

17425 NE Union Hill Road, Suite 250 Redmond, Washington 98052 425.861.6000

March 14, 2022

Lynnwood Public Facilities District 3815 196<sup>th</sup> Street SW, Suite 136 Lynnwood, Washington 98036

Attention: Janet Pope

Subject: Strip Mall Indoor Air Sampling - November 2021

Alderwood Laundry and Dry Cleaner Site

3815 196<sup>th</sup> Street SW Lynnwood, Washington

**VCP NW3066** 

File No. 17787-001-16

#### **EXECUTIVE SUMMARY**

This report presents the results of the November 2021 indoor air sampling for the strip mall located at 3815 196<sup>th</sup> Street SW in Lynnwood, Washington in the western portion of Lynnwood Public Facilities District (PFD) Property. Indoor air sampling was conducted in connection with the PFD's cleanup of the former Alderwood Laundry and Dry Cleaner Site. The PFD is enrolled in the Washington State Department of Ecology (Ecology's) Voluntary Cleanup Program (VCP).

The tenant space previously occupied by the Alderwood Laundry and Dry Cleaners was located in the strip mall (Figure 1). As of November 2021, tenants occupying areas of the strip mall at and near the former dry cleaner space included the Bamboo Tree Restaurant, Carniceria Grocery and Tropical Tan.

As described in the August 6, 2021 Remedial Investigation (RI) Addendum report for the Site, sub-slab soil vapor samples were collected from beneath the strip mall building in April 2021. Analytical results for the April 2021 sub-slab soil vapor samples identified tetrachloroethylene (PCE) and trichloroethylene (TCE) in four of the sub-slab soil vapor samples at concentrations exceeding Model Toxics Control Act (MTCA) Method B soil vapor screening levels for unrestricted land use and commercial worker<sup>1</sup> exposure scenarios. Sub-slab soil vapor sampling was conducted to evaluate the *potential* for soil vapor intrusion to indoor air and it should be noted that MTCA Method B soil vapor screening levels are based on conservative exposure assumptions. Indoor air at the strip mall was last sampled in 2013 and the detected concentrations of drycleaning related solvents were less than the indoor air screening levels at the time. The PFD conducted the November 2021 sampling to resample indoor air at the strip mall to further evaluate indoor air vapor

<sup>&</sup>lt;sup>1</sup> Commercial worker exposure scenarios were calculated for the Site based on Ecology guidance and Ecology concurred with the proposed commercial screening levels following their review of the PFD's Site-related indoor air sampling report for the adjacent property (Washington Energy Services building).

intrusion risk, determine if mitigation actions should be evaluated and provide documentation of current conditions.

The indoor air sampling was performed in accordance with procedures documented in Ecology's "Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action," updated April 2018 (Ecology 2018a) and Ecology's Implementation Memoranda No. 18, No. 21 and No. 22 (Ecology 2018b, 2018c and 2018d).

Based on the November 2021 indoor air sampling event, the detected concentrations of dry-cleaning related solvents were less than MTCA Method B indoor air screening levels for commercial uses, which is the screening level applicable under current site conditions. Additional details regarding the sampling results are presented in the sections that follow.

#### **SCOPE**

The scope of services for the indoor air sampling was as follows:

- Coordinate access to the tenant spaces with the PFD.
- Perform a field assessment to document building conditions that can affect indoor air, specifically building materials and products used inside the tenant spaces, as well as the building heating, ventilation and air conditioning (HVAC) operations. Based on the results of the field assessment, indoor air sample locations were finalized.
- Collect four indoor air samples (two in the Bamboo Tree Pho restaurant [Pho restaurant], which is the space formerly occupied by the dry cleaner), one at the north-adjacent grocery shop known as Carniceria Market Michoacan (Carniceria), one in the next north-adjacent Tropical Tan space and collect one outdoor ambient air sample in the upwind location at the time of sampling. Due to equipment issues, indoor air samples at the Pho restaurant were deployed on a different date than the other samples. Approximate sample locations are shown in Figure 1. Air samples were collected using an 8-hour flow controller and 6-liter Summa canisters. Indoor air samples were deployed in the evening and collected approximately 8 hours later (the following morning), in an effort to minimize the effects of tenant activities such as HVAC usage, opening and closing of doors, cooking, etc. on indoor air conditions during the sampling period.
- Submit air samples to a subcontracted chemical laboratory for chemical analysis of the site-specific volatile organic compounds (VOCs) of interest², specifically PCE, TCE, 1,1-dichloroethene (1,1-DCE), cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-dichloroethene (trans-1,2-DCE) and vinyl chloride. Analyses were completed in accordance with U.S. Environmental Protection Agency (EPA) Method TO-15-SIM.
- Compare laboratory analytical results for indoor air samples to the most recently published MTCA Method B indoor air cleanup levels and applicable screening levels for commercial worker settings<sup>3</sup>, after using outdoor air sample data to adjust for ambient conditions per Ecology guidance.

<sup>&</sup>lt;sup>3</sup> Commercial exposure screening levels were calculated according to Ecology's Implementation Memorandum No. 21 ("Frequently Asked Question No. 17") and assume a commercial worker exposure scenario of 250 days/year, 10 hours/day for 20 years. The MTCA Method B indoor air cleanup levels per "CLARC Master Spreadsheet.xlsx" dated July 2021 assume an exposure scenario of 365 days/year, 24 hours/day for 30 years.



<sup>&</sup>lt;sup>2</sup> The VOCs of interest for this indoor air sampling event are limited to those detected in soil, groundwater and sub-slab soil gas samples collected during the RI, i.e., PCE and TCE and their respective breakdown products.

Also compare TCE results to the Short-Term Commercial Worker Indoor Air Action Level for TCE published in Ecology Implementation Memorandum No. 22 (Ecology 2018d). The respective cleanup, screening and action levels are shown in Table 1.

#### **FIELD INVESTIGATION**

#### **Building Survey**

Prior to conducting the November 2021 indoor air sampling, a building survey was performed in each tenant space to document current conditions such as HVAC systems, potential points for vapor intrusion to occur and possible indoor air sources of VOCs such as cleaning products or other chemicals stored in the spaces.

All three tenant spaces utilize forced air HVAC systems for heating and cooling. Intakes and vents are distributed throughout the spaces for circulation. We observed small quantities of cleaning products typical of food service/office type settings in all three tenant spaces. Solvents, industrial degreasers or other chemicals that might be potential indoor air sources of VOCs were not observed.

#### **Weather Conditions and HVAC Operation**

Outdoor temperatures on November 4, 2021 at the time of indoor and outdoor air sampling in two of the tenant spaces ranged between 47 and 57 degrees Fahrenheit. Wind speed during the sampling was reported at about 13 miles per hour to the north. Over the 3 days leading up to the November 4, 2021 sampling, barometric pressures ranged from 29.1 to 29.6 inches of mercury with pressures decreasing over the time period (Weather Underground 2022).

Outdoor temperatures on November 18, 2021 at the time of indoor air sampling in the Pho restaurant space (former dry cleaner space) ranged between 41 and 48 degrees Fahrenheit. Wind speed during the sampling was reported at about 8 miles per hour to the north. Over the 3 days leading up to the November 18, 2021 sampling, barometric pressures ranged from 29.3 to 29.8 inches of mercury with pressures decreasing over the time period (Weather Underground 2022).

Indoor air sampling was conducted under conservative building operational conditions to the extent practicable. The sampling was generally performed at night during off hours when the HVAC systems are generally not operating, except for the Tropical Tan until which was inaccessible during the nighttime hours and the HVAC system runs 24 hours a day. During the sampling duration, building doors were kept closed and ingress and egress activities during sampling activities were minimized. The intent was to obtain indoor air samples that were representative of normal conditions, but to reduce potential interferences by collecting samples when few to no building occupants are present, exterior doors are not regularly opening and closing and the HVAC systems are generally not operating.

#### **Samples**

GeoEngineers collected two of the indoor air samples (IA-2-110421 and IA-3-110421) and one ambient outdoor air sample (OA-1-110421) on November 4, 2021 and the remaining two indoor air samples (IA-1-11821 and IA-2-111821) on November 18, 2021. Approximate sample locations are shown in Figure 1.



- Indoor Air Samples. Two sample were collected in the Pho restaurant, one in the Carniceria grocery store immediately adjacent to the Pho restaurant and one in the Tropical Tan unit north-adjacent to the Carniceria. Samples were generally located in close proximity to the previous sub-slab soil gas samples collected in April 2021.
- Outdoor Air Samples. Ecology's Draft Vapor Intrusion (VI) Guidance indicates that building-specific ambient (outdoor) air samples are to be collected as part of the Tier II VI evaluation at the same time indoor air samples are collected. Outdoor air sample results are used to assess how background outdoor air conditions influence indoor air quality. Ecology guidance allows outdoor air results to be evaluated in conjunction with indoor air sampling to better estimate whether contaminants measured in indoor air are likely, or not likely, to be due to vapor intrusion (Ecology 2018a). The outdoor air sample results are directly subtracted from the indoor air sample results. The November 4, 2021 outdoor air sample was collected from an upwind location near the south end of the strip mall at the approximate location shown in Figure 1.

#### **Sampling Procedures**

Initial canister pressure start date and start time were recorded on a field data form. Indoor and outdoor air samples were obtained by placing a 6-liter Summa canister equipped with an 8-hour flow controller at the sample locations. Tubing was connected to each canister and was used to elevate the sample intake into the breathing zone at approximately 3 to 5 feet above the ground surface. The inlet valve on the canister was opened to collect the sample. After approximately 8 hours the sample team closed the inlet valve and recorded the canister pressure and stop date and time on the field data form.

The indoor and outdoor air samples were submitted to Pace National lab in Mt. Juliette, Tennessee for chemical analyses of PCE, TCE and breakdown products by U.S. Environmental Protection Agency (EPA) Method TO-15SIM. Laboratory reports are presented in Appendix A.

#### **Chemical Analytical Results**

The November 2021 indoor air and outdoor air chemical analytical results are summarized in Table 1. Contaminants of concern were not detected in the outdoor ambient air sample so no adjustments were necessary in relation to the indoor air sample results.

PCE was detected in all four samples analyzed at concentrations ranging from 1.89 micrograms per cubic meter ( $\mu g/m^3$ ) (IA-2-110421) to 16.80  $\mu g/m^3$  (IA-2-111821 collected from the Pho restaurant). TCE was non-detect except in one sample where the detected concentration was 1.56  $\mu g/m^3$  (IA-2-111821 collected from the Pho restaurant). Other contaminants of concern including 1,1-dichloroethene (DCE), cis-1,2-DCE, trans-1,2-DCE and vinyl chloride were not detected in the samples submitted for analysis.

#### **DISCUSSION AND CONCLUSIONS**

The strip mall is used as a commercial/retail space; therefore, in accordance with Ecology guidance and concurrence from Ecology per the December 31, 2019 Opinion Letter for sampling conducted at the Site, the commercial worker screening levels are considered appropriate for comparison purposes for this study. The November 2021 VI study results were evaluated relative to MTCA Method B indoor air commercial



worker screening levels and the short-term commercial worker indoor air action level for TCE<sup>4</sup>. A noted above (see Footnote 4), MTCA Method B indoor air cleanup levels for residential (unrestricted) land use assume an exposure scenario of 365 days/year, 24 hours/day for 30 years and the Site does not currently have residential uses.

- The detected concentration of PCE (16.80 μg/m³) in sample IA-2-111821 collected in the Pho restaurant was less than the MTCA Method B Commercial Worker Indoor Air Screening Level of 51 μg/m³. The result exceeded the MTCA Method B Indoor Air Cleanup Level of 9.6 μg/m³ for unrestricted land use.
- TCE was detected (1.56 μg/m³) in the indoor air sample (IA-2-111821) collected from the Pho restaurant at a concentration less than the MTCA Method B Commercial Worker Indoor Air Screening Level of 3.2 μg/m³. The result exceeded the MTCA Method B Indoor Air Cleanup Level for unrestricted land use of 0.33 μg/m³. The TCE concentration in the sample from the Pho restaurant was also less than the TCE Short-Term Commercial Worker Indoor Air Action Level, which is intended to protect more vulnerable populations.
- Other chlorinated solvents including 1,1-DCE, cis-1,2-DCE, trans-1,2-DCE and vinyl chloride were either not detected or were detected at concentrations less than the indoor air screening levels.

Based on the November 2021 indoor air sampling and in accordance with VI guidance, concentrations of PCE, TCE and other chlorinated VOCs are not present at levels of regulatory concern for a commercial building.

#### **LIMITATIONS**

We have prepared this letter for the exclusive use of the Lynnwood Public Facilities District. No other party may place reliance on the product of our services unless we agree in advance and in writing to such reliance. Our services were provided in accordance with our agreement with the Lynnwood Public Facilities District, dated August 27, 2021.

This report is based on conditions that existed at the time our site studies were performed. The findings and conclusions of this report may be affected by the passage of time, by manmade events such as construction on or adjacent to the site, by new releases of hazardous substances, or by natural events such as floods, earthquakes, slope instability or groundwater fluctuations or changes in weather conditions. Our interpretations are based on field observations and chemical analytical data from widely spaced sampling locations. GeoEngineers reviewed field and laboratory data and then applied our professional judgment to render an opinion. Our report, conclusions and interpretations should not be construed as a warranty of contaminant conditions. Some substances may be present in the site vicinity in quantities or under conditions that may have led, or may lead, to contamination of the subject site, but are not included in current local, state or federal regulatory definitions of hazardous substances or do not otherwise present current potential liability. GeoEngineers cannot be responsible if the standards for appropriate inquiry, or regulatory definitions of hazardous substance, change or if more stringent environmental standards are developed in the future.

<sup>&</sup>lt;sup>4</sup> Short-term commercial worker indoor air action levels for dry cleaning related solvents are limited to TCE.



Our services have been executed in accordance with generally accepted environmental science practices in this area at the time this report was prepared. No warranty or other conditions, express or implied, should be understood.

#### REFERENCES

- Ecology 2018a. Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action. Publication No. 09-09-047. Updated April 2018.
- Ecology 2018b. Petroleum Vapor Intrusion (PVI): Updated Screening Levels, Cleanup Levels, and Assessing PVI Threats to Future Buildings Implementation Memo No. 18. January 10, 2018.
- Ecology 2018c. Frequently Asked Questions (FAQs) Regarding Vapor Intrusion (VI) and Ecology's 2009 Draft VI Guidance Implementation Memo No. 21. November 15, 2018.
- Ecology 2018d. DRAFT Vapor Intrusion (VI) Investigations and Short-term Trichloroethene (TCE) Toxicity Implementation Memo No. 22. November 21, 2018.
- GeoEngineers, Inc. 2021. "Remedial Investigation Addendum Report, Alderwood Laundry and Dry Cleaner, Lynnwood Public Facilities District Property" prepared for Lynnwood Public Facilities District, dated August 6, 2021.
- Washington State Department of Ecology (Ecology). 2021. Cleanup Levels and Risk Calculation Master Spreadsheet. July 2021. Accessed online February 2022. https://fortress.wa.gov/ecy/clarc/
- Weather Underground, Inc. 2022. Historical Weather. Accessed on Internet on February 7, 2022. https://www.wunderground.com/history/weekly/us/wa/seatac/KSEA/date/2021-11-4 and https://www.wunderground.com/history/weekly/us/wa/seatac/KSEA/date/2021-11-18

If you have any questions about this letter, please let us know. Thank

Sincerely,

GeoEngineers, Inc.

Cris J. Watkins

Senior Environmental Scientist

CJW:DLC:tjh

Attachments:

Table 1. Indoor and Outdoor Air Samples Chemical Analytical Results

Figure 1. Strip Mall Indoor Air Sample Locations - November 2021

Appendix A. Lab Reports

Disclaimer: Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.



# Table 1

### **Indoor and Outdoor Air Samples Chemical Analytical Results**

Former Alderwood Laundry and Cleaners Lynnwood, Washington

Sample				$VOCs^2 (\mu g/m^3)$												
Identification <sup>1</sup>	Sample Date	<b>General Sample Location</b>	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride								
			Novemb	er 4, 2021 Sampling Event												
Indoor Air Sampl	es															
IA-2-110421	11/04/21	Carniceria Grocery	<0.793	<0.793	<0.793	1.89	<1.07	<0.511								
IA-3-110421	11/04/21	Tropical Tan	<0.793	<0.793	<0.793	2.09	<1.07	<0.511								
Outdoor Air Sam	ples															
OA-1-110421	11/04/21	South of the strip mall	<0.793	<0.793	<0.793	<1.36	<1.07	<0.511								
			Novembe	er 18, 2021 Sampling Even	t											
Indoor Air Samples	<b>;</b>															
IA-1-111821	11/18/21	Bamboo Tree Pho South	<0.793	<0.793	<0.793	9.10	<1.07	<0.511								
IA-2-111821	11/18/21	Bamboo Tree Pho North	<0.793	<0.793	<0.793	16.80	1.56	<0.511								
MTCA Method B Ind	loor Air Cleanup Levels	3	91	NE	NE	9.6	0.33	0.28								
MTCA Method B Co	mmercial Worker Indo	or Air Screening Levels <sup>4</sup>	700	NE	NE	51	3.2	1.5								
TCE Short-Term Cor	nmercial Worker Indoo	or Air Action Level <sup>5</sup>	NE	NE	NE	NE	7.5	NE								

#### Notes:

Bold font type indicates the analyte was detected at a concentration greater than the laboratory reporting limit.

Gray shading indicates the detected concentration is greater than MTCA Method B Indoor Air Cleanup Levels, but less than the Commercial Worker Indoor Air Remediation Levels and Short-Term Commercial Worker Indoor Air Action level for TCE.

<sup>&</sup>lt;sup>1</sup> The approximate sample collection locations are shown in Figure 1.

<sup>&</sup>lt;sup>2</sup> Volatile organic compounds (VOCs) analyzed by U.S. Environmental Protection Agency (EPA) Method TO-15. VOCs analyzed include PCE, TCE and associated daughter products.

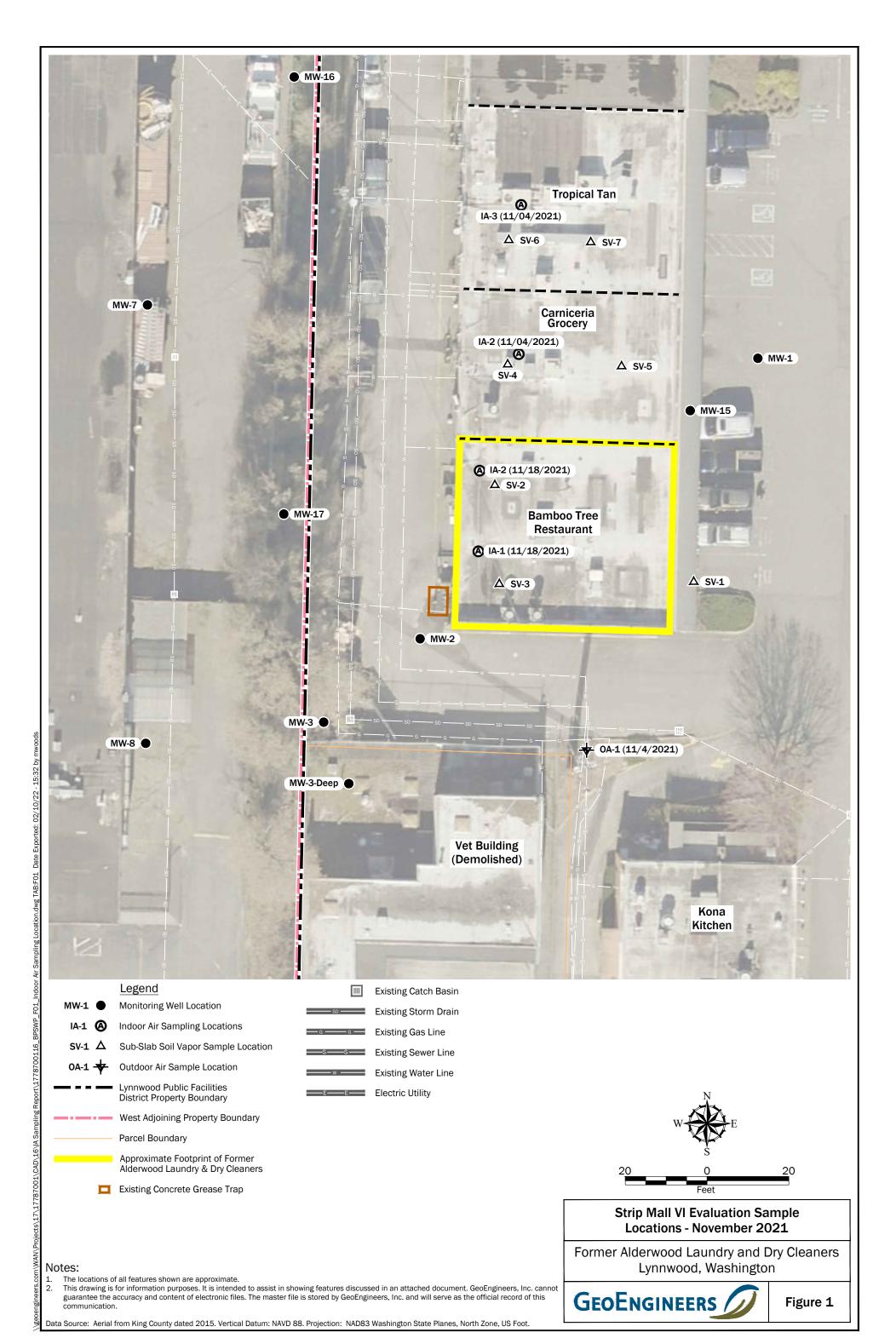
<sup>&</sup>lt;sup>3</sup> Model Toxics Control Act (MTCA) Method B indoor air cleanup level from Ecology's "CLARC Master Spreadsheet.xlsx" dated July 2021. These levels assume 365 days/year, 24 hours/day for 30 years.

<sup>&</sup>lt;sup>4</sup> MTCA Method B indoor air cleanup level from Ecology's "CLARC Master Spreadsheet.xlsx" dated July 2021. These levels have been modified to assume a commercial worker exposure scenario of 250 days/year, 10 hours/day for 20 years.

<sup>&</sup>lt;sup>5</sup> The TCE short-term commercial worker indoor air action level represents maximum 3-week mean concentration for women of childbearing age and assumes a 45-hour work week (Ecology 2018).

<sup>&</sup>lt;0.4 = analyte was not detected at concentrations greater than the laboratory detection limit.

NE = Not Established;  $\mu g/m^3$  = microgram per cubic meter



# **APPENDIX A**Lab Reports



GeoEngineers-Portland, OR

# Pace Analytical® ANALYTICAL REPORT

November 16, 2021

# GeoEngineers-Portland, OR

L1430103 Sample Delivery Group:

Samples Received:

Project Number: 17787-001-16

Description: Lynnwood PFD - Strip Mall Indoor Air Sampling

11/11/2021

Report To: Cris J. Watkins

4000 Kruse Way Place

Bldg. 3, Suite 200

Lake Oswego, OR 97035

Entire Report Reviewed By:

Buar Ford

L1430103

11/16/21 18:34

Brian Ford

Project Manager Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received. Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

> ACCOUNT: PROJECT: SDG: DATE/TIME: 17787-001-16

















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# SAMPLE SUMMARY

		Collected by	Collected date/time	Received dat	e/time
		Katy Atakturk	11/05/21 03:00	11/11/21 10:00	
Batch	Dilution	Preparation	Analysis	Analyst	Location
		date/time	date/time		
WG1773397	1	11/12/21 18:51	11/12/21 18:51	FKG	Mt. Juliet, TN
		Collected by	Collected date/time	Received date	e/time
		Katy Atakturk	11/04/21 19:20	11/11/21 10:00	
Batch	Dilution	Preparation	Analysis	Analyst	Location
		date/time	date/time		
WG1773397	1	11/12/21 19:20	11/12/21 19:20	FKG	Mt. Juliet, TN
		Collected by	Collected date/time	Received date	e/time
		Katy Atakturk	11/05/21 02:45	11/11/21 10:00	
Batch	Dilution	Preparation	Analysis	Analyst	Location
		date/time	date/time		
WG1773397	1	11/12/21 19:49	11/12/21 19:49	FKG	Mt. Juliet, TN
	WG1773397  Batch  WG1773397	WG1773397 1  Batch Dilution  WG1773397 1  Batch Dilution	Batch Dilution Preparation date/time  WG1773397 1 11/12/21 18:51  Collected by Katy Atakturk  Batch Dilution Preparation date/time  WG1773397 1 11/12/21 19:20  Collected by Katy Atakturk  Batch Dilution Preparation date/time  WG1773397 1 11/12/21 19:20	Raty Atakturk	Batch   Dilution   Preparation   date/time   date/time   date/time   WG1773397   1   11/12/21 18:51   11/12/21 18:51   FKG



















#### CASE NARRATIVE

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

















Brian Ford Project Manager

Buar Ford

# SAMPLE RESULTS - 02

L1430103

# Collected date/time: 11/05/21 03:00

	CAS #	Mol. Wt.	RDL1	RDL2	Result	Result	Qualifier	Dilution	<u>Batch</u>
Analyte			ppbv	ug/m3	ppbv	ug/m3			
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1773397
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1773397
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1773397
2-Propanol	67-63-0	60.10	1.25	3.07	11.1	27.3		1	WG1773397
Tetrachloroethylene	127-18-4	166	0.200	1.36	0.278	1.89		1	WG1773397
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1773397
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1773397
1,1-Difluoroethane	75-37-6	66.05	1.00	2.70	1.81	4.89		1	WG1773397
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		98.8				WG1773397



















# SAMPLE RESULTS - 03

L1430103

	CAS#	Mol. Wt.	RDL1	RDL2	Result	Result	Qualifier	Dilution	<u>Batch</u>
Analyte			ppbv	ug/m3	ppbv	ug/m3			
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1773397
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1773397
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1773397
2-Propanol	67-63-0	60.10	1.25	3.07	1.43	3.52		1	WG1773397
Tetrachloroethylene	127-18-4	166	0.200	1.36	0.308	2.09		1	WG1773397
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1773397
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1773397
1,1-Difluoroethane	75-37-6	66.05	1.00	2.70	ND	ND		1	WG1773397
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		97.6				WG1773397



















Collected date/time: 11/05/21 02:45

# SAMPLE RESULTS - 04

L1430103

	CAS #	Mol. Wt.	RDL1	RDL2	Result	Result	Qualifier	Dilution	<u>Batch</u>
Analyte			ppbv	ug/m3	ppbv	ug/m3			
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1773397
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1773397
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1773397
2-Propanol	67-63-0	60.10	1.25	3.07	22.5	55.3		1	WG1773397
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG1773397
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1773397
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1773397
1,1-Difluoroethane	75-37-6	66.05	1.00	2.70	3.03	8.19		1	WG1773397
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		97.7				WG1773397



















### WG1773397

# QUALITY CONTROL SUMMARY

Volatile Organic Compounds (MS) by Method TO-15

L1430103-02,03,04

### Method Blank (MB)

(MB) R3729875-3 11/12/21	09:30			
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	ppbv		ppbv	ppbv
1,1-Dichloroethene	U		0.0762	0.200
cis-1,2-Dichloroethene	U		0.0784	0.200
trans-1,2-Dichloroethene	U		0.0673	0.200
2-Propanol	U		0.264	1.25
Tetrachloroethylene	U		0.0814	0.200
Trichloroethylene	U		0.0680	0.200
Vinyl chloride	U		0.0949	0.200
1,1-Difluoroethane	U		0.129	1.00
(S) 1,4-Bromofluorobenzene	97.3			60.0-140

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

(LCS) R3729	875-1 11/12/21	08:31 • (LC	CSD) R37	29875-2	11/12/21 09:01

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	
Analyte	ppbv	ppbv	ppbv	%	%	%			%	%	
Vinyl chloride	3.75	3.96	4.08	106	109	70.0-130			2.99	25	
1,1-Dichloroethene	3.75	4.17	4.11	111	110	70.0-130			1.45	25	
2-Propanol	3.75	3.89	3.92	104	105	70.0-139			0.768	25	
trans-1,2-Dichloroethene	3.75	4.01	4.05	107	108	70.0-130			0.993	25	
cis-1,2-Dichloroethene	3.75	3.88	3.91	103	104	70.0-130			0.770	25	
Trichloroethylene	3.75	4.01	4.03	107	107	70.0-130			0.498	25	
Tetrachloroethylene	3.75	3.42	3.40	91.2	90.7	70.0-130			0.587	25	
1,1-Difluoroethane	3.75	3.93	3.87	105	103	70.0-130			1.54	25	
(S) 1,4-Bromofluorobenzene				100	99.7	60.0-140					

















### **GLOSSARY OF TERMS**

#### Guide to Reading and Understanding Your Laboratory Report

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

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

#### Abbreviations and Definitions

Appleviations and	a Definitions
MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

#### Qualifier Description

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



















# **ACCREDITATIONS & LOCATIONS**

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

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina 1	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky 16	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	Al30792	Tennessee 14	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234



<sup>\*</sup> Not all certifications held by the laboratory are applicable to the results reported in the attached report.

TN00003

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 $<sup>^* \, \</sup>text{Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.} \\$ 

Company Name/Address:	4 100	el a	Billing Infor	mation:					Analysis / C	ontainer	/ Preservativ	e			Chain of Custody	Page
GeoEngineers- Portland			Johnston			Pres Chk		. 7						(Contractor)	Pac	e Analytical
4000 Kruse Way Place Bldg. 3, Suite 200 Lake Oswego. OR 97035			Redmon	17425 NE Union Hill Rd, Suite 250 Redmond, WA 98052 Email To: cwatkins@geoengineers.com				ow word					10		12065 Lebanon Rd. Mount Juliet, TN 37122	
Report to: Cris J. Watkins			Email To: co	Email To: cwatkins@geoengineers.com				Somers						4	Pace Terms and Condit	gment and acceptance of the ions found at:
Project Description: Lynnwood PFD - Strip Mall Indoor Air Sar	mpling	City/State Collected:	ynnu	vood, WA	Please Cir PT MT C			Die 18							https://info.pacelabs.com/hubls/pas-standard- terms.pdf	
Phone: <b>503-603-6661</b>	Client Project # 17787-001-16		0	Lab Project # GEOENGPOR	-17787001	16		VC,8 D							SDG #	D163
Collected by (print): Katy Atalcturk	Site/Facility II	Rush? (Lab MUST Be Notified)  Same Day Five Day  Next Day  Two Day  Three Day  S Day (Rad Only)  Three Day			7-001-16			17CE,							Acctnum: GEO	
Collected by (signature):							ma	PCE, DUC)							Template: <b>T198009</b> Prelogin: <b>P882376</b> PM: <b>110</b> - <b>Brian Ford</b>	
Immediately Packed on Ice N X Y	Two Da				ts Needed	No.	Summa	Vocs							PB: CSC Shipped Via: F	10/15/4
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	TO-15	select D(E)							Remarks	Sample # (lab only)
1A-1 110421	G	Air	1 -	11/4/21	21:37	1		X								-01
1A-2_11047	G	Air	_	11/5/21	103,00	1		X						24		-02
1A-3_110421	G	Air	7	11/4/21	19:20	1		X							112 11.	-03
0A-1-110424	G	Air		11/5/21	02:45	1		X								-04
		Air	# 1 2 4 may 2 may 2													
<b>37</b>																
		do not a	nalyze	IA-1 per C	ris Watk	ins -	-bif 1	1/12/2	1			7.7	-			
		do not c	maryzo	17 1 por 0	no wan		υji i	17 12/2	'							
			1			16.								27		
SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay	emarks:			j.					pH _		Temp		COC Si	eal Pr igned/ es arr	le Receipt C esent/Intact Accurate: ive intact: tles used:	
WW - WasteWater  DW - Drinking Water  OT - Other  Samples returned via:  LUPSFedExCourier		r	Track	ing#						6		Suffic VOA Ze	cient ero He	volume sent: If Applicate adspace:	ole Y N	
			Time	e: Recei	ved by: (Signa	ture)			Trip Blan	k Receive	d: Yes/No HCL/M TBR		RAD So	creen	on Correct/Ch <0.5 mR/hr:	F -1
Relinquished by : (Signature)	2- 0	Date:	Time		ved by: (Signa	ture)		124-5	Temp:	l °C		eived:	If prese	ervation	n required by Lo	gin: Date/Time
Relinquished by : (Signature)	C	Date:	Time	e: Recei	ived for lab by				Date:	1 0.	Time:	0	Hold:			Condition: NCF / OK



# Pace Analytical® ANALYTICAL REPORT

November 29, 2021

# GeoEngineers-Portland, OR

Sample Delivery Group: L1434016

Samples Received: 11/20/2021

Project Number: 17787-001-16

Description: Lynnwood PFD - Strip Mall Indoor Air Sampling

Report To: Cris J. Watkins

4000 Kruse Way Place

Bldg. 3, Suite 200

Lake Oswego, OR 97035

Entire Report Reviewed By:

Buar Ford

Ss

Cn

Sr

<sup>°</sup>Qc

Gl

Αl

Sc

PAGE:

1 of 10

Brian Ford

Project Manager Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received. Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

> PROJECT: SDG: DATE/TIME:

> > L1434016

11/29/21 12:53

17787-001-16

ACCOUNT: GeoEngineers-Portland, OR

# TABLE OF CONTENTS

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Sr: Sample Results	5
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IA-2_111821 L1434016-02	6
Qc: Quality Control Summary	7
Volatile Organic Compounds (MS) by Method TO-15	7
GI: Glossary of Terms	8
Al: Accreditations & Locations	9
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# SAMPLE SUMMARY

IA-1_111821 L1434016-01 Air			Collected by Katy Atakturk	Collected date/time 11/18/21 19:40	Received da 11/20/21 09:0	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG1779690	1	11/24/21 17:55	11/24/21 17:55	DAH	Mt. Juliet, TN
			Collected by	Collected date/time	Received da	te/time
IA-2_111821 L1434016-02 Air			Katy Atakturk	11/18/21 19:35	11/20/21 09:0	00
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
Volatile Organic Compounds (MS) by Method TO-15	WG1779690	1	11/24/21 18:36	11/24/21 18:36	DAH	Mt. Juliet, TN



















#### CASE NARRATIVE

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

















Buar Ford

# SAMPLE RESULTS - 01

Collected date/time: 11/18/21 19:40

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

	CAS #	Mol. Wt.	RDL1	RDL2	Result	Result	Qualifier	Dilution	Batch
Analyte			ppbv	ug/m3	ppbv	ug/m3			
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1779690
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1779690
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1779690
Tetrachloroethylene	127-18-4	166	0.200	1.36	1.34	9.10		1	WG1779690
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1779690
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1779690
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		92.6				WG1779690



















# SAMPLE RESULTS - 02

	CAS #	Mol. Wt.	RDL1	RDL2	Result	Result	Qualifier	Dilution	<u>Batch</u>
Analyte			ppbv	ug/m3	ppbv	ug/m3			
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1779690
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1779690
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1779690
Tetrachloroethylene	127-18-4	166	0.200	1.36	2.47	16.8		1	WG1779690
Trichloroethylene	79-01-6	131	0.200	1.07	0.292	1.56		1	WG1779690
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1779690
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		92.8				WG1779690



















### WG1779690

### QUALITY CONTROL SUMMARY

Volatile Organic Compounds (MS) by Method TO-15

L1434016-01,02

### Method Blank (MB)

(MB) R3733545-3 11/24/21	09:46			
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	ppbv		ppbv	ppbv
1,1-Dichloroethene	U		0.0762	0.200
cis-1,2-Dichloroethene	U		0.0784	0.200
trans-1,2-Dichloroethene	U		0.0673	0.200
Tetrachloroethylene	U		0.0814	0.200
Trichloroethylene	U		0.0680	0.200
Vinyl chloride	U		0.0949	0.200
(S) 1,4-Bromofluorobenzene	94.5			60.0-140

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

(LCS) R3733545-1 11/24/21 08:23 • (LCSD) R3733545-2 11/24/21 09:05

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	
Analyte	ppbv	ppbv	ppbv	%	%	%			%	%	
Vinyl chloride	3.75	4.10	4.10	109	109	70.0-130			0.000	25	
1,1-Dichloroethene	3.75	4.10	4.14	109	110	70.0-130			0.971	25	
trans-1,2-Dichloroethene	3.75	4.17	4.07	111	109	70.0-130			2.43	25	
cis-1,2-Dichloroethene	3.75	4.11	4.05	110	108	70.0-130			1.47	25	
Trichloroethylene	3.75	4.24	4.22	113	113	70.0-130			0.473	25	
Tetrachloroethylene	3.75	4.56	4.47	122	119	70.0-130			1.99	25	
(S) 1,4-Bromofluorobenzen	е			95.0	95.0	60.0-140					



















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Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
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#### Qualifier Description

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



















# **ACCREDITATIONS & LOCATIONS**

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

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico <sup>1</sup>	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina 1	DW21704
Georgia	NELAP	North Carolina <sup>3</sup>	41
Georgia <sup>1</sup>	923	North Dakota	R-140
ldaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
owa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky <sup>1 6</sup>	KY90010	South Carolina	84004002
Kentucky <sup>2</sup>	16	South Dakota	n/a
Louisiana	Al30792	Tennessee 1 4	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 <sup>5</sup>	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234



<sup>\*</sup> Not all certifications held by the laboratory are applicable to the results reported in the attached report.

TN00003

EPA-Crypto



















 $<sup>^* \, \</sup>text{Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.} \\$ 

Company Name/Address:  GeoEngineers- Portland, OR  4000 Kruse Way Place		Johnston	s Payable (Ma	Pres Chk	Analysis / Container / Preservative							Chain of Custody Page 1 of Pace Analytica					
Bldg. 3, Suite 200 Lake Oswego. OR 97035 Report to:			Redmon	d, WA 98052										12055 (ab	anna Rd Maun	t Juliet, TN 37122	
Cris J. Watkins			Email 10: C	watkins@geoeng	ineers.com			The state						Submitting	g a sample via tl s acknowledgm	his chain of custody ent and acceptance of	
Project Description: Lynnwood PFD - Strip Mall Indoor Air	Sampling	City/State Collected:			Please C											/hubfs/pas-standard-	
Phone: <b>503-603-6661</b>	Client Project		Con deficies (see a	Lab Project # GEOENGPOR	R-17787001	116	Summa							SDG #		34016	
Collected by (print):  Katy Alaktury	Site/Facility II	D#		P,O.#			CE/DCEs/VCTO-15							Acctnu	Acctnum: GEOENGPOR		
Collected by (signature):	Same D	Lab MUST Be	Day	Quote #			Es/VC							Prelog	in: P887	435	
Immediately Packed on Ice N Y Y	Two Da	Next Day 5 Day Two Day 10 Day Three Day		Date Result	ts Needed	Needed No. of								PM: 110 - Brian Ford PB: CSC Place Shipped Via: FedEX Prio		day	
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	PCE/T								marks	Sample # (lab or	
IA-1_111821	9	Air	-	11.18.21	1940	1	X								5.7	-01	
IA-2-111824	G	Air	_	11.1824	1935	11	X									-02	
7.70								1. Es									
											A TOWNS OF STREET						
The second secon																	
					A A	1								Total			
								1							1 - 14 (1 - K) 1		
				1		-											
Matrix: S - Soil AIR - Air F - Filter W - Groundwater B - Bioassay	Remarks:									рН	Temp	L	COC Si	Sample Receil Present/	Intact: te:	cklist NP Y	
NW - WasteWater DW - Drinking Water DT - Other	ter		Tracking# 5349					2, 74/13/10/2						ttles arrive intact: rrect bottles used: fficient volume sent:  If Applicable A Zero Headspace:  Y			
Relinquished by: (Signature)	-	te:	Time:	Receiv 30	ed by: (Signat	SECTION STREET,		.4.	and the second	Trip Blank R	eceived: Yes No HCL/Me TBR		Preser	vation Corr reen <0.5 m	ect/Chec	cked: $\begin{bmatrix} -1 \\ Y \\ Y \end{bmatrix}$	
Relinquished by (Signature)	Da	te:	Time:	Receiv	ed by: (Signat	ure)		South of P.		Temp:	°C Bottles Recei	ved:	If preser	vation require	ed by Logi	n: Date/Time	
Relinquished by : (Signature)	Da	te:	Time:	Receiv	ed for lab by:			2		Date: 11-20	Time: 090	00	Hold:			Condition:	