boxed up for shipping back to the laboratory.

Samples were handled under chain-of-custody protocol and analyzed by modified EPA Test Method TO-17 for VOCs.

4.4 Sampling Details

Identification	Purpose	Location	Sampled Media	Analysis
IA1 & IA1-2	Indoor Assessment	Eating Area	Indoor Air	VOCs
IA2 & IA2-2	Indoor Assessment	Food Preparation Area	Indoor Air	VOCs
IA3 & IA3-2	Indoor Assessment	Hallway	Indoor Air	VOCs
IA3 & IA1-23 Duplicates	Indoor Assessment	Hallway	Indoor Air	VOCs
OA1 & OA1-2	Outdoor Assessment	NW Corner of Building	Outdoor Air	VOCs
Trip Blank	QA	-	-	VOCs

5.0 QUALITY ASSURANCE & QUALITY CONTROL

For the project, Alpha comply with the DEQ's Quality Assurance Project Plan (QAPP) for Preliminary Assessments, DEQ05-LQ-069-QAPP, Version 2.2 dated August 14, 2012.

5.1 Field Equipment

All sampling equipment was supplied directly by the laboratory.

Disposable field equipment used for this project included nitrile gloves and Ziplock bags.

5.2 Sample Collection

Samples from the investigation were collected passively using Radeillo samplers. The sample tubes provided by the laboratory were kept sealed until they were opened and placed in the filters. Once sampling was complete, the samples were returned to the protective containers and labeled for shipping.

5.4 Sample Identification

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

5.5 Trip Blanks

As per DEQ's requirements, one trip blank was provided by the laboratory. The trip blank was transported to the jobsite and returned to the laboratory. The results of the trip blank were non-detect for all analytes.

5.6 Sample Transport

Containers were placed in the sampler box provided by the laboratory. The samples were transported by the geologist to a FedEx shipping center.

Samples were handled under chain-of-custody protocol in which the custody form was signed and dated by the Alpha personnel. A completed copy of the chain-of-custody form is included at the end of the laboratory analytical report.

5.7 Field Duplicates

Field duplicates were collected at a rate of 1 per 20 analytical samples for the sample matrix.

5.8 Field Duplicate Evaluation

The duplicate Relative Percent Difference (RPD) is a measure of the overall precision of the sampling and analytical program.

The RPD was calculated for Benzene and Tetrachloroethylene and was calculated using the following:

$$\text{RPD} = \frac{\text{Difference Between Duplicate Results}}{\text{Mean of Duplicate Results}} \times 100 = \%$$

RPD Table for VOCs – June 2023				
Analyte	**Original**	**Duplicate**	**RPD%**	**Pass < 30%**
Benzene	8.6	3.7	80	*N*
Chloroform	2.3	2.0	14	*Y*
Ethylbenzene	1.3	1.1	17	*Y*
Styrene	3.2	2.0	46	*N*
Tetrachloroethylene	14	14	0	*Y*
Trichloroethene	0.84	0.80	5	*Y*
Xylenes	3.8	3.9	3	*Y*

RPD Table for VOCs – February 2024				
Analyte	**Original**	**Duplicate**	**RPD%**	**Pass < 30%**
Benzene	3.1	4.0	25	*Y*
Chloroform	0.52	0.59	13	*Y*
Ethylbenzene	0.92	1.0	8	*Y*
Styrene	1.2	1.4	15	*Y*
Tetrachloroethylene	3.6	4.9	31	*N*
Trichloroethene	0.56	<0.39	36	*N*
Xylenes	4.1	4.8	16	*Y*

The field duplicate RPD for the air samples from the June 2023 sampling event ranged between 0% to 80%. The field duplicate RPD from the February 2024 sampling event ranged between 8% to 36%. In general, an RPD of 30% or less is considered acceptable. With the exception of the two outlier RPDs (different analytes between sampling events) the duplicates show good precision in the data.

6.0 SAMPLE ANALYTICAL RESULTS

6.1 Sample Results Evaluation

In order to evaluate the current and reasonably likely future risk to human health and the environment, Alpha compared the data from the previous and current investigation to the Oregon Department of Environmental Quality (DEQ) risk-based decision making (RBDM) guidelines.

The RBDM process involves investigating potential sources of the contaminants and the environmental media in which they are contained (e.g., soil or groundwater), receptors (who could potentially be exposed to contaminants), and the exposure pathway (how a receptor might come in contact with contaminants [e.g., inhalation, ingestion or dermal contact]). If any of these elements is missing, the pathway is considered incomplete. This was accomplished by constructing a Conceptual Site Model (CSM).

Using the parameters listed above, the laboratory detected concentrations and/or the reporting limits were compared to DEQ risk-based concentrations (RBCs). An RBC is the concentration of a hazardous substance in soil, water, air or sediment that is determined to be protective of human health and the environment under specified exposure conditions.

Since contamination exists on the site, the following receptors and pathways are applicable.

Potential Receptors:

Occupational

Selected Pathways for Receptor:

- Air inhalation caused by vapor intrusion into buildings from soil and/or groundwater

6.2 Findings

VOC Results June 2023

The VOC analytical results indicate that several VOCs were detected in the samples. With the outdoor air correction for the samples calculated, the concentrations of highest benzene sample and estimated concentrations of chloroform exceeded the occupational risk level.

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

Table 1 – Air Sample Analytical Results – VOCs

Sample No.	Location	Date	VOCs						
			Benzene	Chloroform	Ethylbenzene	Styrene	Tetrachloroethene	Trichloroethene	Xylenes
			ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
IA1	Eating Area	6/8/23	**6.0**	**2.1 C**	**1.2**	**2.4**	**14**	**0.84**	**3.8**
IA2	Food Preparation Area	6/8/23	**3.8**	**2.1 C**	**1.1**	**2.0**	**14**	**0.88**	**3.6**
IA3	Hallway	6/8/23	**8.6**	**2.3 C**	**1.3**	**3.2**	**14**	**0.84**	**3.8**
IA3 Dup	Hallway	6/8/23	**3.7**	**2.0 C**	**2.0**	**2.0**	**14**	**0.80**	**3.9**
OA1	NW Corner of Building	6/8/23	**5.2**	*ND*	**1.0**	**1.0**	**14**	*ND*	*ND*
Trip Blank	Center of back lot	6/8/23	**2.1**	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
DEQ Risk-Based Screening Levels									
Max Indoor Air Concentration			8.8	2.3 C	1.3	3.2	14	0.88	3.9
Outdoor Air Concentration			5.2	ND	ND	1.0	ND	ND	ND
Net Indoor Air Concentration			**3.6**	**2.3**	**1.3**	**2.2**	**14**	**0.88**	**3.9**
Residential Risk-Based Concentrations			0.36	0.12	1.1	1,000	11	0.48	100
Exceeds Residential RBCs			Y	Y	Y	N	Y	Y	N
Occupational Risk-Based Concentrations			1.6	0.53	4.9	4,400	47	3.0	440
Exceeds Occupational RBCs			Y	Y	N	N	N	N	N

ND = Analyte Not Detected at or above laboratory reporting limit (See Laboratory Report) All reporting limits are below the RBCs.
ug/m3 = microgram per meter cubed

VOC Results February 2024

The VOC analytical results indicate that several VOCs were detected in the samples. With the outdoor air correction for the samples calculated, the concentrations of highest benzene sample and estimated concentrations of chloroform exceeded the occupational risk level. The estimated concentrations of chloroform are only slightly above the occupational risk level.

A summary of the results for the soil analysis is presented in Table 2. Laboratory analytical reports are included as Appendix B.

Table 2 – Air Sample Analytical Results – VOCs

Sample Date	Location	Date	VOCs						
			Benzene	**Chloroform**	**Ethylbenzene**	**Styrene**	**Tetrachloroethene**	**Trichloroethene**	**Xylenes**
			ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
IA1-2	Eating Area	2/22/24	**5.0**	**0.58 C**	**1.1**	**1.4**	**4.7**	*ND*	**5.2**
IA2-2	Food Preparation Area	2/22/24	**4.1**	**0.56 C**	**0.98**	**1.3**	**4.1**	**0.46**	**4.5**
IA3-2	Hallway	2/22/24	**3.1**	**0.52 C**	**0.92**	**1.2**	**3.6**	**0.56**	**4.1**
IA3-2 Dup	Hallway	2/22/24	**4.0**	**0.59 C**	**1.0**	**1.4**	**4.9**	*ND*	**4.8**
OA1-2	NW Corner of Building	2/22/24	**2.8**	*ND*	*ND*	**14**	*ND*	*ND*	**2.97**
Trip Blank	Center of back lot	2/22/24	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*	*ND*
DEQ Risk-Based Screening Levels									
Max Indoor Air Concentration			5.0	0.59 C	1.1	1.4	4.9	0.84	5.2
Outdoor Air Concentration			2.8	ND	ND	14	ND	ND	2.97
Net Indoor Air Concentration			**2.2**	**0.59**	**1.1**	**0**	**4.9**	**0.84**	**2.2**
Residential Risk-Based Concentrations			0.36	0.12	1.1	1,000	11	0.48	100
Exceeds Residential RBCs			Y	Y	Y	N	N	Y	N
Occupational Risk-Based Concentrations			1.6	0.53	4.9	4,400	47	3.0	440
Exceeds Occupational RBCs			Y	Y*	N	N	N	N	N

ND = Analyte Not Detected at or above laboratory reporting limit (See Laboratory Report) All reporting limits are below the RBCs.
ug/m3 = microgram per meter cubed
Y* = results are based on estimated value and actual exceedance of RBC may not exist

VOC Average Results June 2023

The average VOC results were calculated to determine an overall risk to site occupants. Using the average results from all indoor samples, with the outdoor air correction, only chloroform exceeded the occupational risk level.

A summary of the results for the soil analysis is presented in Table 3. Laboratory analytical reports are included as Appendix B.

Table 3 – Air Sample Average Results Summary - June 2023

June 8, 2023	VOCs						
	Benzene	Chloroform	Ethylbenzene	Styrene	Tetrachloroethene	Trichloroethene	Xylenes
	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
DEQ Risk-Based Screening Levels							
Average Indoor Air Concentration	5.5	2.1 C	1.4	2.4	14	0.84	3.8
Outdoor Air Concentration	5.2	ND	ND	1.0	ND	ND	ND
Net Average Indoor Air Concentration	**0.3**	**2.1**	**1.4**	**2.4**	**14**	**0.84**	**3.9**
Residential Risk-Based Concentrations	0.36	0.12	1.1	1,000	11	0.48	100
Exceeds Residential RBCs	N	Y	Y	N	Y	Y	N
Occupational Risk-Based Concentrations	1.6	0.53	4.9	4,400	47	3.0	440
Exceeds Occupational RBCs	N	Y	N	N	N	N	N

ND = Analyte Not Detected at or above laboratory reporting limit (See Laboratory Report) All reporting limits are below the RBCs.
ug/m3 = microgram per meter cubed

VOC Average Results February 2024

The average VOC results were calculated to determine an overall risk to site occupants. Using the average results from all indoor samples, with the outdoor air correction, only chloroform exceeded the occupational risk level.

A summary of the results for the soil analysis is presented in Table 4. Laboratory analytical reports are included as Appendix B.

Table 4 – Air Sample Average Results Summary - February 2024

February 22, 2024	VOCs						
	Benzene	**Chloroform**	**Ethylbenzene**	**Styrene**	**Tetrachloroethene**	**Trichloroethene**	**Xylenes**
	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
DEQ Risk-Based Screening Levels							
Average Indoor Air Concentration	4.1	0.56 C	1.4	1.3	4.3	0.7	4.7
Outdoor Air Concentration	2.8	ND	ND	14	ND	ND	ND
Net Average Indoor Air Concentration	**1.3**	**0.56**	**1.0**	**0**	**4.3**	**0.7**	**4.7**
Residential Risk-Based Concentrations	0.36	0.12	1.1	1,000	11	0.48	100
Exceeds Residential RBCs	Y	Y	N	N	N	Y	N
Occupational Risk-Based Concentrations	1.6	0.53	4.9	4,400	47	3.0	440
Exceeds Occupational RBCs	N	Y*	N	N	N	N	N

ND = Analyte Not Detected at or above laboratory reporting limit (See Laboratory Report) All reporting limits are below the RBCs.
ug/m3 = microgram per meter cubed
Y* = results are based on estimated value and actual risk may not exist

6.3 Weather Conditions

Weather conditions can cause temporal differences in how soil vapors react that can affect vapor intrusion. Historical weather data for two days prior to the sampling event, the day of the sampling event and one day following the sampling events is presented below.

Table 5 – Weather Data

1st Sampling Event				
Date	6-6-23	6-7-23	**6-8-23**	6-9-23
Precipitation (past 24 hours)	0.00	0.00	0.00	0.02
Max. Wind Speed (mph)	12	10	8	9
High Temperature	92	82	72	62
Low Temperature	57	62	58	56
Sea Level Pressure	29.90	29.91	30.01	30.04
2nd Sampling Event				
Date	2-20-24	2-21-24	**2-22-24**	2-23-24
Precipitation (past 24 hours)	0.08	0.32	0.14	0.00
Max. Wind Speed (mph)	16	20	8	7
High Temperature	52	54	59	61
Low Temperature	43	44	42	36
Sea Level Pressure	29.91	30.21	30.31	30.32

8.0 FINDINGS, CONCLUSIONS, RISK EVALUATION AND RECOMMENDATIONS

Alpha has conducted the Site Investigation for the Property located at 10543 SE Fuller Road, Milwaukie, Oregon. The assessment was performed in accordance with the agreed-upon scope of services. Based on the evaluation of the current findings of this assessment, the following findings, conclusions and recommendations have been developed.

8.1 Findings

Summary of Findings – June 2023

- The maximum indoor air concentrations of benzene are 3.4 ug/m^3.
- The average indoor air concentration of benzene is 0.3 ug/m^3.
- The maximum indoor air concentrations of chloroform are 2.3 ug/m^3.
- The average indoor air concentration of chloroform is 2.1 ug/m^3.
- All other analyte concentrations are below the RBCs.

Summary of Findings – February 2024

- The maximum indoor air concentrations of benzene are 2.2 ug/m^3.
- The average indoor air concentration of benzene is 1.3 ug/m^3.
- The maximum indoor air concentrations of chloroform are 0.59 ug/m^3.
- The average indoor air concentration of chloroform is 0.56 ug/m^3.
- All other analyte concentrations are below the RBCs.

Competing Sources of Benzene and Chloroform in Air

- Gas furnace and gas stoves in use.
- Cleaning chemicals containing chlorine bleach frequently used in the restaurant.
- Hot water dishwasher used in preparation area.

8.2 Conclusions

Benzene

- The occupational RBC for benzene is 1.6 ug/m^3.
- For the June 2023 sampling event, the maximum indoor air concentrations of benzene (3.4 ug/m^3) exceeded the occupational receptor RBC; however, the average indoor air concentration (0.3 ug/m^3) was below the RBC.
- For the February 2024 sampling event, the maximum indoor air concentrations of benzene (2.2 ug/m^3) exceeded the occupational receptor RBC and again, the average indoor air concentration (1.3 ug/m^3) was below the RBC.
- Since the average concentrations from both sampling events are below the RBCs, benzene does not appear to be a significant risk to indoor air.

Chloroform

- The occupational RBC for chloroform is 0.53 ug/m^3.
- For the June 2023 sampling event, the maximum and average indoor air concentrations of chloroform exceeded the occupational receptor RBC.
- For the February 2024 sampling event, the maximum and average indoor air concentrations of chloroform exceeded the occupational receptor RBC; however, both are only slightly above the RBC (0.59 ug/$m^3$and 0.56 ug/m^3 vs 0.53 ug/m^3).

8.3 Risk Evaluation

OSHA Guidelines

The OSHA Permissible Exposure Limits (PELs) were evaluated to determine if a risk exists to site workers from chloroform at the site. The most conservative CAL/OSHA and/or NIOSH Time Weighted Average (TWA) PEL is 9,800 ug/m^3. Based on OSHA limits, there were no levels detected that would cause a significant risk to site workers.

Background Levels of Chloroform

To help determine if chloroform detected at concentrations above risk levels is a risk to site occupants, a study of background concentrations from consumer products and building materials by the EPA (EPA 530-R-10-001) was reviewed. The report indicates that background chloroform was found in the 11 studies over 68% of the time. This includes the analysis of 2,278 individual samples where levels from the 50th percentile ranged from 0.2 -2.4 ug/m^3. The detected concentrations at the site are within these levels and competing sources of chloroform are present at the property.

Based on the findings and conclusions discussed above, it does not appear that significant environmental conditions are present at the Property that would pose an unacceptable indoor air risk to site occupants or future workers.

8.4 Recommendations

Based on the analytical results, comparison with current DEQ RBCs and OSHA guidelines, it is our opinion that the site is a candidate for an NFA determination by the DEQ. Alpha does not recommend further assessment of the Property at this time.

Since it has been shown by previous reports that impacts to the soil have occurred near the old septic system, if the property is redeveloped in the future for residential use, it is recommended that impacted soils be further evaluated and/or removed or an engineer with experience in vapor mitigation should be consulted and an appropriate vapor barrier being included in the building design.

9.0 LIMITATIONS & USE RELIANCE

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

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

9.1 Limitations and Exceptions

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

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

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

9.2 Use Reliance

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

10.0 SIGNATURES OF ENVIROMENTAL PROFESSIONALS

Alpha is providing the client with the results of our investigation for the Property located at 10543 SE Fuller Road, Milwaukie, Oregon. Alpha completed the investigation of the Property in a professional manner according with generally accepted engineering practices, using the degree of skill and care ordinarily exercised by reputable environmental consultants under similar circumstances.

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

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

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

Jim Cooper, R.G.
Senior Geologist

ALPHA ENVIRONMENTAL SERVICES, INC.

11.0 REFERENCES

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

Occupational Safety and Health Administration, *OSHA Occupational Chemical Database Chloroform (Trichloromethane)*, accessed via website, https://www.osha.gov/chemicaldata/477.

State of Oregon DEQ, *Guide to Tables of Vapor Intrusion RBCs Based on EPA VISL Calculations*, Dated March 2024.

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

U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, *Background Indoor Air Concentrations of Volatile Organic Compounds in North American Residences (1990–2005): A Compilation of Statistics for Assessing Vapor Intrusion*, EPA 530-R-10-001, dated June 2011.

United States Geological Survey, *7.5 Minute Topographic Quadrangle of Gladstone, OR*, 1984.

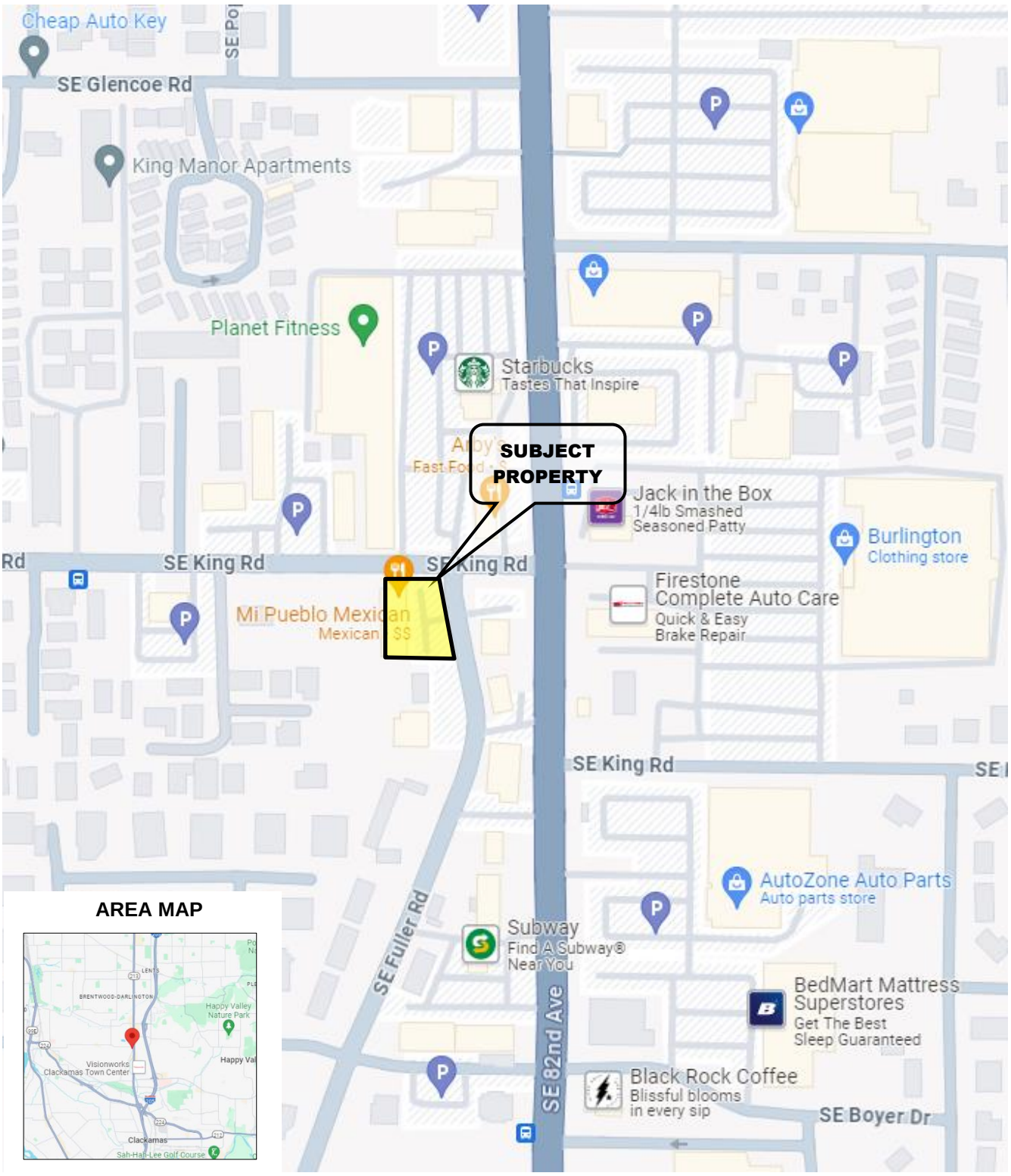
Walker, 1991. *Geological Map of Oregon*, United States Geological Survey, Walker, G.W. and MacLeod, N.S., 1991.

12.0 ACRONYMS

ASTM	American Society for Testing and Materials
CSM	Conceptual Site Model
DEQ	Department of Environmental Quality (Oregon)
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
ND	Not Detected At or Above Laboratory Reporting Limits
PEL	Permissible Exposure Limit
ppb	parts per billion
ppm	parts per million
RBCs	Risk-based Concentrations
RBDM	Risk-based Decision Making
RCRA	Resource Conservation & Recovery Act
RECs	Recognized Environmental Conditions
TPH	Total Petroleum Hydrocarbons
TWA	Time Weighted Average
VOCs	Volatile Organic Compounds
WRD	Water Resources Department (Oregon)

FIGURES:

VICINITY MAP
TOPOGRAPHIC MAP
SITE OVERVIEW MAP
SITE SAMPLING MAP
SITE SAMPLING MAP – JUNE 2023
SITE SAMPLING MAP – FEBRUARY 2024



SOURCE: Google Maps

DRAWING NOT TO SCALE

Alpha environmental

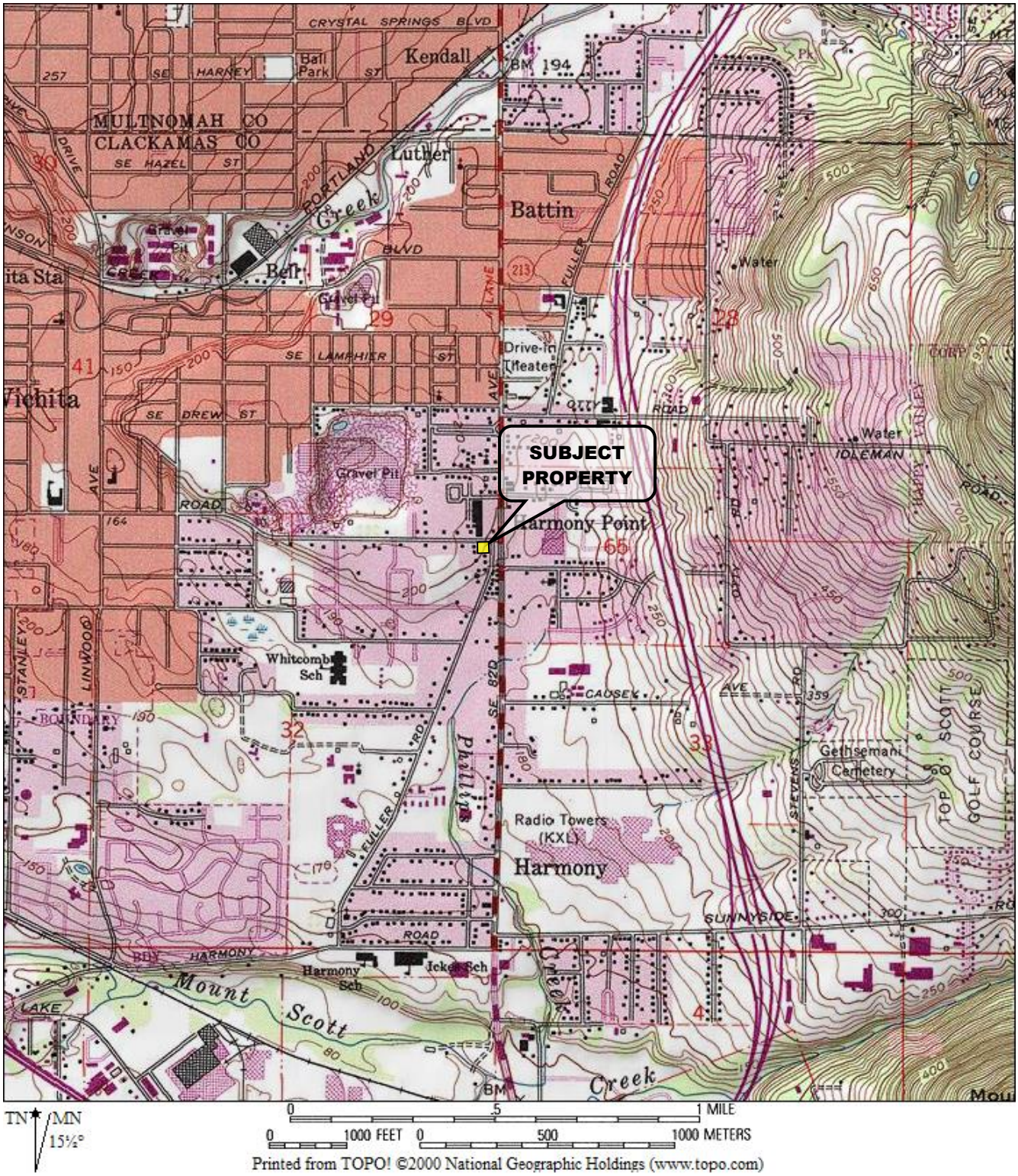
11080 SW ALLEN BLVD, STE 100
BEAVERTON, OREGON 97005
(503) 292-5346

FIGURE 1: SITE VICINITY MAP

10543 SE FULLER ROAD
MILWAUKIE, OREGON 97222

PROJECT NO: 23-53145

N



SOURCE: USGS 7.5 Minute Topographic Map – Gladstone, OR Quadrangle, 1984

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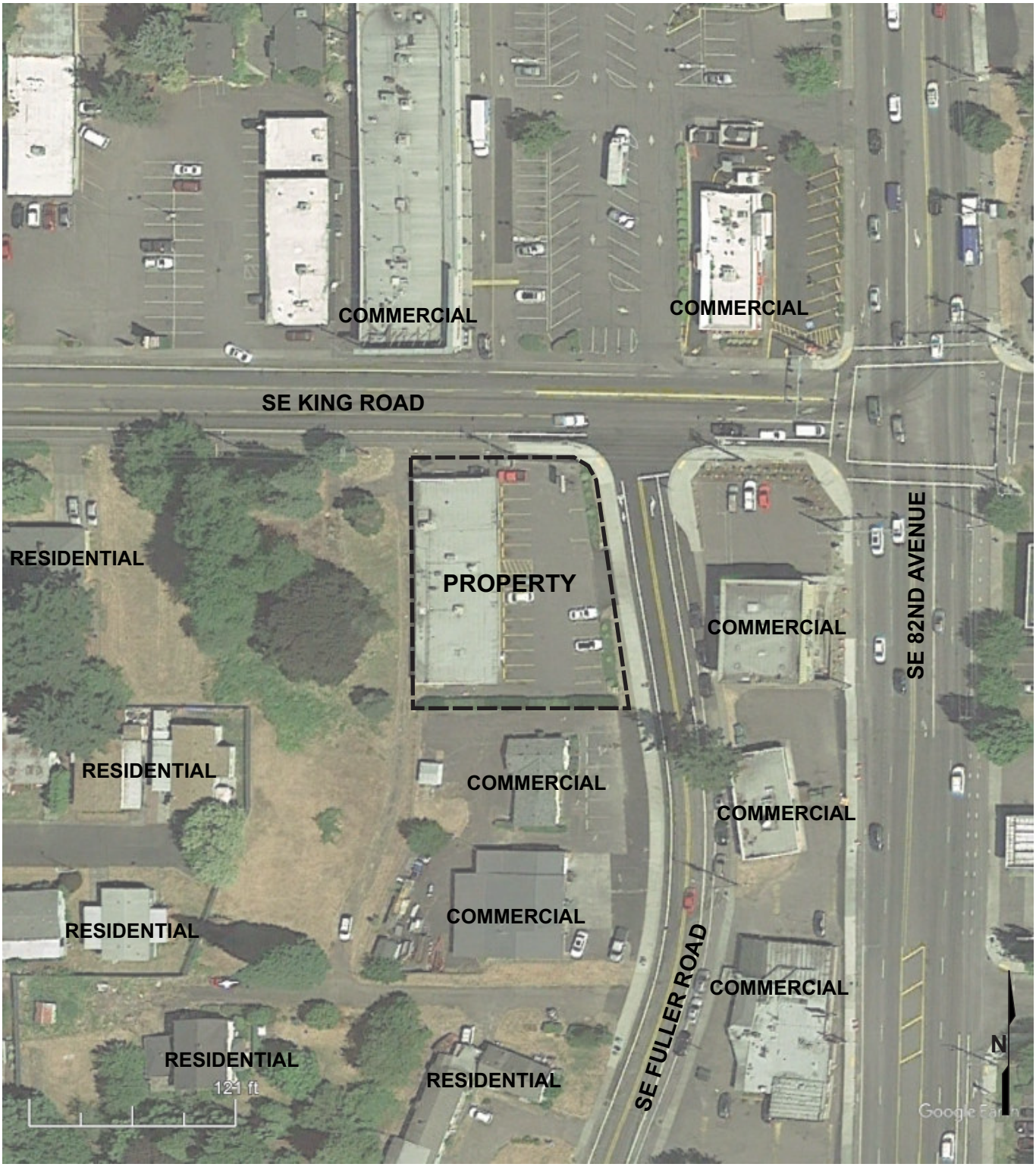
(503) 292-5346

FIGURE 2: TOPOGRAPHIC MAP

10543 SE FULLER ROAD
MIWAUKIE, OREGON 97222

PROJECT NO: 23-53145

N



LEGEND

PROPERTY BOUNDARY

FIGURE 3: SITE OVERVIEW MAP

10543 SE FULLER ROAD
MILWAUKIE, OREGON 97206

NOTES

MAP SYMBOLS DENOTE LOCATIONS AND MAY NOT BE TO SCALE

GOOGLE MAPS BASE IMAGE MAY BE SKEWED BY SATELLITE POSITION

PROJECT NO: 23-53145

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

LEGEND

- FORMER SEPTIC TANK LOCATION
- PROPOSED INDOOR AIR (IA) SAMPLE LOCATIONS
- PROPOSED OUTDOOR AIR (OA) SAMPLE LOCATIONS

PREVIOUS SAMPLING BY EVREN NW

- *SUB-SLAB & SOIL-GAS SAMPLE LOCATIONS*
- *INDOOR & OUTDOOR AIR SAMPLE LOCATIONS*

FIGURE 4: SITE SAMPLING MAP

10543 SE FULLER ROAD
MILWAUKIE, OREGON 97206

NOTES

MAP SYMBOLS DENOTE LOCATIONS AND MAY NOT BE TO SCALE

GOOGLE MAPS BASE IMAGE MAY BE SKEWED BY SATELLITE POSITION

PROJECT NO: 23-53145

Alpha environmental
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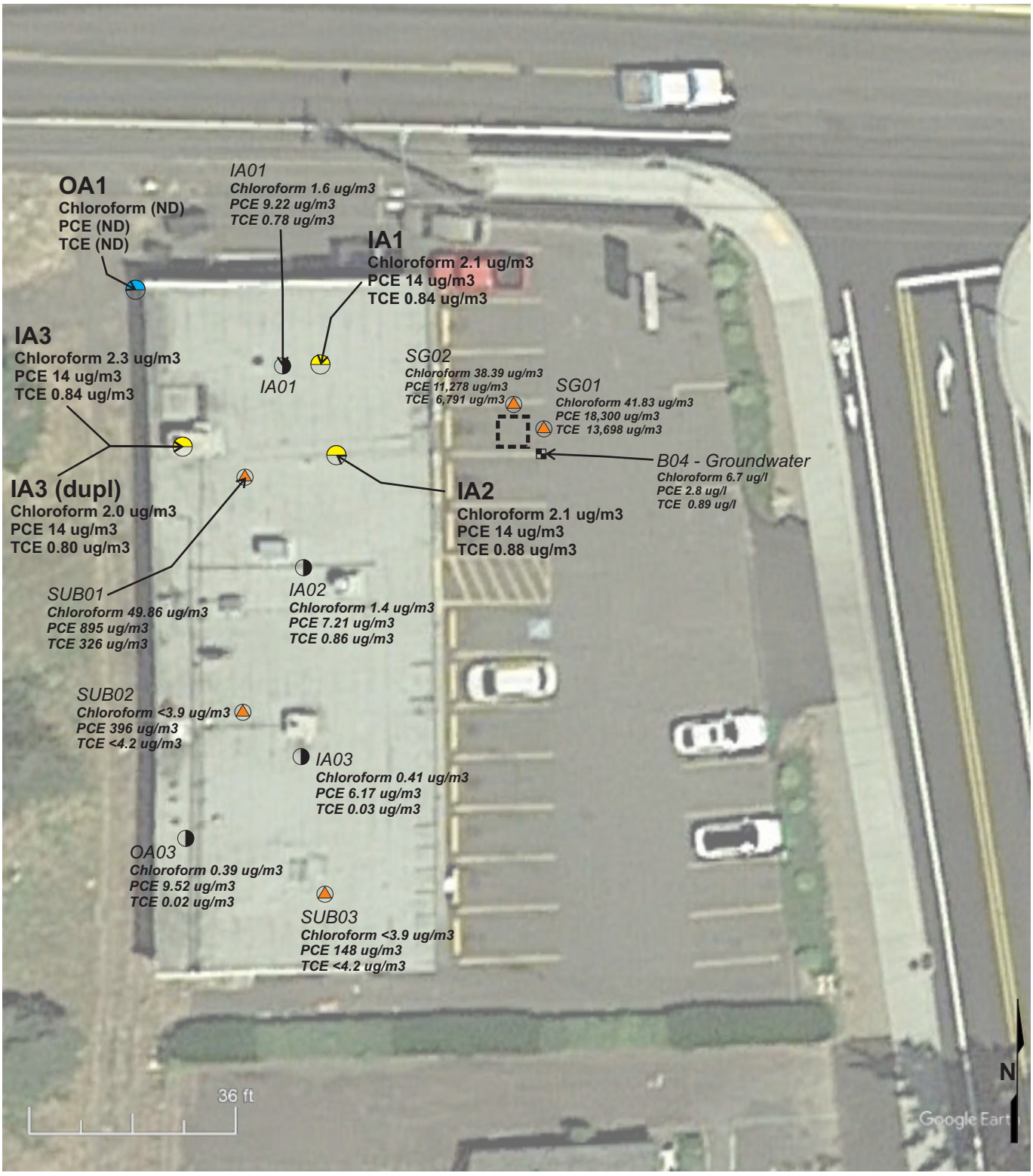
(503) 292-5346



LEGEND

- FORMER SEPTIC TANK LOCATION
- INDOOR AIR (IA) SAMPLE LOCATIONS
- OUTDOOR AIR (OA) SAMPLE LOCATIONS

PREVIOUS SAMPLING BY EVREN NW

- *SUB-SLAB & SOIL-GAS SAMPLE LOCATIONS*
- *INDOOR & OUTDOOR AIR SAMPLE LOCATIONS*
- *GROUNDWATER SAMPLE LOCATION*

FIGURE 5: SITE SAMPLING MAP - JUNE 2023

10543 SE FULLER ROAD
MILWAUKIE, OREGON 97206

NOTES

MAP SYMBOLS DENOTE LOCATIONS AND MAY NOT BE TO SCALE

GOOGLE MAPS BASE IMAGE MAY BE SKEWED BY SATELLITE POSITION

PROJECT NO: 23-53145

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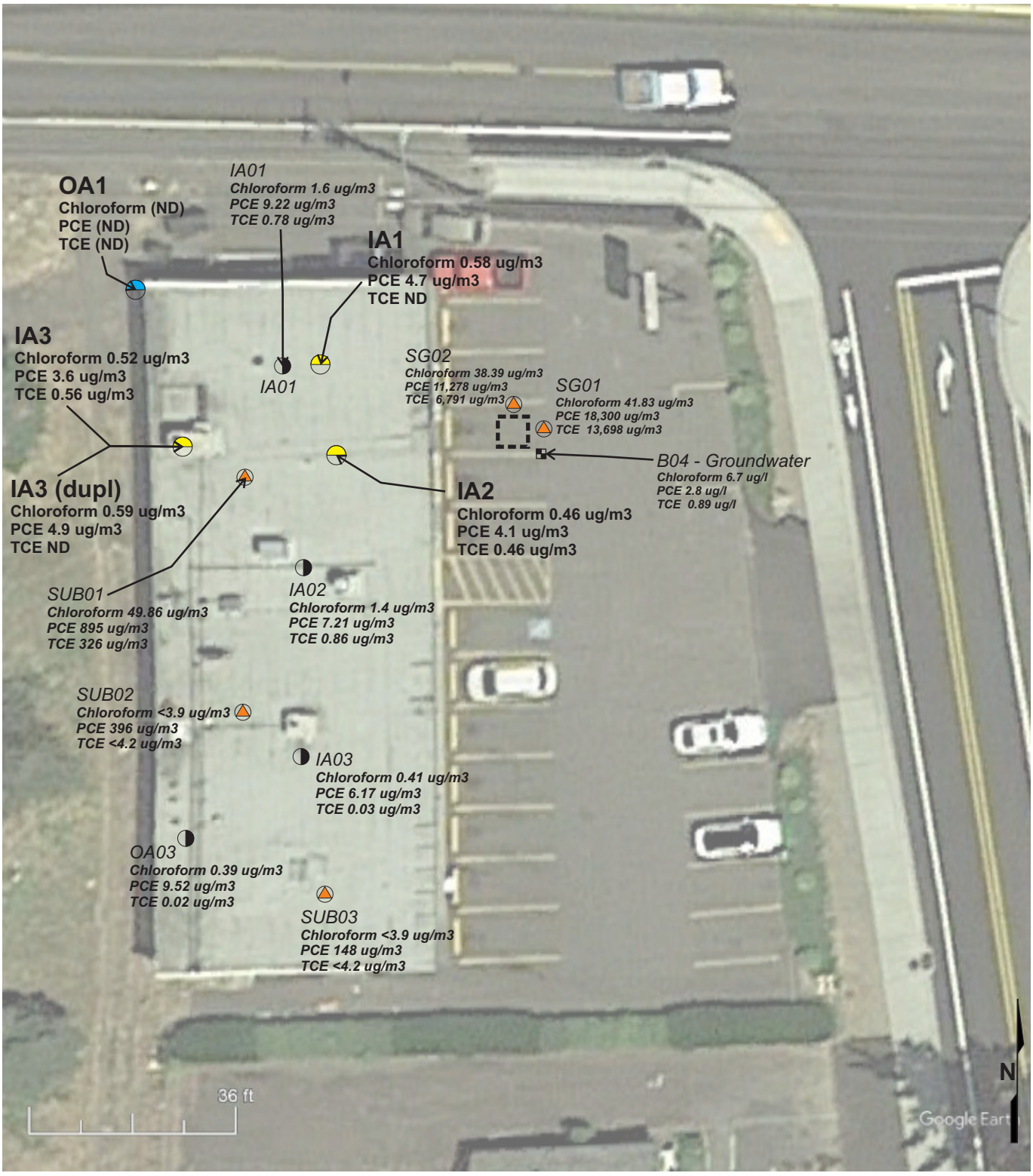
BEAVERTON, OREGON 97005
(503) 292-5346



LEGEND

- FORMER SEPTIC TANK LOCATION
- INDOOR AIR (IA) SAMPLE LOCATIONS
- OUTDOOR AIR (OA) SAMPLE LOCATIONS

PREVIOUS SAMPLING BY EVREN NW

- *SUB-SLAB & SOIL-GAS SAMPLE LOCATIONS*
- *INDOOR & OUTDOOR AIR SAMPLE LOCATIONS*
- *GROUNDWATER SAMPLE LOCATION*

FIGURE 6: SITE SAMPLING MAP - FEBRUARY 2024

10543 SE FULLER ROAD
MILWAUKIE, OREGON 97206

NOTES

MAP SYMBOLS DENOTE LOCATIONS AND MAY NOT BE TO SCALE

GOOGLE MAPS BASE IMAGE MAY BE SKEWED BY SATELLITE POSITION

PROJECT NO: 23-53145

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

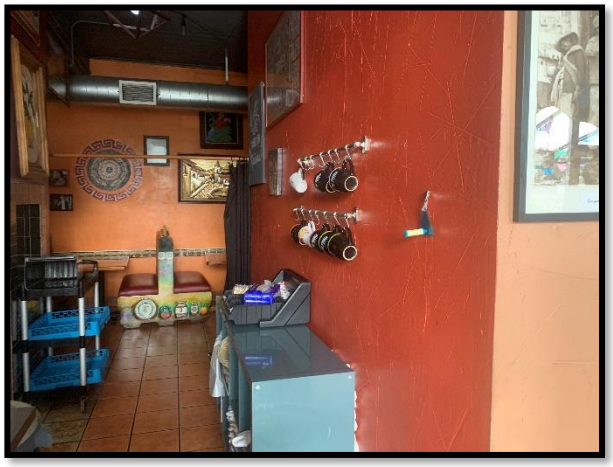
APPENDIX A:

SITE PHOTOGRAPHS

SITE PHOTOGRAPHS

PHOTOGRAPH NO. 1 – Front view of building.

PHOTOGRAPH NO. 2 – Passive sampler attached to artificial plant in eating area.



PHOTOGRAPH NO. 3 – Passive sampler attached to wall in preparation area.

PHOTOGRAPH NO. 4 – Passive sampler and duplicate attached to wall behind fire extinguisher in hallway area.

PHOTOGRAPH NO. 5 – Passive sampler attached to building for outdoor air collection.

PHOTOGRAPH NO. 6 – Chemical examples in building including chlorine bleach.

APPENDIX B:

ANALYTICAL LABORATORY REPORTS

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6/26/2023
Mr. Jim Cooper
Alpha Environmental Services, Inc.
11080 SW Allen Blvd.
Suite 100
Beaverton OR 97005

Project Name: 10543 SE FULLER
Project #: 23-53145
Workorder #: 2306359

Dear Mr. Jim Cooper

The following report includes the data for the above referenced project for sample(s) received on 6/13/2023 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Passive RAD 145 (TD) are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Monica Tran at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Monica Tran

Project Manager

eurofins | Air Toxics

WORK ORDER #: 2306359

Work Order Summary

CLIENT:	Mr. Jim Cooper Alpha Environmental Services, Inc. 11080 SW Allen Blvd. Suite 100 Beaverton, OR 97005	**BILL TO:**	Mr. Jim Cooper Alpha Environmental Services, Inc. 11080 SW Allen Blvd. Suite 100 Beaverton, OR 97005
PHONE:	503-292-5346	**P.O. #**	
FAX:		**PROJECT #**	23-53145 10543 SE FULLER
DATE RECEIVED:	06/13/2023	**CONTACT:**	Monica Tran
DATE COMPLETED:	06/26/2023		

FRACTION #	NAME	TEST
01A	EATING AREA / IA1	Passive RAD 145 (TD)
02A	PREP. AREA / IA2	Passive RAD 145 (TD)
03A	HALLWAY / IA3	Passive RAD 145 (TD)
04A	HALLWAY / IA3 DUP.	Passive RAD 145 (TD)
05A	NW BUILDING / OA1	Passive RAD 145 (TD)
06A	BLANK	Passive RAD 145 (TD)
07A	Lab Blank	Passive RAD 145 (TD)
08A	CCV	Passive RAD 145 (TD)
09A	LCS	Passive RAD 145 (TD)
09AA	LCSD	Passive RAD 145 (TD)

CERTIFIED BY: Heidi Hayes DATE: 06/26/23

Technical Director

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP – 209222, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP – T104704434-22-18, UT NELAP – CA009332022-14, VA NELAP - 12240, WA ELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-017
Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

LABORATORY NARRATIVE
Passive TO-17 GC/MS
Alpha Environmental Services, Inc.
Workorder# 2306359

Six Radiello 145 (VOC TD) samples were received on June 13, 2023. The laboratory performed the analysis via EPA Method TO-17 using GC/MS in the full scan mode.

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value.

The modification to EPA Method TO-17 method is based on the sample collection procedures. Method TO-17 relies on active sample collection rather than passive sample collection.

Receiving Notes

The Chain of Custody (COC) information for samples EATING AREA / IA1, PREP. AREA / IA2, HALLWAY / IA3, HALLWAY / IA3 DUP., NW BUILDING / OA1 and BLANK did not match the information on the tube with regard to tube identification. The client was notified of the discrepancy and the information on the tubes was used to process and report the samples.

Analytical Notes

To calculate ug/m3 concentrations in the Lab Blank and sample BLANK, a sampling duration of 469 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

If validated uptake rates were not available, rates were estimated using the chemical's diffusion coefficient in air and the geometric constant of the sampler. Chemicals that are poorly retained by the sorbent over the sampling duration may exhibit a low bias. All concentrations calculated using estimated rates are qualified with a "C" flag.

Due to the Method Detection Limit (MDL) study, the reporting limit for 1,1-Dichloroethane was raised from 5.0ng to 10ng.

All Quality Control Limit exceedances and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page.

The sample BLANK has reportable levels of Benzene present.

Definition of Data Qualifying Flags

Nine qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).
J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.
UJ- Non-detected compound associated with low bias in the CCV
CN - See case narrative explanation.
C - Estimated concentration due to calculated uptake rate

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: EATING AREA / IA1

Lab ID#: 2306359-01A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Benzene	20	1.5	78	6.0
Trichloroethene	5.0	0.39	11	0.84
Tetrachloroethene	5.0	0.42	170	14
Ethyl Benzene	10	0.83	14	1.2
m,p-Xylene	20	1.6	35	2.8
o-Xylene	10	0.87	11	0.97
Styrene	10	0.79	31	2.4
Freon 113	5.0	0.37	6.0 C	0.45 C
Chloroform	5.0	0.28	37 C	2.1 C

Client Sample ID: PREP. AREA / IA2

Lab ID#: 2306359-02A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Benzene	20	1.5	49	3.8
Trichloroethene	5.0	0.39	11	0.88
Tetrachloroethene	5.0	0.42	170	14
Ethyl Benzene	10	0.83	13	1.1
m,p-Xylene	20	1.6	34	2.7
o-Xylene	10	0.87	11	0.92
Styrene	10	0.79	25	2.0
Freon 113	5.0	0.37	6.0 C	0.45 C
Chloroform	5.0	0.28	37 C	2.1 C

Client Sample ID: HALLWAY / IA3

Lab ID#: 2306359-03A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Benzene	20	1.5	110	8.6
Trichloroethene	5.0	0.39	11	0.84
Tetrachloroethene	5.0	0.42	170	14
Ethyl Benzene	10	0.83	16	1.3
m,p-Xylene	20	1.6	35	2.8

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: HALLWAY / IA3

Lab ID#: 2306359-03A

o-Xylene	10	0.87	11	0.96
Styrene	10	0.79	41	3.2
Freon 113	5.0	0.37	6.1 C	0.46 C
Chloroform	5.0	0.28	40 C	2.3 C

Client Sample ID: HALLWAY / IA3 DUP.

Lab ID#: 2306359-04A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Benzene	20	1.5	48	3.7
Trichloroethene	5.0	0.39	10	0.80
Tetrachloroethene	5.0	0.42	170	14
Ethyl Benzene	10	0.83	13	1.1
m,p-Xylene	20	1.6	36	2.9
o-Xylene	10	0.87	11	0.96
Styrene	10	0.79	26	2.0
Freon 113	5.0	0.37	5.5 C	0.41 C
Chloroform	5.0	0.28	35 C	2.0 C

Client Sample ID: NW BUILDING / OA1

Lab ID#: 2306359-05A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Benzene	20	1.5	68	5.2
Styrene	10	0.79	13	1.0
Freon 113	5.0	0.37	6.7 C	0.50 C

Client Sample ID: BLANK

Lab ID#: 2306359-06A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Benzene	20	1.5	27	2.1

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Client Sample ID: EATING AREA / IA1

Lab ID#: 2306359-01A

PASSIVE RAD 145 (TD)

File Name:	**9062026**	**Date of Extraction: NA**	**Date of Collection: 6/8/23 4:39:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 6/21/23 01:18 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	1.1	Not Detected	Not Detected
Cyclohexane	10	0.77	Not Detected	Not Detected
Benzene	20	1.5	78	6.0
Trichloroethene	5.0	0.39	11	0.84
Toluene	50	3.6	Not Detected	Not Detected
Tetrachloroethene	5.0	0.42	170	14
Ethyl Benzene	10	0.83	14	1.2
m,p-Xylene	20	1.6	35	2.8
o-Xylene	10	0.87	11	0.97
Styrene	10	0.79	31	2.4
Freon 113	5.0	0.37	6.0 C	0.45 C
1,1-Dichloroethene	5.0	0.32	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.41	Not Detected C	Not Detected C
1,1-Dichloroethane	10	0.79	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.40	Not Detected C	Not Detected C
Chloroform	5.0	0.28	37 C	2.1 C
1,2-Dichloroethane	5.0	0.28	Not Detected C	Not Detected C
1,1,2-Trichloroethane	5.0	0.37	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 468 minutes.
Container Type: Radiello 145 (VOC TD)

Surrogates	%Recovery	Method Limits
4-Bromofluorobenzene	117	70-130

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Client Sample ID: PREP. AREA / IA2

Lab ID#: 2306359-02A

PASSIVE RAD 145 (TD)

File Name:	**9062027**	**Date of Extraction: NA**	**Date of Collection: 6/8/23 4:42:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 6/21/23 01:58 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	1.1	Not Detected	Not Detected
Cyclohexane	10	0.77	Not Detected	Not Detected
Benzene	20	1.5	49	3.8
Trichloroethene	5.0	0.39	11	0.88
Toluene	50	3.6	Not Detected	Not Detected
Tetrachloroethene	5.0	0.42	170	14
Ethyl Benzene	10	0.83	13	1.1
m,p-Xylene	20	1.6	34	2.7
o-Xylene	10	0.87	11	0.92
Styrene	10	0.79	25	2.0
Freon 113	5.0	0.37	6.0 C	0.45 C
1,1-Dichloroethene	5.0	0.32	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.41	Not Detected C	Not Detected C
1,1-Dichloroethane	10	0.79	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.40	Not Detected C	Not Detected C
Chloroform	5.0	0.28	37 C	2.1 C
1,2-Dichloroethane	5.0	0.28	Not Detected C	Not Detected C
1,1,2-Trichloroethane	5.0	0.37	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 469 minutes.
Container Type: Radiello 145 (VOC TD)

Surrogates	%Recovery	Method Limits
4-Bromofluorobenzene	118	70-130

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Client Sample ID: HALLWAY / IA3

Lab ID#: 2306359-03A

PASSIVE RAD 145 (TD)

File Name:	**9062028**	**Date of Extraction: NA**	**Date of Collection: 6/8/23 4:44:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 6/21/23 02:38 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	1.1	Not Detected	Not Detected
Cyclohexane	10	0.77	Not Detected	Not Detected
Benzene	20	1.5	110	8.6
Trichloroethene	5.0	0.39	11	0.84
Toluene	50	3.6	Not Detected	Not Detected
Tetrachloroethene	5.0	0.42	170	14
Ethyl Benzene	10	0.83	16	1.3
m,p-Xylene	20	1.6	35	2.8
o-Xylene	10	0.87	11	0.96
Styrene	10	0.79	41	3.2
Freon 113	5.0	0.37	6.1 C	0.46 C
1,1-Dichloroethene	5.0	0.32	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.41	Not Detected C	Not Detected C
1,1-Dichloroethane	10	0.79	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.40	Not Detected C	Not Detected C
Chloroform	5.0	0.28	40 C	2.3 C
1,2-Dichloroethane	5.0	0.28	Not Detected C	Not Detected C
1,1,2-Trichloroethane	5.0	0.37	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 468 minutes.
Container Type: Radiello 145 (VOC TD)

Surrogates	%Recovery	Method Limits
4-Bromofluorobenzene	117	70-130

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Client Sample ID: HALLWAY / IA3 DUP.

Lab ID#: 2306359-04A

PASSIVE RAD 145 (TD)

File Name:	**9062029**	**Date of Extraction: NA**	**Date of Collection: 6/8/23 4:44:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 6/21/23 03:19 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	1.1	Not Detected	Not Detected
Cyclohexane	10	0.77	Not Detected	Not Detected
Benzene	20	1.5	48	3.7
Trichloroethene	5.0	0.39	10	0.80
Toluene	50	3.6	Not Detected	Not Detected
Tetrachloroethene	5.0	0.42	170	14
Ethyl Benzene	10	0.83	13	1.1
m,p-Xylene	20	1.6	36	2.9
o-Xylene	10	0.87	11	0.96
Styrene	10	0.79	26	2.0
Freon 113	5.0	0.37	5.5 C	0.41 C
1,1-Dichloroethene	5.0	0.32	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.41	Not Detected C	Not Detected C
1,1-Dichloroethane	10	0.79	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.40	Not Detected C	Not Detected C
Chloroform	5.0	0.28	35 C	2.0 C
1,2-Dichloroethane	5.0	0.28	Not Detected C	Not Detected C
1,1,2-Trichloroethane	5.0	0.37	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 468 minutes.
Container Type: Radiello 145 (VOC TD)

Surrogates	%Recovery	Method Limits
4-Bromofluorobenzene	116	70-130

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Client Sample ID: NW BUILDING / OA1

Lab ID#: 2306359-05A

PASSIVE RAD 145 (TD)

File Name:	**9062030**	**Date of Extraction: NA**	**Date of Collection: 6/8/23 4:47:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 6/21/23 03:59 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	1.1	Not Detected	Not Detected
Cyclohexane	10	0.77	Not Detected	Not Detected
Benzene	20	1.5	68	5.2
Trichloroethene	5.0	0.39	Not Detected	Not Detected
Toluene	50	3.6	Not Detected	Not Detected
Tetrachloroethene	5.0	0.42	Not Detected	Not Detected
Ethyl Benzene	10	0.83	Not Detected	Not Detected
m,p-Xylene	20	1.6	Not Detected	Not Detected
o-Xylene	10	0.87	Not Detected	Not Detected
Styrene	10	0.79	13	1.0
Freon 113	5.0	0.37	6.7 C	0.50 C
1,1-Dichloroethene	5.0	0.32	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.41	Not Detected C	Not Detected C
1,1-Dichloroethane	10	0.79	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.40	Not Detected C	Not Detected C
Chloroform	5.0	0.28	Not Detected C	Not Detected C
1,2-Dichloroethane	5.0	0.28	Not Detected C	Not Detected C
1,1,2-Trichloroethane	5.0	0.37	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 469 minutes.

Container Type: Radiello 145 (VOC TD)

Surrogates	%Recovery	Method Limits
4-Bromofluorobenzene	114	70-130

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Client Sample ID: BLANK

Lab ID#: 2306359-06A

PASSIVE RAD 145 (TD)

File Name:	**9062025**	**Date of Extraction: NA**	**Date of Collection: 6/8/23**
Dil. Factor:	**1.00**		**Date of Analysis: 6/21/23 12:38 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	1.1	Not Detected	Not Detected
Cyclohexane	10	0.77	Not Detected	Not Detected
Benzene	20	1.5	27	2.1
Trichloroethene	5.0	0.39	Not Detected	Not Detected
Toluene	50	3.6	Not Detected	Not Detected
Tetrachloroethene	5.0	0.42	Not Detected	Not Detected
Ethyl Benzene	10	0.83	Not Detected	Not Detected
m,p-Xylene	20	1.6	Not Detected	Not Detected
o-Xylene	10	0.87	Not Detected	Not Detected
Styrene	10	0.79	Not Detected	Not Detected
Freon 113	5.0	0.37	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.32	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.41	Not Detected C	Not Detected C
1,1-Dichloroethane	10	0.79	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.40	Not Detected C	Not Detected C
Chloroform	5.0	0.28	Not Detected C	Not Detected C
1,2-Dichloroethane	5.0	0.28	Not Detected C	Not Detected C
1,1,2-Trichloroethane	5.0	0.37	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 469 minutes.
Container Type: Radiello 145 (VOC TD)

Surrogates	%Recovery	Method Limits
4-Bromofluorobenzene	115	70-130

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Client Sample ID: Lab Blank

Lab ID#: 2306359-07A

PASSIVE RAD 145 (TD)

File Name:	**9062005**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 6/20/23 10:41 AM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	1.1	Not Detected	Not Detected
Cyclohexane	10	0.77	Not Detected	Not Detected
Benzene	20	1.5	Not Detected	Not Detected
Trichloroethene	5.0	0.39	Not Detected	Not Detected
Toluene	50	3.6	Not Detected	Not Detected
Tetrachloroethene	5.0	0.42	Not Detected	Not Detected
Ethyl Benzene	10	0.83	Not Detected	Not Detected
m,p-Xylene	20	1.6	Not Detected	Not Detected
o-Xylene	10	0.87	Not Detected	Not Detected
Styrene	10	0.79	Not Detected	Not Detected
Freon 113	5.0	0.37	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.32	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.41	Not Detected C	Not Detected C
1,1-Dichloroethane	10	0.79	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.40	Not Detected C	Not Detected C
Chloroform	5.0	0.28	Not Detected C	Not Detected C
1,2-Dichloroethane	5.0	0.28	Not Detected C	Not Detected C
1,1,2-Trichloroethane	5.0	0.37	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.

Temperature = 77.0F , duration time = 469 minutes.
Container Type: Radiello 145 (VOC TD)

Surrogates	%Recovery	Method Limits
4-Bromofluorobenzene	125	70-130

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Client Sample ID: CCV
Lab ID#: 2306359-08A
PASSIVE RAD 145 (TD)

File Name:	**9062002**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 6/20/23 08:54 AM**

Compound	%Recovery
1,1,1-Trichloroethane	100
Cyclohexane	103
Benzene	98
Trichloroethene	96
Toluene	82
Tetrachloroethene	72
Ethyl Benzene	82
m,p-Xylene	82
o-Xylene	82
Styrene	79
Freon 113	103
1,1-Dichloroethene	105
trans-1,2-Dichloroethene	116
1,1-Dichloroethane	102
cis-1,2-Dichloroethene	113
Chloroform	111
1,2-Dichloroethane	96
1,1,2-Trichloroethane	73

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
4-Bromofluorobenzene	124	70-130

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Client Sample ID: LCS

Lab ID#: 2306359-09A

PASSIVE RAD 145 (TD)

File Name:	**9062003**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 6/20/23 09:34 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	74	60-140
Cyclohexane	91	70-130
Benzene	88	70-130
Trichloroethene	91	70-130
Toluene	71	70-130
Tetrachloroethene	63 Q	70-130
Ethyl Benzene	73	70-130
m,p-Xylene	76	70-130
o-Xylene	76	70-130
Styrene	67 Q	70-130
Freon 113	87	70-130
1,1-Dichloroethene	90	70-130
trans-1,2-Dichloroethene	95	70-130
1,1-Dichloroethane	84	70-130
cis-1,2-Dichloroethene	93	70-130
Chloroform	98	70-130
1,2-Dichloroethane	90	70-130
1,1,2-Trichloroethane	72	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
4-Bromofluorobenzene	128	70-130

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Client Sample ID: LCSD
Lab ID#: 2306359-09AA
PASSIVE RAD 145 (TD)

File Name:	**9062004**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 6/20/23 10:06 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	69	60-140
Cyclohexane	98	70-130
Benzene	104	70-130
Trichloroethene	88	70-130
Toluene	77	70-130
Tetrachloroethene	62 Q	70-130
Ethyl Benzene	73	70-130
m,p-Xylene	76	70-130
o-Xylene	76	70-130
Styrene	63 Q	70-130
Freon 113	94	70-130
1,1-Dichloroethene	99	70-130
trans-1,2-Dichloroethene	102	70-130
1,1-Dichloroethane	85	70-130
cis-1,2-Dichloroethene	101	70-130
Chloroform	100	70-130
1,2-Dichloroethane	90	70-130
1,1,2-Trichloroethane	76	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
4-Bromofluorobenzene	125	70-130

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3/8/2024
Mr. Jim Cooper
Alpha Environmental Services, Inc.
11080 SW Allen Blvd.
Suite 100
Beaverton OR 97005

Project Name: 10543 SE Fuller Rd.
Project #: 23-53145
Workorder #: 2402565

Dear Mr. Jim Cooper

The following report includes the data for the above referenced project for sample(s) received on 2/26/2024 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Passive RAD 145 (TD) are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Monica Tran at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Monica Tran

Project Manager

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WORK ORDER #: 2402565

Work Order Summary

CLIENT:	Mr. Jim Cooper Alpha Environmental Services, Inc. 11080 SW Allen Blvd. Suite 100 Beaverton, OR 97005	**BILL TO:**	Mr. Jim Cooper Alpha Environmental Services, Inc. 11080 SW Allen Blvd. Suite 100 Beaverton, OR 97005
PHONE:	503-292-5346	**P.O. #**	
FAX:		**PROJECT #**	23-53145 10543 SE Fuller Rd.
DATE RECEIVED:	02/26/2024	**CONTACT:**	Monica Tran
DATE COMPLETED:	03/08/2024		

FRACTION #	NAME	TEST
01A	Eating area/IA12	Passive RAD 145 (TD)
02A	Prep area/IA2-2	Passive RAD 145 (TD)
03A	Hall/IA3-2	Passive RAD 145 (TD)
04A	Hall/IA3-2 Dup.	Passive RAD 145 (TD)
05A	NW Building/OA1-2	Passive RAD 145 (TD)
06A	Blank	Passive RAD 145 (TD)
07A	Lab Blank	Passive RAD 145 (TD)
08A	CCV	Passive RAD 145 (TD)
09A	LCS	Passive RAD 145 (TD)
09AA	LCSD	Passive RAD 145 (TD)

CERTIFIED BY: Heidi Hayes DATE: 03/08/24

Technical Director

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP – 209222, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP – T104704434-22-18, UT NELAP – CA009332022-14, VA NELAP - 12240, WA ELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-017
Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

LABORATORY NARRATIVE
Passive TO-17 GC/MS
Alpha Environmental Services, Inc.
Workorder# 2402565

Six Radiello 145 (VOC TD) samples were received on February 26, 2024. The laboratory performed the analysis via EPA Method TO-17 using GC/MS in the full scan mode.

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value.

The modification to EPA Method TO-17 method is based on the sample collection procedures. Method TO-17 relies on active sample collection rather than passive sample collection.

Receiving Notes

According to the Chain of Custody (COC), samples Eating area/IA12, Prep area/IA2-2, Hall/IA3-2, Hall/IA3-2 Dup., NW Building/OA1-2 and Blank were collected on 09/22/2024. However, the date on the sample tags reflects a collection date of 02/22/2024. Therefore the date on the sample tags were used to calculate the samples holding time.

Analytical Notes

To calculate ug/m3 concentrations in the Lab Blank and sample Blank, a sampling duration of 470 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

If validated uptake rates were not available, rates were estimated using the chemical's diffusion coefficient in air and the geometric constant of the sampler. Chemicals that are poorly retained by the sorbent over the sampling duration may exhibit a low bias. All concentrations calculated using estimated rates are qualified with a "C" flag.

All Quality Control Limit exceedances and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page.

Definition of Data Qualifying Flags

Nine qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).
J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the reporting limit.
UJ- Non-detected compound associated with low bias in the CCV
CN - See case narrative explanation.
C - Estimated concentration due to calculated uptake rate

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: Eating area/IA12

Lab ID#: 2402565-01A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Benzene	20	1.5	65	5.0
Toluene	50	3.5	54	3.8
Tetrachloroethene	5.0	0.42	56	4.7
Ethyl Benzene	10	0.83	13	1.1
m,p-Xylene	20	1.6	48	3.9
o-Xylene	10	0.86	15	1.3
Styrene	10	0.78	18	1.4
Freon 113	5.0	0.37	5.7 C	0.42 C
Chloroform	5.0	0.28	10 C	0.58 C

Client Sample ID: Prep area/IA2-2

Lab ID#: 2402565-02A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Benzene	20	1.5	54	4.1
Trichloroethene	5.0	0.39	5.9	0.46
Tetrachloroethene	5.0	0.42	49	4.1
Ethyl Benzene	10	0.83	12	0.98
m,p-Xylene	20	1.6	42	3.3
o-Xylene	10	0.86	14	1.2
Styrene	10	0.78	17	1.3
Freon 113	5.0	0.37	5.2 C	0.39 C
Chloroform	5.0	0.28	10 C	0.56 C

Client Sample ID: Hall/IA3-2

Lab ID#: 2402565-03A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Benzene	20	1.5	41	3.1
Trichloroethene	5.0	0.39	7.1	0.56
Tetrachloroethene	5.0	0.42	44	3.6
Ethyl Benzene	10	0.83	11	0.92
m,p-Xylene	20	1.6	37	3.0

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Summary of Detected Compounds
PASSIVE RAD 145 (TD)

Client Sample ID: Hall/IA3-2

Lab ID#: 2402565-03A

o-Xylene	10	0.86	13	1.1
Styrene	10	0.78	15	1.2
Chloroform	5.0	0.28	9.3 C	0.52 C

Client Sample ID: Hall/IA3-2 Dup.

Lab ID#: 2402565-04A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Benzene	20	1.5	52	4.0
Toluene	50	3.5	51	3.6
Tetrachloroethene	5.0	0.42	58	4.9
Ethyl Benzene	10	0.83	12	1.0
m,p-Xylene	20	1.6	44	3.5
o-Xylene	10	0.86	15	1.3
Styrene	10	0.78	18	1.4
Freon 113	5.0	0.37	5.6 C	0.42 C
Chloroform	5.0	0.28	10 C	0.59 C

Client Sample ID: NW Building/OA1-2

Lab ID#: 2402565-05A

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
Benzene	20	1.5	36	2.8
m,p-Xylene	20	1.6	26	2.1
o-Xylene	10	0.87	10	0.87
Styrene	10	0.79	180	14
Freon 113	5.0	0.37	5.7 C	0.43 C

Client Sample ID: Blank

Lab ID#: 2402565-06A

No Detections Were Found.

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Client Sample ID: Eating area/IA12

Lab ID#: 2402565-01A

PASSIVE RAD 145 (TD)

File Name:	**6022716**	**Date of Extraction: NA**	**Date of Collection: 2/22/24 5:35:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/27/24 05:44 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	1.1	Not Detected	Not Detected
Cyclohexane	10	0.77	Not Detected	Not Detected
Benzene	20	1.5	65	5.0
Trichloroethene	5.0	0.39	Not Detected	Not Detected
Toluene	50	3.5	54	3.8
Tetrachloroethene	5.0	0.42	56	4.7
Ethyl Benzene	10	0.83	13	1.1
m,p-Xylene	20	1.6	48	3.9
o-Xylene	10	0.86	15	1.3
Styrene	10	0.78	18	1.4
Freon 113	5.0	0.37	5.7 C	0.42 C
1,1-Dichloroethene	5.0	0.32	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.41	Not Detected C	Not Detected C
1,1-Dichloroethane	5.0	0.39	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.40	Not Detected C	Not Detected C
Chloroform	5.0	0.28	10 C	0.58 C
1,2-Dichloroethane	5.0	0.28	Not Detected CUJ	Not Detected CUJ
1,1,2-Trichloroethane	5.0	0.37	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.
UJ = Analyte associated with low bias in the CCV.

Temperature = 77.0F , duration time = 470 minutes.
Container Type: Radiello 145 (VOC TD)

Surrogates	%Recovery	Method Limits
4-Bromofluorobenzene	107	70-130

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Client Sample ID: Prep area/IA2-2

Lab ID#: 2402565-02A

PASSIVE RAD 145 (TD)

File Name:	**6022717**	**Date of Extraction: NA**	**Date of Collection: 2/22/24 5:35:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/27/24 06:20 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	1.1	Not Detected	Not Detected
Cyclohexane	10	0.77	Not Detected	Not Detected
Benzene	20	1.5	54	4.1
Trichloroethene	5.0	0.39	5.9	0.46
Toluene	50	3.5	Not Detected	Not Detected
Tetrachloroethene	5.0	0.42	49	4.1
Ethyl Benzene	10	0.83	12	0.98
m,p-Xylene	20	1.6	42	3.3
o-Xylene	10	0.86	14	1.2
Styrene	10	0.78	17	1.3
Freon 113	5.0	0.37	5.2 C	0.39 C
1,1-Dichloroethene	5.0	0.32	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.41	Not Detected C	Not Detected C
1,1-Dichloroethane	5.0	0.39	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.40	Not Detected C	Not Detected C
Chloroform	5.0	0.28	10 C	0.56 C
1,2-Dichloroethane	5.0	0.28	Not Detected CUJ	Not Detected CUJ
1,1,2-Trichloroethane	5.0	0.37	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.
UJ = Analyte associated with low bias in the CCV.

Temperature = 77.0F , duration time = 470 minutes.
Container Type: Radiello 145 (VOC TD)

Surrogates	%Recovery	Method Limits
4-Bromofluorobenzene	106	70-130

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Client Sample ID: Hall/IA3-2

Lab ID#: 2402565-03A

PASSIVE RAD 145 (TD)

File Name:	**6022719**	**Date of Extraction: NA**	**Date of Collection: 2/22/24 5:35:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/27/24 07:32 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	1.1	Not Detected	Not Detected
Cyclohexane	10	0.77	Not Detected	Not Detected
Benzene	20	1.5	41	3.1
Trichloroethene	5.0	0.39	7.1	0.56
Toluene	50	3.5	Not Detected	Not Detected
Tetrachloroethene	5.0	0.42	44	3.6
Ethyl Benzene	10	0.83	11	0.92
m,p-Xylene	20	1.6	37	3.0
o-Xylene	10	0.86	13	1.1
Styrene	10	0.78	15	1.2
Freon 113	5.0	0.37	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.32	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.41	Not Detected C	Not Detected C
1,1-Dichloroethane	5.0	0.39	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.40	Not Detected C	Not Detected C
Chloroform	5.0	0.28	9.3 C	0.52 C
1,2-Dichloroethane	5.0	0.28	Not Detected CUJ	Not Detected CUJ
1,1,2-Trichloroethane	5.0	0.37	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.
UJ = Analyte associated with low bias in the CCV.

Temperature = 77.0F , duration time = 470 minutes.
Container Type: Radiello 145 (VOC TD)

Surrogates	%Recovery	Method Limits
4-Bromofluorobenzene	104	70-130

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Client Sample ID: Hall/IA3-2 Dup.

Lab ID#: 2402565-04A

PASSIVE RAD 145 (TD)

File Name:	**6022718**	**Date of Extraction: NA**	**Date of Collection: 2/22/24 5:35:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/27/24 06:56 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	1.1	Not Detected	Not Detected
Cyclohexane	10	0.77	Not Detected	Not Detected
Benzene	20	1.5	52	4.0
Trichloroethene	5.0	0.39	Not Detected	Not Detected
Toluene	50	3.5	51	3.6
Tetrachloroethene	5.0	0.42	58	4.9
Ethyl Benzene	10	0.83	12	1.0
m,p-Xylene	20	1.6	44	3.5
o-Xylene	10	0.86	15	1.3
Styrene	10	0.78	18	1.4
Freon 113	5.0	0.37	5.6 C	0.42 C
1,1-Dichloroethene	5.0	0.32	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.41	Not Detected C	Not Detected C
1,1-Dichloroethane	5.0	0.39	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.40	Not Detected C	Not Detected C
Chloroform	5.0	0.28	10 C	0.59 C
1,2-Dichloroethane	5.0	0.28	Not Detected CUJ	Not Detected CUJ
1,1,2-Trichloroethane	5.0	0.37	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.
UJ = Analyte associated with low bias in the CCV.

Temperature = 77.0F , duration time = 470 minutes.
Container Type: Radiello 145 (VOC TD)

Surrogates	%Recovery	Method Limits
4-Bromofluorobenzene	108	70-130

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Client Sample ID: NW Building/OA1-2

Lab ID#: 2402565-05A

PASSIVE RAD 145 (TD)

File Name:	**6022720**	**Date of Extraction: NA**	**Date of Collection: 2/22/24 5:35:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/27/24 08:08 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	1.1	Not Detected	Not Detected
Cyclohexane	10	0.77	Not Detected	Not Detected
Benzene	20	1.5	36	2.8
Trichloroethene	5.0	0.39	Not Detected	Not Detected
Toluene	50	3.6	Not Detected	Not Detected
Tetrachloroethene	5.0	0.42	Not Detected	Not Detected
Ethyl Benzene	10	0.83	Not Detected	Not Detected
m,p-Xylene	20	1.6	26	2.1
o-Xylene	10	0.87	10	0.87
Styrene	10	0.79	180	14
Freon 113	5.0	0.37	5.7 C	0.43 C
1,1-Dichloroethene	5.0	0.32	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.41	Not Detected C	Not Detected C
1,1-Dichloroethane	5.0	0.39	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.40	Not Detected C	Not Detected C
Chloroform	5.0	0.28	Not Detected C	Not Detected C
1,2-Dichloroethane	5.0	0.28	Not Detected CUJ	Not Detected CUJ
1,1,2-Trichloroethane	5.0	0.37	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.
UJ = Analyte associated with low bias in the CCV.

Temperature = 77.0F , duration time = 469 minutes.
Container Type: Radiello 145 (VOC TD)

Surrogates	%Recovery	Method Limits
4-Bromofluorobenzene	107	70-130

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Client Sample ID: Blank

Lab ID#: 2402565-06A

PASSIVE RAD 145 (TD)

File Name:	**6022715**	**Date of Extraction: NA**	**Date of Collection: 2/22/24 5:35:00 PM**
Dil. Factor:	**1.00**		**Date of Analysis: 2/27/24 05:08 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	1.1	Not Detected	Not Detected
Cyclohexane	10	0.77	Not Detected	Not Detected
Benzene	20	1.5	Not Detected	Not Detected
Trichloroethene	5.0	0.39	Not Detected	Not Detected
Toluene	50	3.5	Not Detected	Not Detected
Tetrachloroethene	5.0	0.42	Not Detected	Not Detected
Ethyl Benzene	10	0.83	Not Detected	Not Detected
m,p-Xylene	20	1.6	Not Detected	Not Detected
o-Xylene	10	0.86	Not Detected	Not Detected
Styrene	10	0.78	Not Detected	Not Detected
Freon 113	5.0	0.37	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.32	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.41	Not Detected C	Not Detected C
1,1-Dichloroethane	5.0	0.39	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.40	Not Detected C	Not Detected C
Chloroform	5.0	0.28	Not Detected C	Not Detected C
1,2-Dichloroethane	5.0	0.28	Not Detected CUJ	Not Detected CUJ
1,1,2-Trichloroethane	5.0	0.37	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.
UJ = Analyte associated with low bias in the CCV.

Temperature = 77.0F , duration time = 470 minutes.
Container Type: Radiello 145 (VOC TD)

Surrogates	%Recovery	Method Limits
4-Bromofluorobenzene	106	70-130

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Client Sample ID: Lab Blank

Lab ID#: 2402565-07A

PASSIVE RAD 145 (TD)

File Name:	**6022711**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/27/24 12:28 PM**

Compound	Rpt. Limit (ng)	Rpt. Limit (ug/m3)	Amount (ng)	Amount (ug/m3)
1,1,1-Trichloroethane	10	1.1	Not Detected	Not Detected
Cyclohexane	10	0.77	Not Detected	Not Detected
Benzene	20	1.5	Not Detected	Not Detected
Trichloroethene	5.0	0.39	Not Detected	Not Detected
Toluene	50	3.5	Not Detected	Not Detected
Tetrachloroethene	5.0	0.42	Not Detected	Not Detected
Ethyl Benzene	10	0.83	Not Detected	Not Detected
m,p-Xylene	20	1.6	Not Detected	Not Detected
o-Xylene	10	0.86	Not Detected	Not Detected
Styrene	10	0.78	Not Detected	Not Detected
Freon 113	5.0	0.37	Not Detected C	Not Detected C
1,1-Dichloroethene	5.0	0.32	Not Detected C	Not Detected C
trans-1,2-Dichloroethene	5.0	0.41	Not Detected C	Not Detected C
1,1-Dichloroethane	5.0	0.39	Not Detected C	Not Detected C
cis-1,2-Dichloroethene	5.0	0.40	Not Detected C	Not Detected C
Chloroform	5.0	0.28	Not Detected C	Not Detected C
1,2-Dichloroethane	5.0	0.28	Not Detected CUJ	Not Detected CUJ
1,1,2-Trichloroethane	5.0	0.37	Not Detected C	Not Detected C

C = Estimated concentration due to calculated sampling rate.
UJ = Analyte associated with low bias in the CCV.

Temperature = 77.0F , duration time = 470 minutes.
Container Type: Radiello 145 (VOC TD)

Surrogates	%Recovery	Method Limits
4-Bromofluorobenzene	104	70-130

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Client Sample ID: CCV
Lab ID#: 2402565-08A
PASSIVE RAD 145 (TD)

File Name:	**6022708**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/27/24 10:42 AM**

Compound	%Recovery
1,1,1-Trichloroethane	98
Cyclohexane	101
Benzene	82
Trichloroethene	109
Toluene	93
Tetrachloroethene	84
Ethyl Benzene	113
m,p-Xylene	117
o-Xylene	118
Styrene	122
Freon 113	111
1,1-Dichloroethene	75
trans-1,2-Dichloroethene	94
1,1-Dichloroethane	82
cis-1,2-Dichloroethene	97
Chloroform	96
1,2-Dichloroethane	68 Q
1,1,2-Trichloroethane	97

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
4-Bromofluorobenzene	106	70-130

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Client Sample ID: LCS
Lab ID#: 2402565-09A
PASSIVE RAD 145 (TD)

File Name:	**6022709**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/27/24 11:20 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	94	60-140
Cyclohexane	96	70-130
Benzene	80	70-130
Trichloroethene	103	70-130
Toluene	91	70-130
Tetrachloroethene	79	70-130
Ethyl Benzene	108	70-130
m,p-Xylene	113	70-130
o-Xylene	117	70-130
Styrene	113	70-130
Freon 113	101	70-130
1,1-Dichloroethene	72	70-130
trans-1,2-Dichloroethene	88	70-130
1,1-Dichloroethane	76	70-130
cis-1,2-Dichloroethene	89	70-130
Chloroform	88	70-130
1,2-Dichloroethane	67 Q	70-130
1,1,2-Trichloroethane	92	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
4-Bromofluorobenzene	106	70-130

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Client Sample ID: LCSD
Lab ID#: 2402565-09AA
PASSIVE RAD 145 (TD)

File Name:	**6022710**	**Date of Extraction: NA**	**Date of Collection: NA**
Dil. Factor:	**1.00**		**Date of Analysis: 2/27/24 11:54 AM**

Compound	%Recovery	Method Limits
1,1,1-Trichloroethane	94	60-140
Cyclohexane	98	70-130
Benzene	82	70-130
Trichloroethene	103	70-130
Toluene	87	70-130
Tetrachloroethene	79	70-130
Ethyl Benzene	107	70-130
m,p-Xylene	110	70-130
o-Xylene	114	70-130
Styrene	112	70-130
Freon 113	102	70-130
1,1-Dichloroethene	74	70-130
trans-1,2-Dichloroethene	88	70-130
1,1-Dichloroethane	77	70-130
cis-1,2-Dichloroethene	89	70-130
Chloroform	86	70-130
1,2-Dichloroethane	65 Q	70-130
1,1,2-Trichloroethane	90	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
4-Bromofluorobenzene	107	70-130