PRECISION
ENVIRONMENTAL SERVICES, INC.
831 RT. 67, LOT 38 A
BALLSTON SPA, NY 12020
TEL: 518-885-4399
FAX: 518-885-4416
CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

25 YEARS 1991 - 2016

June 8, 2021

Via Electronic Mail: parag.amin@dec.ny.gov

Mr. Parag Amin, P.E.
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York 12233-7014

RE: Report of Findings
Lubricant Packaging Co. Site
17 Industrial Place, Middletown, NY
NYSDEC Site No.: 336034

Mr. Amin:

Precision Environmental Services, Inc. (PES), has prepared this letter report to document subsurface investigative activities on and off the 17 Industrial Place property (hereafter referred to as 'the Site') (see – Figure 1, for site location detail). The work described within this report was performed on behalf of the New York State Department of Environmental Conservation (NYSDEC) and completed in accordance with Prime Contract C100614. Site work activities were completed following PES's Work Plan dated March 9, 2021. Work tasks completed and documented within this findings report include the following:

1. Sample and analyze soil and groundwater at five (5) locations for Per- and Polyfluoroalkyl Substances (PFAS) and 1,4-Dioxane; and
2. Collect sub-slab vapor intrusion (SVI) samples at 79 Industrial Place.

Subsurface Soil Characterization

On March 24 and 25, 2021 PES performed subsurface investigative work at the Site by installing five (5) soil borings using direct push technology (see Figure 2). PES utilized a Geoprobe 6620DT to advance the borings, collecting soil samples with 4-foot acetate, sample sleeves. A PES geologist subsequently logged the soil types, documented the presence of saturated soil at depth and presence of volatile organic vapors in the soil using a calibrated photo-ionization detector (PID). The shallow soils observed consisted primarily of fine sands and silts, with lesser quantities of clay and gravel sized material. Coal and brick pieces were present throughout identifying the material as primarily fill in nature. The highest PID reading of 21.2 parts per million was recorded at the LPES-1 eight-to-ten-foot depth. Boring logs are included as Attachment A.

Representative soil samples were collected at all boring locations using pre-determined depth intervals of 0 feet (ft) to 6-inches, 2 ft to 4 ft and the interface directly above saturated soil or groundwater. Samples were collected then analyzed for PFAS using Method 537 and 1,4-Dioxane using Method 8270 SIM. Eurofins TestAmerica in Amherst, NY performed the laboratory analysis. The independently validated analytical results are tabulated as shown on Table 1.

Minimal PFAS detections were recorded in the soils associated with the five borings. The highest polyfluorooctanoic acid (PFOA) detection was 0.22 parts per billion (ppb) and the highest polyfluorooctanesulfonic acid (PFOS) detection was an estimated 0.29 ppb, both below the NYSDEC screening levels of 0.66 ppb and 0.88 ppb, respectively. Both were detected at soil boring LPES-2 (0-6'). The highest levels were recorded within the near surface soil. No 1,4-Dioxane detections were recorded for all sample locations and depths. Complete Eurofins laboratory data packages and independently provided Data Usability Summary Report (DUSR) are included as Attachment B.

Groundwater Sampling

During the soil investigation all five (5) boring locations were converted into 1-inch diameter PVC, temporary monitor wells. Five-foot length screens were installed across the upper five feet of water column in temporary monitoring wells LPES-1, LPES-2, and LPES-3. Ten-foot length screens were installed in LPES-4 and LPES-5. The wells were developed with dedicated, disposable bailers, removing up to one gallon of water from each. The bailers and cord were made of PFAS-free materials.

On March 25, 2021 PES gauged and purged each of the monitoring wells. The gauging results as follows:

Monitoring Well	Depth to Water	Depth to Bottom
LPES-1	3.20 ft below ground (bg)	9.40 ft bg
LPES-2	3.70 ft bg	8.85 ft bg
LPES-3	3.95 ft bg	11.15 ft bg
LPES-4	7.50 ft bg	15.48 ft bg
LPES-5	2.33 ft bg	13.70 ft bg

PES used dedicated, PFAS-free bailers to purge than collect a representative groundwater sample from each of the three wells. Samples were placed in an iced cooler for delivery to Eurofins/Test America under proper chain of custody procedures. Samples were analyzed using EPA Methods 537 (modified) for PFAS and 8270 SIM for 1,4-Dioxane.

Low level concentrations of individual PFAS analytes were detected in LPES-2 through LPES-5. No single PFAS analyte exceeded New York State maximum allowable contaminant (MCL) levels. Similarly, all five monitoring well samples for 1,4-Dioxane were non detect or below the MCL of 1 part per billion. The independently validated analytical results are tabulated as shown on Table 2. Complete Eurofins laboratory data packages and independently provided DUSR are included as Attachment B.

Sub-Slab Vapor Intrusion Sampling – 79 Industrial Place

On March 30 and 31, 2021 PES performed sub-slab and indoor air sampling at 79 Industrial Place. PES sampled four sub-slab points (SS-SV-04, SS-SV-05, SS-SV-06 and SS-SV-07) all of which were previously installed by CDM Smith in 2019. PES also sampled indoor air locations IA-04, IA-05, IA-06 and IA-07, along with one outdoor ambient air sample (AA-02).

Prior to commencement of sub-slab sampling a helium tracer test was performed at each location to confirm that there was no potential surface air infiltration and that all were viable for sampling. The procedure for helium tracer gas testing was conducted in accordance with the NYSDOH guidance document and PES Work Plan Standard Operating Procedures (SOP) as follows:

- Each soil vapor sampling tube was run through a hole in the bottom of a pre-prepared enclosure that was placed over the borehole.
- Helium gas was released through a sample port into the enclosure until a concentration of greater than or equal too 80% was attained. The helium enriched space was monitored and confirmed with a helium gas tracer meter.
- After confirming 80% or greater helium presence in the enclosure, the soil vapor sampling tube (Teflon® coated interior) was purged using a low-flow sample pump. The tube was screened for helium and VOCs using a PPBRae. Tracer gas testing was performed at all locations. All helium detections were measure at 10% or less, as required by the NYSDOH guidance.

After completion of the tracer test, approximately three air volumes of gas were purged from each sub-slab point. PID readings were observed directly from the tubing and the recorded. The end of the tubing was then connected directly to the intake valve of the Summa® canister regulator. All measurements and detailed from the sampling are included on Table 3.

All sub-slab, indoor air, and outdoor ambient air samples were collected using 6-Liter Summa® canisters equipped with 24-hour laboratory calibrated regulators. Summa® canisters were laboratory certified with initial vacuum ranging from -27 inches of mercury (inHg) to -30 inHg. The sub-slab samples were collected concurrently with the indoor air and ambient outdoor air samples. The sub-slab samples had final vacuum readings between -4 inHg to -20 inHg.

After the samples were collected, the sample tubing was removed, and the permanent ports were sealed. Air samples were analyzed by Eurofins TestAmerica in Knoxville, Tennessee for VOCs using EPA Method TO-15.

Sub-Slab Vapor Intrusion Sample Results

The soil vapor investigation results are presented on Tables 4A and 4B and the laboratory data package as Attachment B. The 2006 NYSDOH Vapor Intrusion Guidance presents the State of New York indoor air guidance values as well as the 2017 sub-slab vapor/indoor air matrices. Indoor air results were compared to Appendix C, Table C.2, EPA 2001: Building assessment and survey evaluation (BASE) database, Summa® canister method, 90th percentile, as well as Table 3.1, Air guidance values derived by the NYSDOH of the Final NYSDOH Soil Vapor Intrusion Guidance. Ambient air results were compared to Appendix C, Table C.2, EAP 2001: Building assessment and survey evaluation (BASE) database, Summa® canister method, 90th percentile. A comparison of the sub-slab soil vapor and indoor air results at each shared location is presented in Tables 4A and 4B, along with final action recommendations suggested by the NYSDOH matrices (Table 5).

NYSDOH Matrix A Comparison

All four sub-slab vapor samples recorded detectable levels for trichloroethene (TCE), SS-SV-04 at 30 micrograms per cubic meter (ug/m3), SS-SV-05 at 12 ug/m3, SS-SV-06 at 31 ug/m3, and SS-SV-07 at 14 ug/m3. No co-located indoor air samples recorded detectable TCE concentrations though laboratory reporting limits exceeded the no further action determination level of 0.2 ug/m3. The laboratory reporting limit exceeded 0.2 ug/m3 because all four location samples required dilution to determine accurate ethanol levels.

Based on the comparative results from the four co-located sample Matrix A analytes cis-1,2-Dichloroethene, 1,1-Dichloroethen and Carbon Tetrachloride do not warrant further action.

NYSDOH Matrix B Comparison

All four sub-slab vapor samples recorded detectable levels for tetrachloroethene (PCE), SS-SV-04 at 1.3 ug/m3, SS-SV-05 at 8.8 ug/m3, SS-SV-06 at 3 ug/m3, and SS-SV-07 at 71 ug/m3. No co-located indoor air samples recorded detectable PCE concentrations. When referencing the soil vapor/indoor air Matrix B, the NYSDOH guidance suggests no further action is necessary to address human health exposure.

Based on the comparative results from the four co-located sample Matrix B analytes 1,1,1-Trichlorothane and Methylene Chloride to not warrant further action.

NYSDOH Matrix C Comparison

No sub-slab vapor samples recorded detectable levels for Vinyl Chloride (VC). No co-located indoor air samples recorded detectable VC detections. Due to the high reporting limit for non-detect values at all four co-located sub-slab and indoor air samples “Identify Source and Resample or Mitigate” is recommended by the matrix guidance.

Complete Eurofins TestAmerica laboratory data packages and independently provided DUSR are included as Attachment B. All data was considered usable by the DUSR validation process.

Conclusions and Recommendations

Minimal PFAS and 1,4-Dioxane impacts to soil and groundwater in the investigated areas exist. No groundwater concentrations exceeded maximum contaminant levels allowed by the NYSDEC. PES does not recommend further investigation needs in these areas of the site. Should the NYSDEC have further thoughts regarding other potential source areas for these contaminants PES can investigate as needed.

Based on the results from the sub-slab vapor intrusion sampling event no further action is necessary for most NYSDOH matrix analytes. Non detect, high reporting limits for indoor air results as compared with co-located sub-slab detections for TCE suggests continued monitoring is warranted and for VC that source identification, resampling and possible mitigation is warranted. Based on the high reporting limits it is PES recommendation that additional monitoring should be performed.

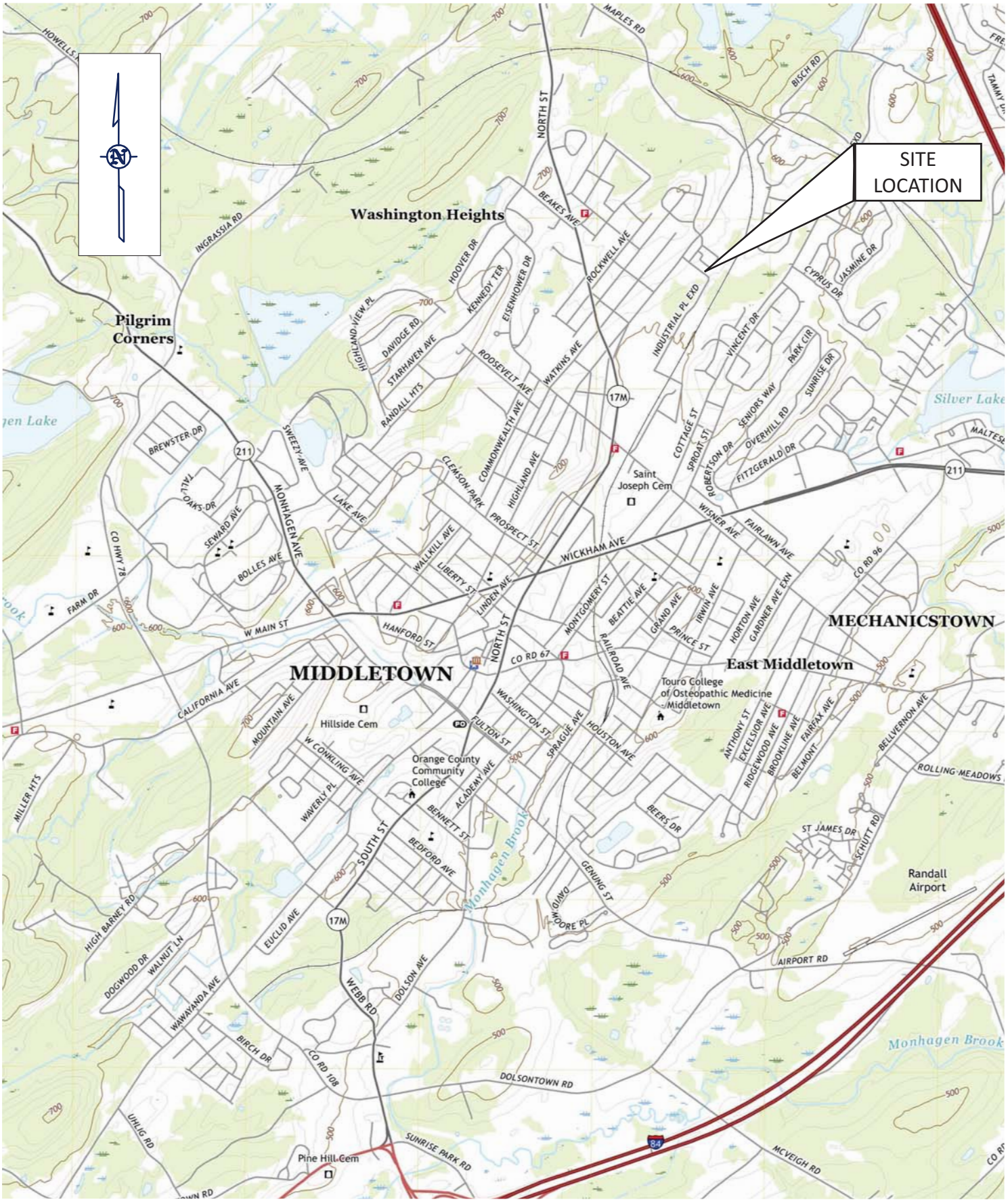
Should you have any questions regarding the above report, please feel free to contact the undersigned at 518-885-4399.

Sincerely.
PRECISION ENVIRONMENTAL SERVICES, INC.

Brian Neumann
Project Manager

Enclosures:
- Figures 1, 2 and 3
- Tables 1, 2, 3, 4A, 4B and 5
- Attachment A: Boring Logs
- Attachment B: Laboratory Analytical Reports & DUSRs
- Attachment C: SVI Questionnaire & Photographs

Figures



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Lubricant Packaging Co.
17 Industrial Place, Middletown, NY

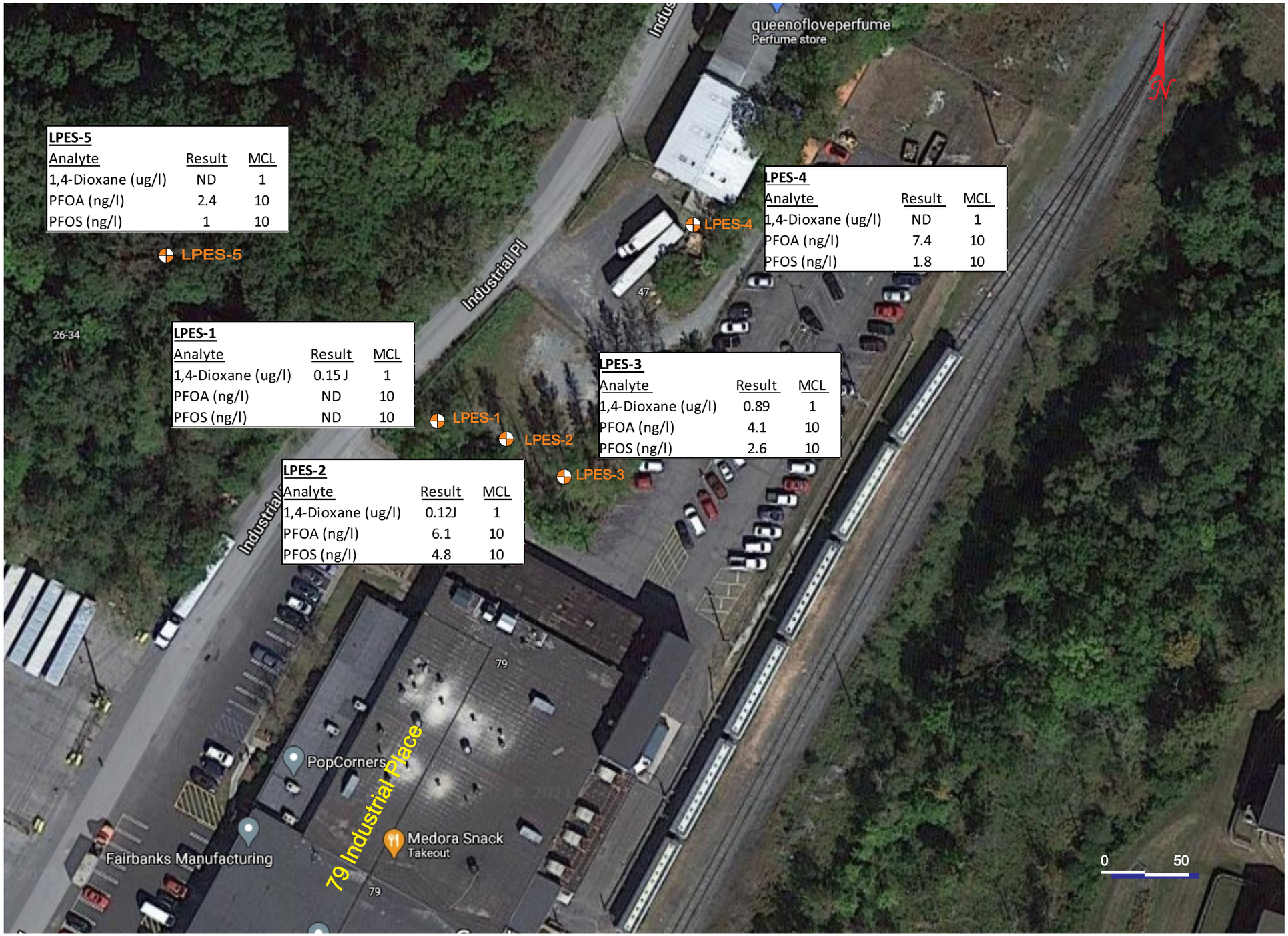
Date: Jan 2021

Map Courtesy of Google

NYSDEC Site #: 336034

Figure: 1

SITE LOCATION MAP



LPES-5

Analyte	Result	MCL
1,4-Dioxane (ug/l)	ND	1
PFOA (ng/l)	2.4	10
PFOS (ng/l)	1	10

LPES-4

Analyte	Result	MCL
1,4-Dioxane (ug/l)	ND	1
PFOA (ng/l)	7.4	10
PFOS (ng/l)	1.8	10

LPES-1

Analyte	Result	MCL
1,4-Dioxane (ug/l)	0.15 J	1
PFOA (ng/l)	ND	10
PFOS (ng/l)	ND	10

LPES-3

Analyte	Result	MCL
1,4-Dioxane (ug/l)	0.89	1
PFOA (ng/l)	4.1	10
PFOS (ng/l)	2.6	10

LPES-2

Analyte	Result	MCL
1,4-Dioxane (ug/l)	0.12J	1
PFOA (ng/l)	6.1	10
PFOS (ng/l)	4.8	10

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SOIL BORING/TEMPORARY WELL LOCATIONS & GROUNDWATER DATA

LUBRICANT PACKAGING COMPANY

SITE #: 336034

LOCATION: 17 INDUST. PLACE, MIDDLETOWN, NY

DATE: 4.19.21	**REVISED BY: BN**
FIGURE: 2	**SCALE: AS SHOWN**

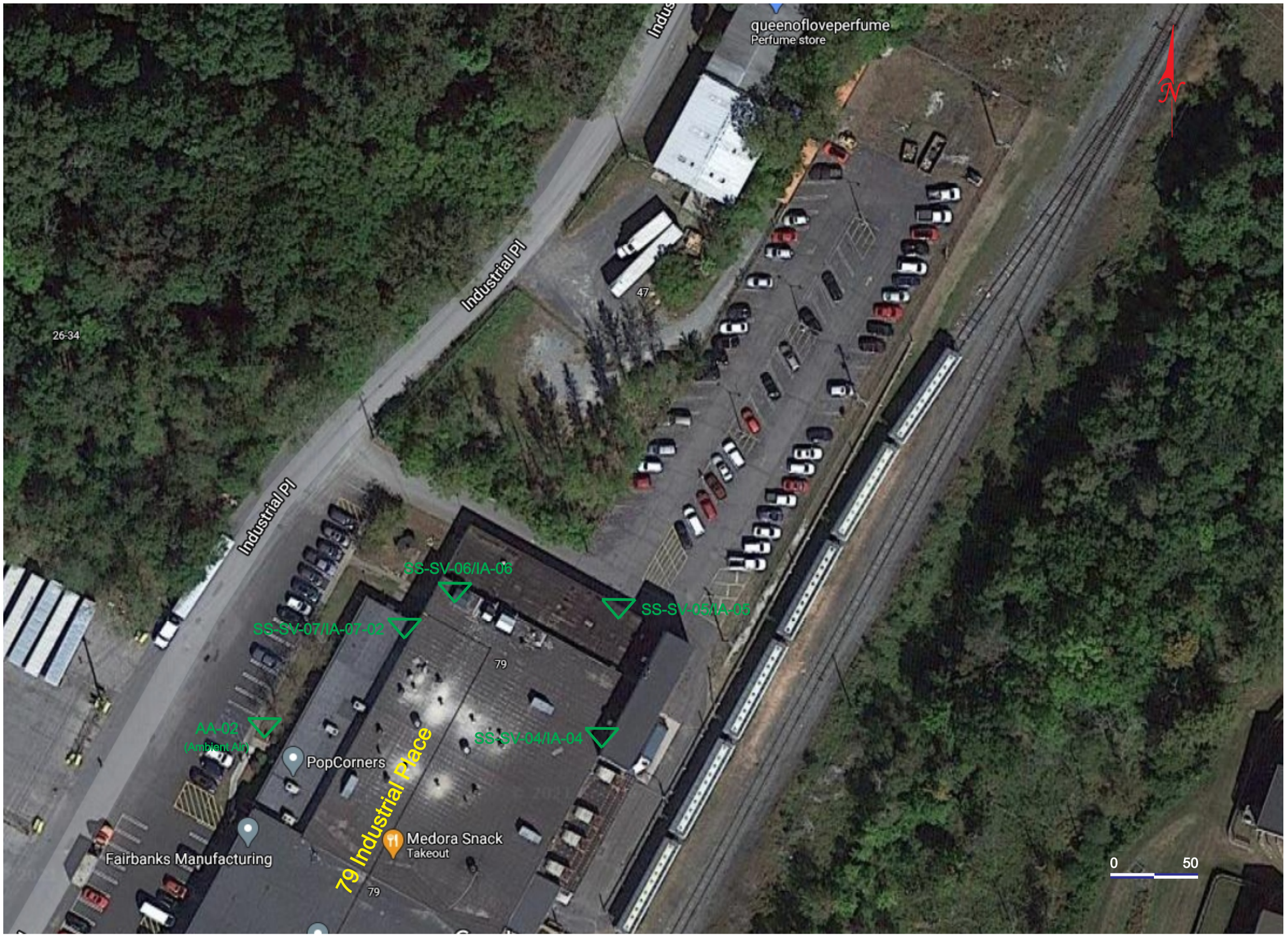
LEGEND

LPES-1
Soil Boring/Temp Well Location

Water samples collected on 3/25/2021

NOTES:

- BASE MAP COMPOSED FROM 2011 AERIAL IMAGERY PROVIDED COURTESY GOOGLE MAPS
- ALL LOCATIONS ARE APPROXIMATE



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SUB SLAB VAPOR INTRUSION SAMPLE LOCATIONS

LUBRICANT PACKAGING COMPANY

SITE #: 336034	
LOCATION: 17 INDUST. PLACE, MIDDLETOWN, NY	
DATE: 4.26.21	**REVISED BY: JJJ**
FIGURE: 3	**SCALE: AS SHOWN**

LEGEND

AA-02 ▽ Vapor Intrusion Sample Collection Location

NOTES:

- BASE MAP COMPOSED FROM 2011 AERIAL IMAGERY PROVIDED COURTESY GOOGLE MAPS
- ALL LOCATIONS ARE APPROXIMATE

Tables

TABLE 1
Summary of Soil Boring Data (Soil Results)
Lubricant Packaging Co.
NYSDEC Site No. 336034

		Sample Identification																
		LPES -1 (0-6")	LPES -1 (2'-4')	LPES -1 (4'-5')	Dup A LPES-1 (4'-5')	LPES -2 (0-6")	LPES -2 (2'-4')	LPES -2 (3.5'-4.5')	LPES -3 (0-6")	LPES -3 (2'-4')	LPES -3 (6'-8')	LPES -4 (0-6")	LPES -4 (2'-4')	LPES -4 (10.5'-11.5')	LPES -5 (0-6")	LPES -5 (2'-4')	LPES -5 (7'-8')	NYS Screen Levels
Sample Collection Date		3/24/2021													3/25/2021			
Analyte	**Method**																	
1,4-Dioxane	**8270D SIM ID**	<1000 (ND)	<110 (ND)	<570 (ND)	<560 (ND)	<110 (ND)	<110 (ND)	<130 (ND)	<1100 (ND)	<590 (ND)	<120 (ND)	<110 (ND)	<1100 (ND)	<120 (ND)	<580 (ND)	<130 (ND)	<110 (ND)	*110*
Perfluorobutanoic acid (PFBA)	**Modified 537**	**0.61**	<0.22 (ND)	<0.22 (ND)	<0.22 (ND)	**0.11 J**	<0.22 (ND)	<0.24 (ND)	**0.096 J**	**0.096 J**	<0.23 (ND)	**0.056 J**	**0.33**	<0.22 (ND)	**0.39**	<0.23 (ND)	<0.21 (ND)	--
Perfluoropentanoic acid (PFPeA)		<0.2 (ND)	<0.22 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.22 (ND)	<0.24 (ND)	**0.14 J**	<0.22 (ND)	<0.23 (ND)	**0.13 J**	<0.22 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.21 (ND)	--
Perfluorohexanoic acid (PFHxA)		<0.2 (ND)	<0.22 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.22 (ND)	**0.079 J**	**0.11 J**	<0.22 (ND)	<0.23 (ND)	**0.096 J**	<0.22 (ND)	<0.22 (ND)	**0.054 J**	<0.23 (ND)	<0.21 (ND)	--
Perfluoroheptanoic acid (PFHpA)		**0.03 J**	<0.22 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.22 (ND)	<0.24 (ND)	**0.083 J**	<0.22 (ND)	<0.23 (ND)	**0.049 J**	<0.22 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.21 (ND)	--
Perfluorooctanoic acid (PFOA)		**0.12 J**	<0.22 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.22 (ND)	<0.24 (ND)	**0.22**	<0.22 (ND)	<0.23 (ND)	**0.10 J**	<0.22 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.21 (ND)	*0.66*
Perfluorononanoic acid (PFNA)		<0.2 (ND)	<0.22 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.22 (ND)	<0.24 (ND)	**0.14 J**	**0.044 J**	<0.23 (ND)	**0.069 J**	<0.22 (ND)	<0.22 (ND)	**0.043 J**	<0.23 (ND)	<0.21 (ND)	--
Perfluorodecanoic acid (PFDA)		<0.2 (ND)	<0.22 (ND)	<0.22 (ND)	<0.22 (ND)	**0.051 J**	<0.22 (ND)	**0.028 J**	**0.17 J**	**0.061 J**	<0.23 (ND)	**0.046 J**	<0.22 (ND)	<0.22 (ND)	**0.050 J**	<0.23 (ND)	<0.21 (ND)	--
Perfluoroundecanoic acid (PFUnA)		<0.2 (ND)	<0.22 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.22 (ND)	<0.24 (ND)	**0.36**	<0.22 (ND)	<0.23 (ND)	**0.050 J**	<0.22 (ND)	<0.22 (ND)	**0.077 J**	<0.23 (ND)	<0.21 (ND)	--
Perfluorododecanoic acid (PFDoA)		<0.2 (ND)	<0.22 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.22 (ND)	<0.24 (ND)	**0.15 J**	<0.22 (ND)	<0.23 (ND)	<0.21 (ND)	<0.22 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.21 (ND)	--
Perfluorotridecanoic acid (PFTriA)		<0.2 (ND)	<0.22 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.22 (ND)	<0.24 (ND)	**0.11 J**	<0.22 (ND)	<0.23 (ND)	<0.21 (ND)	<0.22 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.21 (ND)	--
Perfluorotetradecanoic acid (PFTeA)		<0.2 (ND)	<0.22 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.22 (ND)	<0.24 (ND)	**0.094 J**	<0.22 (ND)	<0.23 (ND)	<0.21 (ND)	<0.22 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.21 (ND)	--
Perfluorobutanesulfonic acid (PFBS)		<0.2 (ND)	<0.22 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.22 (ND)	<0.24 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.21 (ND)	<0.22 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.21 (ND)	--
Perfluorohexanesulfonic acid (PFHxS)		<0.2 (ND)	<0.22 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.22 (ND)	<0.24 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.21 (ND)	<0.22 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.21 (ND)	--
Perfluoroheptanesulfonic acid (PFHpS)		<0.2 (ND)	<0.22 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.22 (ND)	<0.24 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.21 (ND)	<0.22 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.21 (ND)	--
Perfluorodecanesulfonic acid (PFDS)		<0.2 (ND)	<0.22 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.22 (ND)	<0.24 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.21 (ND)	<0.22 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.21 (ND)	--
Perfluorooctanesulfonic acid (PFOS)		<0.5 (ND)	<0.54 (ND)	<0.55 (ND)	<0.55 (ND)	<0.57 (ND)	<0.55 (ND)	<0.61 (ND)	**0.29 J**	**0.24 J**	<0.57 (ND)	<0.52 (ND)	<0.56 (ND)	<0.55 (ND)	<0.55 (ND)	<0.58 (ND)	<0.54 (ND)	*0.88*
Perfluorooctanesulfonamide (FOSA)		<0.2 (ND)	<0.22 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.22 (ND)	<0.24 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.21 (ND)	<0.22 (ND)	<0.22 (ND)	<0.22 (ND)	<0.23 (ND)	<0.21 (ND)	--
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)		<2 (ND)	<2.2 (ND)	<2.2 (ND)	<2.2 (ND)	<2.3 (ND)	<2.2 (ND)	<2.4 (ND)	<2.2 (ND)	<2.2 (ND)	<2.3 (ND)	<2.1 (ND)	<2.2 (ND)	<2.2 (ND)	<2.2 (ND)	<2.3 (ND)	<2.1 (ND)	--
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)		<2 (ND)	<2.2 (ND)	<2.2 (ND)	<2.2 (ND)	<2.3 (ND)	<2.2 (ND)	<2.4 (ND)	<2.2 (ND)	<2.2 (ND)	<2.3 (ND)	<2.1 (ND)	<2.2 (ND)	<2.2 (ND)	<2.2 (ND)	<2.3 (ND)	<2.1 (ND)	--
6:2 FTS		<2 (ND)	<2.2 (ND)	<2.2 (ND)	<2.2 (ND)	<2.3 (ND)	<2.2 (ND)	<2.4 (ND)	<2.2 (ND)	<2.2 (ND)	<2.3 (ND)	<2.1 (ND)	<2.2 (ND)	<2.2 (ND)	<2.2 (ND)	<2.3 (ND)	<2.1 (ND)	--
8:2 FTS		<2 (ND)	<2.2 (ND)	<2.2 (ND)	<2.2 (ND)	<2.3 (ND)	<2.2 (ND)	<2.4 (ND)	<2.2 (ND)	<2.2 (ND)	<2.3 (ND)	<2.1 (ND)	<2.2 (ND)	<2.2 (ND)	<2.2 (ND)	<2.3 (ND)	<2.1 (ND)	--
Total incl PFOA & PFOS		**0.76**	**ND**	**ND**	**ND**	**0.161**	**ND**	**0.107**	**1.963**	**0.441**	**ND**	**0.596**	**0.33**	**ND**	**0.614**	**ND**	**ND**	**--**

NOTES:
Sampling performed by Precision Environmental Services, Inc.
All values are reported in ug/kg - parts per billion (ppb), unless otherwise noted.
Analytical Facility - TestAmerica Laboratories
J indicates result is less than reporting limit but greater than or equal to the method detection limit, thus estimated
ND indicates values reported below the laboratory reporting limits
Values in **BOLD** indicate values reported above the laboratory minimum detection limits
Screening level for 1,4-Dioxane is USCO and PFOA and PFOS are guidance values for unrestricted use

TABLE 2
Summary of Temporary Monitoring Well Data (Water Results)
Lubricant Packaging Co.
NYSDEC Site No. 336034

		Sample Identification						
		LPES -1	Dup B (LPES-1)	LPES-2	LPES-3	LPES-4	LPES-5	NYS MCLs
Sample Collection Date		3/25/2021						
Analyte	**Method**							
1,4-Dioxane (measured in ug/L)	**8270D SIM ID**	**0.15 J**	<20 (ND)	**0.12 J**	**0.89**	<20 (ND)	<0.2 (ND)	*1*
Perfluorobutanoic acid (PFBA)	**Modified 537**	<46 (ND)	<18 (ND)	**6.30**	**4.0 J**	**2.6 J**	<1.8 (ND)	*100*
Perfluoropentanoic acid (PFPeA)		<19 (ND)	<18 (ND)	**6.10**	**3.90**	**1.3 J**	**0.74 J**	*100*
Perfluorohexanoic acid (PFHxA)		<19 (ND)	<18 (ND)	**4.80**	**2.90**	**1.3 J**	**0.75 J**	*100*
Perfluoroheptanoic acid (PFHpA)		<19 (ND)	<18 (ND)	**3.40**	**1.2 J**	**1.3 J**	**0.61 J**	*100*
Perfluorooctanoic acid (PFOA)		<19 (ND)	<18 (ND)	**6.10**	**4.10**	**7.40**	**2.40**	*10*
Perfluorononanoic acid (PFNA)		<19 (ND)	<18 (ND)	**1.2 J**	**0.53 J**	**0.36 J**	**0.59 J**	*100*
Perfluorodecanoic acid (PFDA)		<19 (ND)	<18 (ND)	**0.66 J**	**0.36 J**	<1.8 (ND)	<1.8 (ND)	*100*
Perfluoroundecanoic acid (PFUnA)		<19 (ND)	<18 (ND)	<1.8 (ND)	<1.8 (ND)	<1.8 (ND)	<1.8 (ND)	*100*
Perfluorododecanoic acid (PFDoA)		<19 (ND)	<18 (ND)	<1.8 (ND)	<1.8 (ND)	<1.8 (ND)	<1.8 (ND)	*100*
Perfluorotridecanoic acid (PFTriA)		<19 (ND)	<18 (ND)	<1.8 (ND)	<1.8 (ND)	<1.8 (ND)	<1.8 (ND)	*100*
Perfluorotetradecanoic acid (PFTeA)		<19 (ND)	<18 (ND)	<1.8 (ND)	<1.8 (ND)	<1.8 (ND)	<1.8 (ND)	*100*
Perfluorobutanesulfonic acid (PFBS)		<19 (ND)	**2.0 J**	**6.20**	**2.20**	**1.90**	**1.0 J**	*100*
Perfluorohexanesulfonic acid (PFHxS)		<19 (ND)	<18 (ND)	**1.7 J**	**2.10**	**0.65 J**	<1.8 (ND)	*100*
Perfluoroheptanesulfonic acid (PFHpS)		<19 (ND)	<18 (ND)	<1.8 (ND)	<1.8 (ND)	<1.8 (ND)	<1.8 (ND)	*100*
Perfluorodecanesulfonic acid (PFDS)		<19 (ND)	<18 (ND)	<1.8 (ND)	<1.8 (ND)	<1.8 (ND)	<1.8 (ND)	*100*
Perfluorooctanesulfonic acid (PFOS)		<19 (ND)	<18 (ND)	**4.80**	**2.60**	**1.80**	**1.00**	*10*
Perfluorooctanesulfonamide (FOSA)		<19 (ND)	<18 (ND)	<1.8 (ND)	**4.20**	<1.8 (ND)	**1.1 J**	*100*
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)		<46 (ND)	<46 (ND)	<4.6 (ND)	<4.5 (ND)	<4.4 (ND)	<4.6 (ND)	*100*
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)		<46 (ND)	<46 (ND)	<4.6 (ND)	<4.5 (ND)	<4.4 (ND)	<4.6 (ND)	*100*
6:2 FTS		<46 (ND)	<46 (ND)	<4.6 (ND)	<4.5 (ND)	<4.4 (ND)	<4.6 (ND)	*100*
8:2 FTS		<19 (ND)	<18 (ND)	<1.8 (ND)	<1.8 (ND)	<1.8 (ND)	<1.8 (ND)	*100*
Total incl PFOA & PFOS		**ND**	**ND**	**37.70**	**22.00**	**11.10**	**3.40**	*500*

NOTES:
Sampling performed by Precision Environmental Services, Inc.
All values are reported in ng/L - parts per trillion (ppt), unless otherwise noted.
Analytical Facility - TestAmerica Laboratories
J indicates result is less than reporting limit but greater than or equal to the method detection limit, thus estimated
ND indicates values reported below the laboratory minimum detection limits
Values in **BOLD** indicate values reported above the laboratory minimum detection limits

TABLE 3

Sub-Slab and Indoor Air Sample Parameters

Lubricant Packaging Co.

NYSDEC Site No. 336034

Sample ID	Start Date	End Date	Time Started	Initial Pressure (in Hg)	Time Collected	Final Pressure (in Hg)	Canister ID	Flow Meter ID	PID VOC (ppb)
SS-SV-04	3/30/2021	3/31/2021	1240	-30	1240	-8	11217	7605	100
IA-04			1240	-29	1241	-6	34001413	10352	100
SS-SV-05			1101	-30	1101	-20	4179	8788	243
Dup (at SS-SV-05)			--	-28	--	-17	09812	09856	243
IA-05			1100	-30	1100	-7	12188	7630	243
SS-SV-06			1205	-29	1205	-7	8449	8774	26
IA-06			1206	-29	1206	-7	10404	11243	26
SS-SV-07			1135	-27	1135	-4	34000170	10353	400
IA-07			1136	-29	1136	-5	7936	10879	400
AA-02			1255	-30	1255	-8	7525	12133	--

TABLE 4A

Summary of Sub Slab and Indoor Air Quality Data
Lubricant Packaging Co.
NYSDEC Site No. 336034

				Sub-Slab Soil Vapor									
Sample ID	**EPA Indoor Air Statistical Value (1)**	**EPA Outdoor Air Statistical Value (1)**	**NYSDOH Air Guideline Value (2)**	**SV-04**		**SV-05**		**Duplicate SV-05**		**SV-06**		**SV-07**	
Sampling Date				March 31, 2021									
Unit				ug/m3									
Volatile Organic Compounds (TO-15)													
1,1,1-Trichloroethane	20.6	2.6	NL	**16**		**110**		**130**		**7.3**		**48**	
1,1,2-Trichlorotrifluoroethane	NL	NL	NL	1	U	3.1	U	2.6	U	**0.62**		1.2	U
1,1-Dichloroethane	NL	NL	NL	0.54	U	4.2	U	1.4	U	0.32	U	**1.2**	
1,1-Dichloroethene	NL	NL	NL	0.26	U	2	U	0.67	U	0.16	U	**0.47**	
1,2,4-Trimethylbenzene	9.5	5.8	NL	**1.1**		**26**	**J**	**1.9**	**J**	**2.8**		**1.4**	
1,3,5-Trimethylbenzene	3.7	2.7	NL	0.66	U	**9.9**		1.7	U	**1.3**		**3**	**CI**
1,4-Dioxane	NL	NL	NL	1.2	U	**10**	**J**	**7.8**	**J**	0.72	U	1.4	U
2-Butanone	NL	NL	NL	**2.2**		12	U	4	U	**1.9**		**2.2**	
4-Methyl-2-pentanone (MIBK)	NL	NL	NL	1.4	U	4.1	U	3.5	U	**1.4**		1.6	U
Benzene	9.4	6.6	NL	0.43	U	**4.1**	**J**	**3.3**	**J**	**3.1**		0.51	U
Carbon tetrachloride	1.3	0.7	NL	**0.56**		2.6	U	0.85	U	**0.5**		**0.7**	
Chloroethane	NL	NL	NL	0.35	U	**2.8**	**J**	**2.1**	**J**	0.21	U	**1.1**	
Chloroform	1.1	0.6	NL	**55**		5	U	**4**		**6.1**		**30**	
Chloromethane	3.7	3.7	NL	0.69	U	5.3	U	**3**		0.41	U	**1.5**	
cis-1,2-Dichloroethene	NL	NL	NL	0.26	U	2	U	0.67	U	0.16	U	**0.62**	
Dichlorodifluoromethane	16.5	8.1	NL	**1.1**	**J**	5.1	U	1.7	U	**0.98**	**J**	**1.3**	**J**
Ethanol	NL	NL	NL	**11**		48	U	16	U	**9.3**		**29**	
Ethylbenzene	5.7	3.5	NL	**1.2**		**130**	**J**	**65**	**J**	**0.58**		**0.96**	
Hexane	10.2	6.4	NL	1.2	U	3.5	U	**4.2**		**2.5**		1.4	U
Methylene Chloride	10	6.1	60	**7.9**		6.9	U	5.9	U	**1.7**		2.8	U
Xylenes, Total	NL	NL	NL	**4.7**		**920**	**J**	**235**	**J**	**3.9**		**4.8**	
Naphthalene	NL	NL	NL	1.7	U	**56**		4.4	U	1	U	2.1	U
t-Butyl alcohol	NL	NL	NL	**6.5**		**28**		**22**		**2.4**		**2.8**	
Tetrachloroethene	15.9	6.5	30	**1.3**		**8.8**		**10**		**3**		**71**	
Toluene	43	33.7	NL	**2**		**16**	**J**	**12**	**J**	**2.5**		**3.6**	
trans-1,2-Dichloroethene	NL	NL	NL	0.53	U	4.1	U	1.3	U	0.32	U	**2.8**	
Trichloroethene	4.2	1.3	2	**30**		**12**		**12**		**31**		**14**	
Trichlorofluoromethane	18.1	4.3	NL	**1.9**	**J**	5.8	U	1.9	U	**1.5**	**J**	**2**	

Lab Qualifiers:

U - Analyte included in the analysis, but not detected

J - Result is less than the reporting limit, but greater than or equal to the method detection level

CI - Peak identified exhibited chromatographic interference that could not be resolved. Suspect with high bias.

Notes:

Only those analytes detected at one or more sample locations are presented on this table.

(1) - Final New York State Department of Health Soil Vapor Intrusion Guidance, October 2006. Appendix C Table C2-EPA 2001: Building assessment and survey evaluation (BASE) database, SUMMA® canister method, 90th percentile for indoor and outdoor air.

(2) - Final New York State Department of Health Soil Vapor Intrusion Guidance, October 2006. Table 3.1 Air Guideline Values Derived by the NYSDOH, Revised May 2017.

ug/m3 - microgram per cubic meter

NL - Not Listed

TABLE 4B

Summary of Sub Slab and Indoor Air Quality Data
Lubricant Packaging Co.
NYSDEC Site No. 336034

				Indoor Air								Outdoor Ambient Air	
Sample ID	**EPA Indoor Air Statistical Value**	**EPA Outdoor Air Statistical Value**	**NYSDOH Air Guideline Value**	**IA-04**		**IA-05**		**IA-06**		**IA-07**		**AA-02**	
Sampling Date				March 31, 2021									
Unit				ug/m3									
Volatile Organic Compounds (TO-15)													
1,1,1-Trichloroethane	20.6	2.6	NL	**2.2**	U	**2.9**		2.2	U	**3.6**		0.44	U
1,1,2-Trichlorotrifluoroethane	NL	NL	NL	3.1	U	3.1	U	3.1	U	3.1	U	**0.62**	
1,1-Dichloroethane	NL	NL	NL	1.6	U	1.6	U	1.9	U	1.6	U	0.32	U
1,1-Dichloroethene	NL	NL	NL	0.79	U	0.79	U	0.79	U	0.79	U	0.16	U
1,2,4-Trimethylbenzene	9.5	5.8	NL	3	U	2	U	2	U	3	U	**0.46**	
1,3,5-Trimethylbenzene	3.7	2.7	NL	2	U	2	U	2	U	2	U	0.39	U
1,4-Dioxane	NL	NL	NL	3.6	U	3.6	U	3.6	U	3.6	U	0.72	U
2,2,4-Trimethylpentane	NL	NL	NL	4.7	U	4.7	U	4.7	U	4.7	U	**0.96**	
2-Butanone	NL	NL	NL	**8.6**		**14**		**8.2**		**52**		**1.4**	
4-Methyl-2-pentanone (MIBK)	NL	NL	NL	4.1	U	4.1	U	**4.6**		4.1	U	0.82	U
Benzene	9.4	6.6	NL	1.3	U	**2.1**		1.3	U	1.3	U	**0.79**	
Carbon tetrachloride	1.3	0.7	NL	1	U	1	U	1	U	1	U	**0.52**	
Chloroethane	NL	NL	NL	1.1	U	1.1	U	1.1	U	1.1	U	0.21	U
Chloroform	1.1	0.6	NL	**19**		**3.4**		**2.2**		**2.5**		0.39	U
Chloromethane	3.7	3.7	NL	2.1	U	2.1	U	**2.2**		2.1	U	**1.2**	
cis-1,2-Dichloroethene	NL	NL	NL	0.79	U	0.79	U	0.79	U	0.79	U	**0.16**	
Dichlorodifluoromethane	16.5	8.1	NL	**2**	U	2	U	2	U	2	U	**0.96**	**J**
Ethanol	NL	NL	NL	**490**		**390**		**580**		**3200**	**D**	**42**	
Ethylbenzene	5.7	3.5	NL	1.7	U	1.7	U	1.7	U	1.7	U	**0.42**	
Hexane	10.2	6.4	NL	3.5	U	3.5	U	3.5	U	3.5	U	**1.1**	
Methylene Chloride	10	6.1	60	6.9	U	6.9	U	**8.9**		6.9	U	**2.8**	
Xylenes, Total	NL	NL	NL	**1.8**		**2.8**		1.7	U	**4**		**2.12**	
Naphthalene	NL	NL	NL	5.2	U	5.2	U	5.2	U	5.2	U	1	U
t-Butyl alcohol	NL	NL	NL	4.9	U	4.9	U	4.9	U	4.9	U	0.97	U
Tetrachloroethene	15.9	6.5	30	2.7	U	2.7	U	2.7	U	2.7	U	**1.1**	
Toluene	43	33.7	NL	**3.1**		**3.3**		**2.4**		**4.3**		**2.4**	
trans-1,2-Dichloroethene	NL	NL	NL	1.6	U	1.6	U	1.6	U	**21**		0.32	U
Trichloroethene	4.2	1.3	2	0.97	U	0.97	U	0.97	U	0.97	U	0.19	U
Trichlorofluoromethane	18.1	4.3	NL	2.2	U	2.2	U	2.2	U	2.2	U	**1.3**	

Lab Qualifiers:
U - Analyte included in the analysis, but not detected
J - Result is less than the reporting limit, but greater than or equal to the method detection level

Notes:
Only those analytes detected at one or more sample locations are presented on this table.
(1) - Final New York State Department of Health Soil Vapor Intrusion Guidance, October 2006. Appendix C Table C2-EPA 2001: Building assessment and survey evaluation (BASE) database, SUMMA® canister method, 90th percentile for indoor and outdoor air.
(2) - Final New York State Department of Health Soil Vapor Intrusion Guidance, October 2006. Table 3.1 Air Guideline Values Derived by the NYSDOH, Revised May 2017.
ug/m3 - microgram per cubic meter
NL - Not Listed

TABLE 5

Soil Vapor Intrusion Investigation Recommendations Based on NYSDOH Decision Matrix
Lubricant Packaging Co.
NYSDEC Site No. 336034

Location	Analyte	Sub Slab Air Concentration	Indoor Air Concentration	Matrix A, B and C Recommended Action
SS-SV-04/IA-04	1,1,1-Trichloroethane	16	<2.2	No Further Action
	Carbon tetrachloride	0.56	<1	No Further Action
	cis-1,2-Dichloroethene	<0.26	<0.79	No Further Action
	1,1-Dichloroethene	<0.26	<0.79	No Further Action
	Methylene chloride	7.9	<6.9	No Further Action
	Tetrachloroethene	1.3	<2.7	No Further Action
	Viynl chloride	<0.17	**<0.51**	Identify Source and Resample or Mitigate
	Trichloroethene	30	**<0.97**	Monitor
SS-SV-05/IA-05	1,1,1-Trichloroethane	110/130	2.9	No Further Action
	Carbon tetrachloride	<2.6/<0.85	<1	No Further Action
	cis-1,2-Dichloroethene	<2/<0.67	<0.79	No Further Action
	1,1-Dichloroethene	<2/<0.67	<0.79	No Further Action
	Methylene chloride	<6.9/<5.9	<6.9	No Further Action
	Tetrachloroethene	8.8/10	<2.7	No Further Action
	Viynl chloride	<1.3	**<0.51**	Identify Source and Resample or Mitigate
	Trichloroethene	12/12	**<0.97**	Monitor
SS-SV-06/IA-06	1,1,1-Trichloroethane	7.3	<2.2	No Further Action
	Carbon tetrachloride	0.5	<1	No Further Action
	cis-1,2-Dichloroethene	<0.16	<0.79	No Further Action
	1,1-Dichloroethene	<0.16	<0.79	No Further Action
	Methylene chloride	1.7	8.9	No Further Action
	Tetrachloroethene	3	<2.7	No Further Action
	Viynl chloride	<0.1	**<0.51**	Identify Source and Resample or Mitigate
	Trichloroethene	31	**<0.97**	Monitor
SS-SV-07/IA-07	1,1,1-Trichloroethane	48	3.6	No Further Action
	Carbon tetrachloride	0.7	<1	No Further Action
	cis-1,2-Dichloroethene	0.62	<0.79	No Further Action
	1,1-Dichloroethene	0.47	<0.79	No Further Action
	Methylene chloride	<2.8	<6.9	No Further Action
	Tetrachloroethene	71	<2.7	No Further Action
	Viynl chloride	<0.20	**<0.51**	Identify Source and Resample or Mitigate
	Trichloroethene	14	**<0.97**	Monitor

Notes:
Action levels based on NYSDOH Matrices A, B and C, dated May 2017.
Due to high reporting limits for non-detect values that may affect the action recommended in the matrices.
All concentrations in ug/m3.

Attachment A – Boring Logs

PRECISION
ENVIRONMENTAL SERVICES, INC.
831 RT. 67, LOT 38 A
BALLSTON SPA, NY 12020
TEL: 518-885-4399
FAX: 518-885-4416
CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

DRILLING LOG: LPES-1

Project name & location: Lubricant Packaging Co.	Spill number: 336034		Date & time started: 3/24/2021		
Drilling company: PES	Foreman: Mike Dudley		Sampler(s): Acetate sleeve	Sampler hammer: NA	Drop: NA
Drilling equipment: Geoprobe 6620	Method: Direct Push, 2-inch		Elevation & datum: NM	Completion depth: 10 ft	Rock depth: NA
Bit(s): NA	Core barrel(s): NA		Inspector(s): Brian Neumann		

DEPTH (ft bg)	SAMPLES: Recovery (inch)	Blow per 6 in.	Time	PID (ppm)	GRAPHIC LOG	SOIL DESCRIPTION	REMARKS
0	38/48	NA	--	0.3		0-0.6ft Dark brown silt with vegetation/roots	**LPES-1(0"-6")** soil sample collected
-1						0.6-1.0ft Dark brown/blackish silt and sand (25% c sand)	
-2						1-4.0ft Lt brown/yellowish orange f sand and silt, 5% rounded c sand/cobbles, slightly moist	**LPES-1(2'-4')** soil sample collected
-3							
-4							
-5	48/48	NA	--	4.1		4-4.5ft Same as Above	**LPES-1(4'-5')** soil sample collected Duplicate **Dup A**
-6						4.5-6.5ft Brown f-m sand, trace silt, increased amount cobbles with depth(layered fractured cobbles), odor, wet at 6.0ft	
-7				1.5			
-8						6.5-8.0ft Olive gray soil same description as above, saturated	
-9	24/24	NA	--	21.2		8-10.0ft Same as Above, odor, wet-saturated	
-10							
-11						Boring completed at 10 feet	
-12						Temporary 1-inch ID PVC monitoring well installed, purged and sampled, then removed following sampling	
-13						Water level in well measured at 3.2 ft below ground surface	
-14						**LPES-1** and duplicate (**Dup B**) water sample collected	
-15						Sheen was observed on bailed water surface	
-16							
-17							
-18							
-19							
-20							
-21							
-22							
-23							
-24							
-25							

PRECISION
ENVIRONMENTAL SERVICES, INC.
831 RT. 67, LOT 38 A
BALLSTON SPA, NY 12020
TEL: 518-885-4399
FAX: 518-885-4416
CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

DRILLING LOG: LPES-2

Project name & location: Lubricant Packaging Co.	Spill number: 336034	Date & time started: 3/24/2021			
Drilling company: PES	Foreman: Mike Dudley	Sampler(s): Acetate sleeve	Sampler hammer: NA	Drop: NA	
Drilling equipment: Geoprobe 6620	Method: Direct Push, 2-inch	Elevation & datum: NM	Completion depth: 9 ft	Rock depth: NA	
Bit(s): NA	Core barrel(s): NA	Inspector(s): Brian Neumann			

DEPTH (ft bg)	SAMPLES: Recovery (inch)	Blow per 6 in.	Time	PID (ppm)	GRAPHIC LOG	SOIL DESCRIPTION	REMARKS
0						0-0.3ft Dk brown-blackish silt, trace sand	**LPES-2(0"-6")** soil sample collected
-1	38/48	NA	--	0.2		0.3-3.5ft Black coal pieces (sand sized)	
-2							**LPES-2(2'-4')** soil sample collected
-3						3.5-4.0ft Lt brown/yellowish orange f-m sand, trace silt moist to wet at 3.8ft	
-4							**LPES-2(3.5'-4.5')** soil sample collected
-5						4.0-4.3ft Same as above, very moist to wet	
-6	40/48	NA	--	0.6		4.3-5ft Dark brown-brown silt, trace sand, wet 5.0-6.5ft Lt brown clay, little silt, wet	
-7						6.5-8.0ft Olive gray silt, trace f-c sand, wet	
-8							
-9	12/12	NA	--	0.7		8.0-9.0ft Same as above, wet-saturated Layer of fractured cobbles/rock at base of sampler	
-10						Boring completed at 9 feet	
-11						Temporary 1-inch ID PVC monitoring well installed, purged and sampled, then removed following sampling	
-12						Water level in well measured at 3.7 ft below ground surface **LPES-2** water sample collected	
-13						Sheen was observed on bailed water surface	
-14							
-15							
-16							
-17							
-18							
-19							
-20							
-21							
-22							
-23							
-24							
-25							

PRECISION
ENVIRONMENTAL SERVICES, INC.
831 RT. 67, LOT 38 A
BALLSTON SPA, NY 12020
TEL: 518-885-4399
FAX: 518-885-4416
CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

DRILLING LOG: LPES-3

Project name & location: Lubricant Packaging Co.	Spill number: 336034	Date & time started: 3/24/2021			
Drilling company: PES	Foreman: Mike Dudley	Sampler(s): Acetate sleeve	Sampler hammer: NA	Drop: NA	
Drilling equipment: Geoprobe 6620	Method: Direct Push, 2-inch	Elevation & datum: NM	Completion depth: 12 ft	Rock depth: NA	
Bit(s): NA	Core barrel(s): NA	Inspector(s): Brian Neumann			

DEPTH (ft bg)	SAMPLES: Recovery (inch)	Blow per 6 in.	Time	PID (ppm)	GRAPHIC LOG	SOIL DESCRIPTION	REMARKS
0	40/48	NA	--	0.5		0-0.3ft Brown silty topsoil, grasses with roots	**LPES-3(0"-6")** soil sample collected
-1							
-2						0.3-4ft Dark brown-black size pieces of coal and brick, trace f sand, moist	**LPES-3(2'-4')** soil sample collected
-3							
-4							
-5	42/48	NA	--	0.4		4-5.8ft Same as above, saturated	**LPES-3(6'-8')** soil sample collected
-6						5.8-6.3ft Gray clay, little silt, v moist to wet	
-7						6.3-8ft Light brown/yellowish orange silt, little sand, trace cobbles at base, moist	
-8							
-9	40/48	NA	--	0.4			
-10						8.0-12.0ft Same as above, saturated	
-11							
-12							
-13						Boring completed at 12 feet	
-14						Temporary 1-inch ID PVC monitoring well installed, purged and sampled, then removed following sampling	
-15						Water level in well measured at 3.95 ft below ground surface	
-16						**LPES-3** water sample collected	
-17							
-18							
-19							
-20							
-21							
-22							
-23							
-24							
-25							

PRECISION
ENVIRONMENTAL SERVICES, INC.
831 RT. 67, LOT 38 A
BALLSTON SPA, NY 12020
TEL: 518-885-4399
FAX: 518-885-4416
CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

DRILLING LOG: LPES-4

Project name & location: Lubricant Packaging Co.	Spill number: 336034	Date & time started: 3/24/2021		
Drilling company: PES	Foreman: Mike Dudley	Sampler(s): Acetate sleeve	Sampler hammer: NA	Drop: NA
Drilling equipment: Geoprobe 6620	Method: Direct Push, 2-inch	Elevation & datum: NM	Completion depth: 16 ft	Rock depth: NA
Bit(s): NA	Core barrel(s): NA	Inspector(s): Brian Neumann		

DEPTH (ft bg)	SAMPLES: Recovery (inch)	Blow per 6 in.	Time	PID (ppm)	GRAPHIC LOG	SOIL DESCRIPTION	REMARKS
0	42/48	NA	--	0.5		0-0.5ft Dark brown silt with sparse vegetation throughout	**LPES-4(0"-6")** soil sample collected
-1						0.5-3.6ft Brown sand, little silt, cobbles, slightly moist	
-2							**LPES-4(2'-4')** soil sample collected
-3						3.8-4.0ft Dark brown-black pieces of coal, slightly moist	
-4							
-5	39/48	NA	--	0.8		4.0-4.3ft Same as above 4.3-7.0ft Gray/Yellow orange silt, little f-m sand	**LPES-4(10.5'-11.5')** soil sample collected
-6							
-7						7.0-8.0ft Yellow orange sand and silt, moist	
-8							
-9	37/48	NA	--	4.7		8.0-9.0ft Same as above, slightly moist	
-10						9.0-10.8ft Yellow orange and black f-c sand, little silt, moist	
-11						10.8-12.0ft Gray f-c sand, trace silt, trac clay, greasy look, wet at 11.5ft	
-12							
-13	43/48	NA	--	3.5		12.0-13.5ft Same as above, saturated	
-14						13.5-14.3ft Dark brown/brown f-m sand, trace silt, wet	
-15						14.3-16.0ft Light brown/brown f-c sand, trace silt, trace clay wet	
-16							
-17						Boring completed at 16 feet	
-18						Temporary 1-inch ID PVC monitoring well installed, purged and sampled, then removed following sampling Water level in well measured at 7.50 ft below ground surface **LPES-4** water sample collected	
-19							
-20							
-21							
-22							
-23							
-24							
-25							

PRECISION
ENVIRONMENTAL SERVICES, INC.
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BALLSTON SPA, NY 12020
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FAX: 518-885-4416
CERTIFIED WOMEN-OWNED BUSINESS ENTERPRISE

DRILLING LOG: LPES-5

Project name & location: Lubricant Packaging Co.	Spill number: 336034	Date & time started: 3/25/2021		
Drilling company: PES	Foreman: Mike Dudley	Sampler(s): Acetate sleeve	Sampler hammer: NA	Drop: NA
Drilling equipment: Geoprobe 6620	Method: Direct Push, 2-inch	Elevation & datum: NM	Completion depth: 12 ft	Rock depth: NA
Bit(s): NA	Core barrel(s): NA	Inspector(s): Brian Neumann		

DEPTH (ft bg)	SAMPLES: Recovery (inch)	Blow per 6 in.	Time	PID (ppm)	GRAPHIC LOG	SOIL DESCRIPTION	REMARKS
0	24/48	NA	--	0.1		0-0.3ft Dark brown silt with roots (topsoil), slightly moist	**LPES-5(0"-6")** soil sample collected
-1						0.3-3.5ft Dark brown/black m-c sand, coal pieces, some plant roots at 2.0', moisture increase with depth	
-2							**LPES-5(2'-4')** soil sample collected
-3						3.5-4.0ft Light brown/yellowish orange silt and clay, wet	
-4							
-5	48/48	NA	--	0.5		4.0-7.5ft Light brown/yellowish orange silt and clay, trace subangular-subround cobbles, v moist	**LPES-5(7'-8')** soil sample collected
-6							
-7						7.5-8.0ft Light brown f-c sand, little cobbles, wet	
-8							
-9	48/48	NA	--	0		8-11.0ft Same as above, saturated	
-10						11-11.5ft Sub angular -sub round cobbles	
-11						11.5-12.0ft Light brown silt and sand, v moist to wet	
-12							
-13						Boring completed at 12 feet	
-14						Temporary 1-inch ID PVC monitoring well installed, purged and sampled, then removed following sampling	
-15						Water level in well measured at 2.33 ft below ground surface	
-16						**LPES-5** water sample collected	
-17							
-18							
-19							
-20							
-21							
-22							
-23							
-24							
-25							

Attachment B – Laboratory Analytical Reports & DUSRs

ALPHA GEOSCIENCE

Geology
Hydrology
Remediation
Water Supply

Data Usability Summary Report for Eurofins TestAmerica-Buffalo and Sacramento
Job No: 480-182523-1

15 Soil Samples and 1 Field Duplicate
Collected March 24, 2021

Prepared by: Donald Anné
April 25, 2021

The data package contains the documentation as required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. All information appears legible and complete. The data pack contains the results of 15 soil sample and 1 field duplicate analyzed for 1,4-dioxane and PFAS.

The overall performances of the analyses are acceptable. Eurofins TestAmerica-Buffalo and Sacramento labs did fulfill the requirements of the analytical methods.

The data are acceptable with some issues that are identified in the accompanying data validation reviews. The following data were qualified:

- The "not detected" semi-volatile result for 1,4-dioxane was qualified as "estimated" (UJ) for sample LPES-3 6-8 because 1 of 3 surrogate recoveries was below QC limits, but not below 10% in the sample.

- The positive PFAS result for PFBA was qualified as "estimated" (J) for sample LPES-1 0-6 because the surrogate used to quantitate PFBA was below QC limits, but not below 10% in the sample.

All data are considered usable with estimated (J or UJ) data associated with a higher level of quantitative uncertainty. Detailed information on data quality is included in the data validation reviews.

679 Plank Road ● Clifton Park, New York 12065 ● (518) 348-6995 ● Fax (518) 348-6966
www.alphageoscience.com

Qualified Data Section

Client: New York State D.E.C.
Job ID: 480-182523-1
Project/Site: Lubricant Packaging Co. #336034

Client Sample ID: LPES-1 0-6
Lab Sample ID: 480-182523-1
Date Collected: 03/24/21 10:55
Matrix: Solid
Date Received: 03/26/21 08:00
Percent Solids: 94.9

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1000	580	ug/Kg	☼	04/06/21 07:47	04/07/21 16:47	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5 (Surr)	*93*		*53 - 120*	*04/06/21 07:47*	*04/07/21 16:47*	*10*
p-Terphenyl-d14 (Surr)	*97*		*79 - 130*	*04/06/21 07:47*	*04/07/21 16:47*	*10*
2-Fluorobiphenyl	*87*		*60 - 120*	*04/06/21 07:47*	*04/07/21 16:47*	*10*

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.61**	**J**	0.20	0.028	ug/Kg	☼	03/30/21 19:37	04/03/21 22:56	1
Perfluoropentanoic acid (PFPeA)	ND		0.20	0.077	ug/Kg	☼	03/30/21 19:37	04/03/21 22:56	1
Perfluorohexanoic acid (PFHxA)	ND		0.20	0.042	ug/Kg	☼	03/30/21 19:37	04/03/21 22:56	1
Perfluoroheptanoic acid (PFHpA)	**0.030**	**J**	0.20	0.029	ug/Kg	☼	03/30/21 19:37	04/03/21 22:56	1
Perfluorooctanoic acid (PFOA)	**0.12**	**J**	0.20	0.086	ug/Kg	☼	03/30/21 19:37	04/03/21 22:56	1
Perfluorononanoic acid (PFNA)	ND		0.20	0.036	ug/Kg	☼	03/30/21 19:37	04/03/21 22:56	1
Perfluorodecanoic acid (PFDA)	ND		0.20	0.022	ug/Kg	☼	03/30/21 19:37	04/03/21 22:56	1
Perfluoroundecanoic acid (PFUnA)	ND		0.20	0.036	ug/Kg	☼	03/30/21 19:37	04/03/21 22:56	1
Perfluorododecanoic acid (PFDoA)	ND		0.20	0.067	ug/Kg	☼	03/30/21 19:37	04/03/21 22:56	1
Perfluorotridecanoic acid (PFTriA)	ND		0.20	0.051	ug/Kg	☼	03/30/21 19:37	04/03/21 22:56	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.20	0.054	ug/Kg	☼	03/30/21 19:37	04/03/21 22:56	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.20	0.025	ug/Kg	☼	03/30/21 19:37	04/03/21 22:56	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.20	0.031	ug/Kg	☼	03/30/21 19:37	04/03/21 22:56	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.20	0.035	ug/Kg	☼	03/30/21 19:37	04/03/21 22:56	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.50	0.20	ug/Kg	☼	03/30/21 19:37	04/03/21 22:56	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.20	0.039	ug/Kg	☼	03/30/21 19:37	04/03/21 22:56	1
Perfluorooctanesulfonamide (FOSA)	ND		0.20	0.082	ug/Kg	☼	03/30/21 19:37	04/03/21 22:56	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.0	0.39	ug/Kg	☼	03/30/21 19:37	04/03/21 22:56	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.0	0.37	ug/Kg	☼	03/30/21 19:37	04/03/21 22:56	1
6:2 FTS	ND		2.0	0.15	ug/Kg	☼	03/30/21 19:37	04/03/21 22:56	1
8:2 FTS	ND		2.0	0.25	ug/Kg	☼	03/30/21 19:37	04/03/21 22:56	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*13*	**5-*	*25 - 150*	*03/30/21 19:37*	*04/03/21 22:56*	*1*
13C5 PFPeA	*32*		*25 - 150*	*03/30/21 19:37*	*04/03/21 22:56*	*1*
13C2 PFHxA	*43*		*25 - 150*	*03/30/21 19:37*	*04/03/21 22:56*	*1*
13C4 PFHpA	*54*		*25 - 150*	*03/30/21 19:37*	*04/03/21 22:56*	*1*
13C4 PFOA	*55*		*25 - 150*	*03/30/21 19:37*	*04/03/21 22:56*	*1*
13C5 PFNA	*46*		*25 - 150*	*03/30/21 19:37*	*04/03/21 22:56*	*1*
13C2 PFDA	*44*		*25 - 150*	*03/30/21 19:37*	*04/03/21 22:56*	*1*
13C2 PFUnA	*48*		*25 - 150*	*03/30/21 19:37*	*04/03/21 22:56*	*1*
13C2 PFDoA	*53*		*25 - 150*	*03/30/21 19:37*	*04/03/21 22:56*	*1*
13C2 PFTeDA	*43*		*25 - 150*	*03/30/21 19:37*	*04/03/21 22:56*	*1*
13C3 PFBS	*68*		*25 - 150*	*03/30/21 19:37*	*04/03/21 22:56*	*1*
18O2 PFHxS	*74*		*25 - 150*	*03/30/21 19:37*	*04/03/21 22:56*	*1*
13C4 PFOS	*96*		*25 - 150*	*03/30/21 19:37*	*04/03/21 22:56*	*1*
13C8 FOSA	*29*		*25 - 150*	*03/30/21 19:37*	*04/03/21 22:56*	*1*
d3-NMeFOSAA	*25*		*25 - 150*	*03/30/21 19:37*	*04/03/21 22:56*	*1*
d5-NEtFOSAA	*25*		*25 - 150*	*03/30/21 19:37*	*04/03/21 22:56*	*1*

Client Sample ID: LPES-1 0-6

Lab Sample ID: 480-182523-1
Date Collected: 03/24/21 10:55
Matrix: Solid
Date Received: 03/26/21 08:00
Percent Solids: 94.9

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-6:2 FTS	*182*	**5+*	*25 - 150*	*03/30/21 19:37*	*04/03/21 22:56*	*1*
M2-8:2 FTS	*209*	**5+*	*25 - 150*	*03/30/21 19:37*	*04/03/21 22:56*	*1*

Client Sample ID: LPES-1 2-4

Lab Sample ID: 480-182523-2
Date Collected: 03/24/21 11:00
Matrix: Solid
Date Received: 03/26/21 08:00
Percent Solids: 92.0

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		110	60	ug/Kg	☼	04/06/21 07:47	04/07/21 17:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5 (Surr)	*87*		*53 - 120*	*04/06/21 07:47*	*04/07/21 17:12*	*1*
p-Terphenyl-d14 (Surr)	*94*		*79 - 130*	*04/06/21 07:47*	*04/07/21 17:12*	*1*
2-Fluorobiphenyl	*107*		*60 - 120*	*04/06/21 07:47*	*04/07/21 17:12*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		0.22	0.030	ug/Kg	☼	03/30/21 19:37	04/03/21 23:05	1
Perfluoropentanoic acid (PFPeA)	ND		0.22	0.083	ug/Kg	☼	03/30/21 19:37	04/03/21 23:05	1
Perfluorohexanoic acid (PFHxA)	ND		0.22	0.045	ug/Kg	☼	03/30/21 19:37	04/03/21 23:05	1
Perfluoroheptanoic acid (PFHpA)	ND		0.22	0.031	ug/Kg	☼	03/30/21 19:37	04/03/21 23:05	1
Perfluorooctanoic acid (PFOA)	ND		0.22	0.093	ug/Kg	☼	03/30/21 19:37	04/03/21 23:05	1
Perfluorononanoic acid (PFNA)	ND		0.22	0.039	ug/Kg	☼	03/30/21 19:37	04/03/21 23:05	1
Perfluorodecanoic acid (PFDA)	ND		0.22	0.024	ug/Kg	☼	03/30/21 19:37	04/03/21 23:05	1
Perfluoroundecanoic acid (PFUnA)	ND		0.22	0.039	ug/Kg	☼	03/30/21 19:37	04/03/21 23:05	1
Perfluorododecanoic acid (PFDoA)	ND		0.22	0.072	ug/Kg	☼	03/30/21 19:37	04/03/21 23:05	1
Perfluorotridecanoic acid (PFTriA)	ND		0.22	0.055	ug/Kg	☼	03/30/21 19:37	04/03/21 23:05	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.22	0.058	ug/Kg	☼	03/30/21 19:37	04/03/21 23:05	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.22	0.027	ug/Kg	☼	03/30/21 19:37	04/03/21 23:05	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.22	0.033	ug/Kg	☼	03/30/21 19:37	04/03/21 23:05	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.22	0.038	ug/Kg	☼	03/30/21 19:37	04/03/21 23:05	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.54	0.22	ug/Kg	☼	03/30/21 19:37	04/03/21 23:05	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.22	0.042	ug/Kg	☼	03/30/21 19:37	04/03/21 23:05	1
Perfluorooctanesulfonamide (FOSA)	ND		0.22	0.088	ug/Kg	☼	03/30/21 19:37	04/03/21 23:05	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.2	0.42	ug/Kg	☼	03/30/21 19:37	04/03/21 23:05	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.2	0.40	ug/Kg	☼	03/30/21 19:37	04/03/21 23:05	1
6:2 FTS	ND		2.2	0.16	ug/Kg	☼	03/30/21 19:37	04/03/21 23:05	1
8:2 FTS	ND		2.2	0.27	ug/Kg	☼	03/30/21 19:37	04/03/21 23:05	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*53*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:05*	*1*
13C5 PFPeA	*65*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:05*	*1*
13C2 PFHxA	*64*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:05*	*1*
13C4 PFHpA	*69*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:05*	*1*
13C4 PFOA	*67*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:05*	*1*
13C5 PFNA	*63*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:05*	*1*
13C2 PFDA	*70*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:05*	*1*
13C2 PFUnA	*67*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:05*	*1*

Client Sample ID: LPES-1 2-4

Lab Sample ID: 480-182523-2
Date Collected: 03/24/21 11:00
Matrix: Solid
Date Received: 03/26/21 08:00
Percent Solids: 92.0

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDoA	*69*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:05*	*1*
13C2 PFTeDA	*57*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:05*	*1*
13C3 PFBS	*72*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:05*	*1*
18O2 PFHxS	*79*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:05*	*1*
13C4 PFOS	*78*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:05*	*1*
13C8 FOSA	*61*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:05*	*1*
d3-NMeFOSAA	*54*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:05*	*1*
d5-NEtFOSAA	*55*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:05*	*1*
M2-6:2 FTS	*220*	**5+*	*25 - 150*	*03/30/21 19:37*	*04/03/21 23:05*	*1*
M2-8:2 FTS	*177*	**5+*	*25 - 150*	*03/30/21 19:37*	*04/03/21 23:05*	*1*

Client Sample ID: LPES-1 4-5

Lab Sample ID: 480-182523-3
Date Collected: 03/24/21 11:05
Matrix: Solid
Date Received: 03/26/21 08:00
Percent Solids: 87.4

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		570	310	ug/Kg	☼	04/06/21 07:47	04/07/21 17:37	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5 (Surr)	*86*		*53 - 120*	*04/06/21 07:47*	*04/07/21 17:37*	*5*
p-Terphenyl-d14 (Surr)	*98*		*79 - 130*	*04/06/21 07:47*	*04/07/21 17:37*	*5*
2-Fluorobiphenyl	*82*		*60 - 120*	*04/06/21 07:47*	*04/07/21 17:37*	*5*

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		0.22	0.031	ug/Kg	☼	03/30/21 19:37	04/03/21 23:14	1
Perfluoropentanoic acid (PFPeA)	ND		0.22	0.085	ug/Kg	☼	03/30/21 19:37	04/03/21 23:14	1
Perfluorohexanoic acid (PFHxA)	ND		0.22	0.046	ug/Kg	☼	03/30/21 19:37	04/03/21 23:14	1
Perfluoroheptanoic acid (PFHpA)	ND		0.22	0.032	ug/Kg	☼	03/30/21 19:37	04/03/21 23:14	1
Perfluorooctanoic acid (PFOA)	ND		0.22	0.094	ug/Kg	☼	03/30/21 19:37	04/03/21 23:14	1
Perfluorononanoic acid (PFNA)	ND		0.22	0.040	ug/Kg	☼	03/30/21 19:37	04/03/21 23:14	1
Perfluorodecanoic acid (PFDA)	ND		0.22	0.024	ug/Kg	☼	03/30/21 19:37	04/03/21 23:14	1
Perfluoroundecanoic acid (PFUnA)	ND		0.22	0.040	ug/Kg	☼	03/30/21 19:37	04/03/21 23:14	1
Perfluorododecanoic acid (PFDoA)	ND		0.22	0.074	ug/Kg	☼	03/30/21 19:37	04/03/21 23:14	1
Perfluorotridecanoic acid (PFTriA)	ND		0.22	0.056	ug/Kg	☼	03/30/21 19:37	04/03/21 23:14	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.22	0.059	ug/Kg	☼	03/30/21 19:37	04/03/21 23:14	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.22	0.027	ug/Kg	☼	03/30/21 19:37	04/03/21 23:14	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.22	0.034	ug/Kg	☼	03/30/21 19:37	04/03/21 23:14	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.22	0.038	ug/Kg	☼	03/30/21 19:37	04/03/21 23:14	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.55	0.22	ug/Kg	☼	03/30/21 19:37	04/03/21 23:14	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.22	0.043	ug/Kg	☼	03/30/21 19:37	04/03/21 23:14	1
Perfluorooctanesulfonamide (FOSA)	ND		0.22	0.090	ug/Kg	☼	03/30/21 19:37	04/03/21 23:14	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.2	0.43	ug/Kg	☼	03/30/21 19:37	04/03/21 23:14	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.2	0.41	ug/Kg	☼	03/30/21 19:37	04/03/21 23:14	1
6:2 FTS	ND		2.2	0.16	ug/Kg	☼	03/30/21 19:37	04/03/21 23:14	1
8:2 FTS	ND		2.2	0.27	ug/Kg	☼	03/30/21 19:37	04/03/21 23:14	1

Client Sample ID: LPES-1 4-5

Lab Sample ID: 480-182523-3
Date Collected: 03/24/21 11:05
Matrix: Solid
Date Received: 03/26/21 08:00
Percent Solids: 87.4

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*45*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:14*	*1*
13C5 PFPeA	*52*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:14*	*1*
13C2 PFHxA	*52*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:14*	*1*
13C4 PFHpA	*62*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:14*	*1*
13C4 PFOA	*57*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:14*	*1*
13C5 PFNA	*64*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:14*	*1*
13C2 PFDA	*66*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:14*	*1*
13C2 PFUnA	*62*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:14*	*1*
13C2 PFDoA	*67*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:14*	*1*
13C2 PFTeDA	*59*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:14*	*1*
13C3 PFBS	*49*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:14*	*1*
18O2 PFHxS	*53*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:14*	*1*
13C4 PFOS	*56*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:14*	*1*
13C8 FOSA	*65*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:14*	*1*
d3-NMeFOSAA	*67*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:14*	*1*
d5-NEtFOSAA	*75*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:14*	*1*
M2-6:2 FTS	*113*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:14*	*1*
M2-8:2 FTS	*133*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:14*	*1*

Client Sample ID: DUPA

Lab Sample ID: 480-182523-4
Date Collected: 03/24/21 10:45
Matrix: Solid
Date Received: 03/26/21 08:00
Percent Solids: 89.8

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		560	310	ug/Kg	☼	04/06/21 07:47	04/07/21 18:02	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5 (Surr)	*80*		*53 - 120*	*04/06/21 07:47*	*04/07/21 18:02*	*5*
p-Terphenyl-d14 (Surr)	*94*		*79 - 130*	*04/06/21 07:47*	*04/07/21 18:02*	*5*
2-Fluorobiphenyl	*96*		*60 - 120*	*04/06/21 07:47*	*04/07/21 18:02*	*5*

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		0.22	0.031	ug/Kg	☼	03/30/21 19:37	04/03/21 23:23	1
Perfluoropentanoic acid (PFPeA)	ND		0.22	0.085	ug/Kg	☼	03/30/21 19:37	04/03/21 23:23	1
Perfluorohexanoic acid (PFHxA)	ND		0.22	0.046	ug/Kg	☼	03/30/21 19:37	04/03/21 23:23	1
Perfluoroheptanoic acid (PFHpA)	ND		0.22	0.032	ug/Kg	☼	03/30/21 19:37	04/03/21 23:23	1
Perfluorooctanoic acid (PFOA)	ND		0.22	0.095	ug/Kg	☼	03/30/21 19:37	04/03/21 23:23	1
Perfluorononanoic acid (PFNA)	ND		0.22	0.040	ug/Kg	☼	03/30/21 19:37	04/03/21 23:23	1
Perfluorodecanoic acid (PFDA)	ND		0.22	0.024	ug/Kg	☼	03/30/21 19:37	04/03/21 23:23	1
Perfluoroundecanoic acid (PFUnA)	ND		0.22	0.040	ug/Kg	☼	03/30/21 19:37	04/03/21 23:23	1
Perfluorododecanoic acid (PFDoA)	ND		0.22	0.074	ug/Kg	☼	03/30/21 19:37	04/03/21 23:23	1
Perfluorotridecanoic acid (PFTriA)	ND		0.22	0.056	ug/Kg	☼	03/30/21 19:37	04/03/21 23:23	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.22	0.060	ug/Kg	☼	03/30/21 19:37	04/03/21 23:23	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.22	0.028	ug/Kg	☼	03/30/21 19:37	04/03/21 23:23	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.22	0.034	ug/Kg	☼	03/30/21 19:37	04/03/21 23:23	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.22	0.039	ug/Kg	☼	03/30/21 19:37	04/03/21 23:23	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.55	0.22	ug/Kg	☼	03/30/21 19:37	04/03/21 23:23	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.22	0.043	ug/Kg	☼	03/30/21 19:37	04/03/21 23:23	1
Perfluorooctanesulfonamide (FOSA)	ND		0.22	0.091	ug/Kg	☼	03/30/21 19:37	04/03/21 23:23	1

Client Sample ID: DUPA
Lab Sample ID: 480-182523-4
Date Collected: 03/24/21 10:45
Matrix: Solid
Date Received: 03/26/21 08:00
Percent Solids: 89.8

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.2	0.43	ug/Kg	☼	03/30/21 19:37	04/03/21 23:23	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.2	0.41	ug/Kg	☼	03/30/21 19:37	04/03/21 23:23	1
6:2 FTS	ND		2.2	0.17	ug/Kg	☼	03/30/21 19:37	04/03/21 23:23	1
8:2 FTS	ND		2.2	0.28	ug/Kg	☼	03/30/21 19:37	04/03/21 23:23	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*62*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:23*	*1*
13C5 PFPeA	*73*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:23*	*1*
13C2 PFHxA	*71*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:23*	*1*
13C4 PFHpA	*78*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:23*	*1*
13C4 PFOA	*80*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:23*	*1*
13C5 PFNA	*80*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:23*	*1*
13C2 PFDA	*85*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:23*	*1*
13C2 PFUnA	*86*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:23*	*1*
13C2 PFDoA	*86*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:23*	*1*
13C2 PFTeDA	*76*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:23*	*1*
13C3 PFBS	*62*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:23*	*1*
18O2 PFHxS	*71*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:23*	*1*
13C4 PFOS	*71*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:23*	*1*
13C8 FOSA	*79*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:23*	*1*
d3-NMeFOSAA	*80*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:23*	*1*
d5-NEtFOSAA	*90*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:23*	*1*
M2-6:2 FTS	*176*	**5+*	*25 - 150*	*03/30/21 19:37*	*04/03/21 23:23*	*1*
M2-8:2 FTS	*174*	**5+*	*25 - 150*	*03/30/21 19:37*	*04/03/21 23:23*	*1*

Client Sample ID: LPES-2 0-6
Lab Sample ID: 480-182523-5
Date Collected: 03/24/21 12:00
Matrix: Solid
Date Received: 03/26/21 08:00
Percent Solids: 87.6

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		110	62	ug/Kg	☼	04/06/21 07:47	04/07/21 18:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5 (Surr)	*94*		*53 - 120*	*04/06/21 07:47*	*04/07/21 18:26*	*1*
p-Terphenyl-d14 (Surr)	*104*		*79 - 130*	*04/06/21 07:47*	*04/07/21 18:26*	*1*
2-Fluorobiphenyl	*104*		*60 - 120*	*04/06/21 07:47*	*04/07/21 18:26*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.11**	**J**	0.23	0.032	ug/Kg	☼	03/30/21 19:37	04/03/21 23:33	1
Perfluoropentanoic acid (PFPeA)	ND		0.23	0.087	ug/Kg	☼	03/30/21 19:37	04/03/21 23:33	1
Perfluorohexanoic acid (PFHxA)	ND		0.23	0.048	ug/Kg	☼	03/30/21 19:37	04/03/21 23:33	1
Perfluoroheptanoic acid (PFHpA)	ND		0.23	0.033	ug/Kg	☼	03/30/21 19:37	04/03/21 23:33	1
Perfluorooctanoic acid (PFOA)	ND		0.23	0.098	ug/Kg	☼	03/30/21 19:37	04/03/21 23:33	1
Perfluorononanoic acid (PFNA)	ND		0.23	0.041	ug/Kg	☼	03/30/21 19:37	04/03/21 23:33	1
Perfluorodecanoic acid (PFDA)	**0.051**	**J**	0.23	0.025	ug/Kg	☼	03/30/21 19:37	04/03/21 23:33	1
Perfluoroundecanoic acid (PFUnA)	ND		0.23	0.041	ug/Kg	☼	03/30/21 19:37	04/03/21 23:33	1
Perfluorododecanoic acid (PFDoA)	ND		0.23	0.076	ug/Kg	☼	03/30/21 19:37	04/03/21 23:33	1
Perfluorotridecanoic acid (PFTriA)	ND		0.23	0.058	ug/Kg	☼	03/30/21 19:37	04/03/21 23:33	1

Client Sample ID: LPES-2 0-6

Lab Sample ID: 480-182523-5
Date Collected: 03/24/21 12:00
Matrix: Solid
Date Received: 03/26/21 08:00
Percent Solids: 87.6

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotetradecanoic acid (PFTeA)	ND		0.23	0.061	ug/Kg	☼	03/30/21 19:37	04/03/21 23:33	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.23	0.028	ug/Kg	☼	03/30/21 19:37	04/03/21 23:33	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.23	0.035	ug/Kg	☼	03/30/21 19:37	04/03/21 23:33	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.23	0.040	ug/Kg	☼	03/30/21 19:37	04/03/21 23:33	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.57	0.23	ug/Kg	☼	03/30/21 19:37	04/03/21 23:33	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.23	0.044	ug/Kg	☼	03/30/21 19:37	04/03/21 23:33	1
Perfluorooctanesulfonamide (FOSA)	ND		0.23	0.093	ug/Kg	☼	03/30/21 19:37	04/03/21 23:33	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.3	0.44	ug/Kg	☼	03/30/21 19:37	04/03/21 23:33	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.3	0.42	ug/Kg	☼	03/30/21 19:37	04/03/21 23:33	1
6:2 FTS	ND		2.3	0.17	ug/Kg	☼	03/30/21 19:37	04/03/21 23:33	1
8:2 FTS	ND		2.3	0.28	ug/Kg	☼	03/30/21 19:37	04/03/21 23:33	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*55*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:33*	*1*
13C5 PFPeA	*75*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:33*	*1*
13C2 PFHxA	*71*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:33*	*1*
13C4 PFHpA	*79*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:33*	*1*
13C4 PFOA	*79*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:33*	*1*
13C5 PFNA	*81*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:33*	*1*
13C2 PFDA	*78*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:33*	*1*
13C2 PFUnA	*77*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:33*	*1*
13C2 PFDoA	*78*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:33*	*1*
13C2 PFTeDA	*79*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:33*	*1*
13C3 PFBS	*73*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:33*	*1*
18O2 PFHxS	*78*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:33*	*1*
13C4 PFOS	*77*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:33*	*1*
13C8 FOSA	*82*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:33*	*1*
d3-NMeFOSAA	*82*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:33*	*1*
d5-NEtFOSAA	*88*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:33*	*1*
M2-6:2 FTS	*163*	**5+*	*25 - 150*	*03/30/21 19:37*	*04/03/21 23:33*	*1*
M2-8:2 FTS	*145*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:33*	*1*

Client Sample ID: LPES-2 2-4

Lab Sample ID: 480-182523-6
Date Collected: 03/24/21 12:05
Matrix: Solid
Date Received: 03/26/21 08:00
Percent Solids: 88.7

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		110	62	ug/Kg	☼	04/06/21 07:47	04/07/21 18:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5 (Surr)	*86*		*53 - 120*	*04/06/21 07:47*	*04/07/21 18:50*	*1*
p-Terphenyl-d14 (Surr)	*94*		*79 - 130*	*04/06/21 07:47*	*04/07/21 18:50*	*1*
2-Fluorobiphenyl	*105*		*60 - 120*	*04/06/21 07:47*	*04/07/21 18:50*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		0.22	0.031	ug/Kg	☼	03/30/21 19:37	04/03/21 23:42	1
Perfluoropentanoic acid (PFPeA)	ND		0.22	0.085	ug/Kg	☼	03/30/21 19:37	04/03/21 23:42	1

Client: New York State D.E.C.
Job ID: 480-182523-1
Project/Site: Lubricant Packaging Co. #336034

Client Sample ID: LPES-2 2-4
Lab Sample ID: 480-182523-6
Date Collected: 03/24/21 12:05
Matrix: Solid
Date Received: 03/26/21 08:00
Percent Solids: 88.7

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	ND		0.22	0.046	ug/Kg	☼	03/30/21 19:37	04/03/21 23:42	1
Perfluoroheptanoic acid (PFHpA)	ND		0.22	0.032	ug/Kg	☼	03/30/21 19:37	04/03/21 23:42	1
Perfluorooctanoic acid (PFOA)	ND		0.22	0.095	ug/Kg	☼	03/30/21 19:37	04/03/21 23:42	1
Perfluorononanoic acid (PFNA)	ND		0.22	0.040	ug/Kg	☼	03/30/21 19:37	04/03/21 23:42	1
Perfluorodecanoic acid (PFDA)	ND		0.22	0.024	ug/Kg	☼	03/30/21 19:37	04/03/21 23:42	1
Perfluoroundecanoic acid (PFUnA)	ND		0.22	0.040	ug/Kg	☼	03/30/21 19:37	04/03/21 23:42	1
Perfluorododecanoic acid (PFDoA)	ND		0.22	0.074	ug/Kg	☼	03/30/21 19:37	04/03/21 23:42	1
Perfluorotridecanoic acid (PFTriA)	ND		0.22	0.056	ug/Kg	☼	03/30/21 19:37	04/03/21 23:42	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.22	0.060	ug/Kg	☼	03/30/21 19:37	04/03/21 23:42	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.22	0.028	ug/Kg	☼	03/30/21 19:37	04/03/21 23:42	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.22	0.034	ug/Kg	☼	03/30/21 19:37	04/03/21 23:42	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.22	0.039	ug/Kg	☼	03/30/21 19:37	04/03/21 23:42	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.55	0.22	ug/Kg	☼	03/30/21 19:37	04/03/21 23:42	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.22	0.043	ug/Kg	☼	03/30/21 19:37	04/03/21 23:42	1
Perfluorooctanesulfonamide (FOSA)	ND		0.22	0.091	ug/Kg	☼	03/30/21 19:37	04/03/21 23:42	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.2	0.43	ug/Kg	☼	03/30/21 19:37	04/03/21 23:42	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.2	0.41	ug/Kg	☼	03/30/21 19:37	04/03/21 23:42	1
6:2 FTS	ND		2.2	0.17	ug/Kg	☼	03/30/21 19:37	04/03/21 23:42	1
8:2 FTS	ND		2.2	0.28	ug/Kg	☼	03/30/21 19:37	04/03/21 23:42	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*63*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:42*	*1*
13C5 PFPeA	*67*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:42*	*1*
13C2 PFHxA	*70*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:42*	*1*
13C4 PFHpA	*83*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:42*	*1*
13C4 PFOA	*74*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:42*	*1*
13C5 PFNA	*89*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:42*	*1*
13C2 PFDA	*82*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:42*	*1*
13C2 PFUnA	*82*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:42*	*1*
13C2 PFDoA	*87*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:42*	*1*
13C2 PFTeDA	*77*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:42*	*1*
13C3 PFBS	*69*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:42*	*1*
18O2 PFHxS	*79*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:42*	*1*
13C4 PFOS	*69*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:42*	*1*
13C8 FOSA	*80*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:42*	*1*
d3-NMeFOSAA	*88*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:42*	*1*
d5-NEtFOSAA	*97*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:42*	*1*
M2-6:2 FTS	*101*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:42*	*1*
M2-8:2 FTS	*126*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:42*	*1*

Client Sample ID: LPES-2 3.5-4.5
Lab Sample ID: 480-182523-7
Date Collected: 03/24/21 12:15
Matrix: Solid
Date Received: 03/26/21 08:00
Percent Solids: 76.6

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		130	72	ug/Kg	☼	04/06/21 07:47	04/07/21 19:15	1

Client Sample ID: LPES-2 3.5-4.5
Date Collected: 03/24/21 12:15
Date Received: 03/26/21 08:00

Lab Sample ID: 480-182523-7
Matrix: Solid
Percent Solids: 76.6

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5 (Surr)	*95*		*53 - 120*	*04/06/21 07:47*	*04/07/21 19:15*	*1*
p-Terphenyl-d14 (Surr)	*109*		*79 - 130*	*04/06/21 07:47*	*04/07/21 19:15*	*1*
2-Fluorobiphenyl	*113*		*60 - 120*	*04/06/21 07:47*	*04/07/21 19:15*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		0.24	0.034	ug/Kg	☼	03/30/21 19:37	04/03/21 23:51	1
Perfluoropentanoic acid (PFPeA)	ND		0.24	0.093	ug/Kg	☼	03/30/21 19:37	04/03/21 23:51	1
Perfluorohexanoic acid (PFHxA)	**0.079**	**J**	0.24	0.051	ug/Kg	☼	03/30/21 19:37	04/03/21 23:51	1
Perfluoroheptanoic acid (PFHpA)	ND		0.24	0.035	ug/Kg	☼	03/30/21 19:37	04/03/21 23:51	1
Perfluorooctanoic acid (PFOA)	ND		0.24	0.10	ug/Kg	☼	03/30/21 19:37	04/03/21 23:51	1
Perfluorononanoic acid (PFNA)	ND		0.24	0.044	ug/Kg	☼	03/30/21 19:37	04/03/21 23:51	1
Perfluorodecanoic acid (PFDA)	**0.028**	**J**	0.24	0.027	ug/Kg	☼	03/30/21 19:37	04/03/21 23:51	1
Perfluoroundecanoic acid (PFUnA)	ND		0.24	0.044	ug/Kg	☼	03/30/21 19:37	04/03/21 23:51	1
Perfluorododecanoic acid (PFDoA)	ND		0.24	0.081	ug/Kg	☼	03/30/21 19:37	04/03/21 23:51	1
Perfluorotridecanoic acid (PFTriA)	ND		0.24	0.062	ug/Kg	☼	03/30/21 19:37	04/03/21 23:51	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.24	0.066	ug/Kg	☼	03/30/21 19:37	04/03/21 23:51	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.24	0.030	ug/Kg	☼	03/30/21 19:37	04/03/21 23:51	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.24	0.038	ug/Kg	☼	03/30/21 19:37	04/03/21 23:51	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.24	0.042	ug/Kg	☼	03/30/21 19:37	04/03/21 23:51	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.61	0.24	ug/Kg	☼	03/30/21 19:37	04/03/21 23:51	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.24	0.047	ug/Kg	☼	03/30/21 19:37	04/03/21 23:51	1
Perfluorooctanesulfonamide (FOSA)	ND		0.24	0.099	ug/Kg	☼	03/30/21 19:37	04/03/21 23:51	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.4	0.47	ug/Kg	☼	03/30/21 19:37	04/03/21 23:51	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.4	0.45	ug/Kg	☼	03/30/21 19:37	04/03/21 23:51	1
6:2 FTS	ND		2.4	0.18	ug/Kg	☼	03/30/21 19:37	04/03/21 23:51	1
8:2 FTS	ND		2.4	0.30	ug/Kg	☼	03/30/21 19:37	04/03/21 23:51	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*49*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:51*	*1*
13C5 PFPeA	*66*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:51*	*1*
13C2 PFHxA	*67*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:51*	*1*
13C4 PFHpA	*74*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:51*	*1*
13C4 PFOA	*82*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:51*	*1*
13C5 PFNA	*85*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:51*	*1*
13C2 PFDA	*72*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:51*	*1*
13C2 PFUnA	*68*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:51*	*1*
13C2 PFDoA	*76*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:51*	*1*
13C2 PFTeDA	*75*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:51*	*1*
13C3 PFBS	*65*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:51*	*1*
18O2 PFHxS	*73*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:51*	*1*
13C4 PFOS	*74*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:51*	*1*
13C8 FOSA	*74*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:51*	*1*
d3-NMeFOSAA	*65*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:51*	*1*
d5-NEtFOSAA	*79*		*25 - 150*	*03/30/21 19:37*	*04/03/21 23:51*	*1*
M2-6:2 FTS	*199*	**5+*	*25 - 150*	*03/30/21 19:37*	*04/03/21 23:51*	*1*
M2-8:2 FTS	*167*	**5+*	*25 - 150*	*03/30/21 19:37*	*04/03/21 23:51*	*1*

Client: New York State D.E.C.
Job ID: 480-182523-1
Project/Site: Lubricant Packaging Co. #336034

Client Sample ID: LPES-3 0-6
Lab Sample ID: 480-182523-8
Date Collected: 03/24/21 13:00
Matrix: Solid
Date Received: 03/26/21 08:00
Percent Solids: 88.0

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1100	620	ug/Kg	☼	04/06/21 07:47	04/07/21 19:39	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5 (Surr)	*97*		*53 - 120*	*04/06/21 07:47*	*04/07/21 19:39*	*10*
p-Terphenyl-d14 (Surr)	*103*		*79 - 130*	*04/06/21 07:47*	*04/07/21 19:39*	*10*
2-Fluorobiphenyl	*103*		*60 - 120*	*04/06/21 07:47*	*04/07/21 19:39*	*10*

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.096**	**J**	0.22	0.031	ug/Kg	☼	03/30/21 19:37	04/04/21 00:00	1
Perfluoropentanoic acid (PFPeA)	**0.14**	**J**	0.22	0.085	ug/Kg	☼	03/30/21 19:37	04/04/21 00:00	1
Perfluorohexanoic acid (PFHxA)	**0.11**	**J**	0.22	0.047	ug/Kg	☼	03/30/21 19:37	04/04/21 00:00	1
Perfluoroheptanoic acid (PFHpA)	**0.083**	**J**	0.22	0.032	ug/Kg	☼	03/30/21 19:37	04/04/21 00:00	1
Perfluorooctanoic acid (PFOA)	**0.22**		0.22	0.095	ug/Kg	☼	03/30/21 19:37	04/04/21 00:00	1
Perfluorononanoic acid (PFNA)	**0.14**	**J**	0.22	0.040	ug/Kg	☼	03/30/21 19:37	04/04/21 00:00	1
Perfluorodecanoic acid (PFDA)	**0.17**	**J**	0.22	0.024	ug/Kg	☼	03/30/21 19:37	04/04/21 00:00	1
Perfluoroundecanoic acid (PFUnA)	**0.36**		0.22	0.040	ug/Kg	☼	03/30/21 19:37	04/04/21 00:00	1
Perfluorododecanoic acid (PFDoA)	**0.15**	**J**	0.22	0.074	ug/Kg	☼	03/30/21 19:37	04/04/21 00:00	1
Perfluorotridecanoic acid (PFTriA)	**0.11**	**J**	0.22	0.057	ug/Kg	☼	03/30/21 19:37	04/04/21 00:00	1
Perfluorotetradecanoic acid (PFTeA)	**0.094**	**J**	0.22	0.060	ug/Kg	☼	03/30/21 19:37	04/04/21 00:00	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.22	0.028	ug/Kg	☼	03/30/21 19:37	04/04/21 00:00	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.22	0.034	ug/Kg	☼	03/30/21 19:37	04/04/21 00:00	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.22	0.039	ug/Kg	☼	03/30/21 19:37	04/04/21 00:00	1
Perfluorooctanesulfonic acid (PFOS)	**0.29**	**J I**	0.55	0.22	ug/Kg	☼	03/30/21 19:37	04/04/21 00:00	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.22	0.043	ug/Kg	☼	03/30/21 19:37	04/04/21 00:00	1
Perfluorooctanesulfonamide (FOSA)	ND		0.22	0.091	ug/Kg	☼	03/30/21 19:37	04/04/21 00:00	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.2	0.43	ug/Kg	☼	03/30/21 19:37	04/04/21 00:00	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.2	0.41	ug/Kg	☼	03/30/21 19:37	04/04/21 00:00	1
6:2 FTS	ND		2.2	0.17	ug/Kg	☼	03/30/21 19:37	04/04/21 00:00	1
8:2 FTS	ND		2.2	0.28	ug/Kg	☼	03/30/21 19:37	04/04/21 00:00	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*53*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:00*	*1*
13C5 PFPeA	*75*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:00*	*1*
13C2 PFHxA	*71*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:00*	*1*
13C4 PFHpA	*71*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:00*	*1*
13C4 PFOA	*77*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:00*	*1*
13C5 PFNA	*74*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:00*	*1*
13C2 PFDA	*69*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:00*	*1*
13C2 PFUnA	*74*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:00*	*1*
13C2 PFDoA	*67*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:00*	*1*
13C2 PFTeDA	*57*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:00*	*1*
13C3 PFBS	*68*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:00*	*1*
18O2 PFHxS	*75*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:00*	*1*
13C4 PFOS	*73*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:00*	*1*

Client Sample ID: LPES-3 0-6

Lab Sample ID: 480-182523-8
Date Collected: 03/24/21 13:00
Matrix: Solid
Date Received: 03/26/21 08:00
Percent Solids: 88.0

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C8 FOSA	*63*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:00*	*1*
d3-NMeFOSAA	*60*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:00*	*1*
d5-NEtFOSAA	*59*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:00*	*1*
M2-6:2 FTS	*206*	**5+*	*25 - 150*	*03/30/21 19:37*	*04/04/21 00:00*	*1*
M2-8:2 FTS	*173*	**5+*	*25 - 150*	*03/30/21 19:37*	*04/04/21 00:00*	*1*

Client Sample ID: LPES-3 2-4

Lab Sample ID: 480-182523-9
Date Collected: 03/24/21 13:05
Matrix: Solid
Date Received: 03/26/21 08:00
Percent Solids: 84.4

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		590	320	ug/Kg	☼	04/07/21 11:00	04/08/21 17:24	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5 (Surr)	*98*		*53 - 120*	*04/07/21 11:00*	*04/08/21 17:24*	*5*
p-Terphenyl-d14 (Surr)	*110*		*79 - 130*	*04/07/21 11:00*	*04/08/21 17:24*	*5*
2-Fluorobiphenyl	*101*		*60 - 120*	*04/07/21 11:00*	*04/08/21 17:24*	*5*

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.096**	**J**	0.22	0.031	ug/Kg	☼	03/30/21 19:37	04/04/21 00:27	1
Perfluoropentanoic acid (PFPeA)	ND		0.22	0.086	ug/Kg	☼	03/30/21 19:37	04/04/21 00:27	1
Perfluorohexanoic acid (PFHxA)	ND		0.22	0.047	ug/Kg	☼	03/30/21 19:37	04/04/21 00:27	1
Perfluoroheptanoic acid (PFHpA)	ND		0.22	0.032	ug/Kg	☼	03/30/21 19:37	04/04/21 00:27	1
Perfluorooctanoic acid (PFOA)	ND		0.22	0.096	ug/Kg	☼	03/30/21 19:37	04/04/21 00:27	1
Perfluorononanoic acid (PFNA)	**0.044**	**J**	0.22	0.040	ug/Kg	☼	03/30/21 19:37	04/04/21 00:27	1
Perfluorodecanoic acid (PFDA)	**0.061**	**J**	0.22	0.024	ug/Kg	☼	03/30/21 19:37	04/04/21 00:27	1
Perfluoroundecanoic acid (PFUnA)	ND	F1	0.22	0.040	ug/Kg	☼	03/30/21 19:37	04/04/21 00:27	1
Perfluorododecanoic acid (PFDoA)	ND		0.22	0.075	ug/Kg	☼	03/30/21 19:37	04/04/21 00:27	1
Perfluorotridecanoic acid (PFTriA)	ND		0.22	0.057	ug/Kg	☼	03/30/21 19:37	04/04/21 00:27	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.22	0.060	ug/Kg	☼	03/30/21 19:37	04/04/21 00:27	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.22	0.028	ug/Kg	☼	03/30/21 19:37	04/04/21 00:27	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.22	0.035	ug/Kg	☼	03/30/21 19:37	04/04/21 00:27	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.22	0.039	ug/Kg	☼	03/30/21 19:37	04/04/21 00:27	1
Perfluorooctanesulfonic acid (PFOS)	**0.24**	**J I**	0.56	0.22	ug/Kg	☼	03/30/21 19:37	04/04/21 00:27	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.22	0.043	ug/Kg	☼	03/30/21 19:37	04/04/21 00:27	1
Perfluorooctanesulfonamide (FOSA)	ND		0.22	0.091	ug/Kg	☼	03/30/21 19:37	04/04/21 00:27	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.2	0.43	ug/Kg	☼	03/30/21 19:37	04/04/21 00:27	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.2	0.41	ug/Kg	☼	03/30/21 19:37	04/04/21 00:27	1
6:2 FTS	ND		2.2	0.17	ug/Kg	☼	03/30/21 19:37	04/04/21 00:27	1
8:2 FTS	ND		2.2	0.28	ug/Kg	☼	03/30/21 19:37	04/04/21 00:27	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*55*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:27*	*1*
13C5 PFPeA	*79*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:27*	*1*
13C2 PFHxA	*79*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:27*	*1*
13C4 PFHpA	*78*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:27*	*1*

Client Sample ID: LPES-3 2-4

Lab Sample ID: 480-182523-9
Date Collected: 03/24/21 13:05
Matrix: Solid
Date Received: 03/26/21 08:00
Percent Solids: 84.4

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFOA	*82*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:27*	*1*
13C5 PFNA	*80*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:27*	*1*
13C2 PFDA	*91*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:27*	*1*
13C2 PFUnA	*82*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:27*	*1*
13C2 PFDoA	*93*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:27*	*1*
13C2 PFTeDA	*78*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:27*	*1*
13C3 PFBS	*79*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:27*	*1*
18O2 PFHxS	*88*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:27*	*1*
13C4 PFOS	*81*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:27*	*1*
13C8 FOSA	*79*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:27*	*1*
d3-NMeFOSAA	*80*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:27*	*1*
d5-NEtFOSAA	*89*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:27*	*1*
M2-6:2 FTS	*226*	**5+*	*25 - 150*	*03/30/21 19:37*	*04/04/21 00:27*	*1*
M2-8:2 FTS	*218*	**5+*	*25 - 150*	*03/30/21 19:37*	*04/04/21 00:27*	*1*

Client Sample ID: LPES-3 6-8

Lab Sample ID: 480-182523-10
Date Collected: 03/24/21 13:15
Matrix: Solid
Date Received: 03/26/21 08:00
Percent Solids: 81.6

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND	UJ	120	67	ug/Kg	☼	04/07/21 11:00	04/08/21 17:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5 (Surr)	*76*		*53 - 120*	*04/07/21 11:00*	*04/08/21 17:49*	*1*
p-Terphenyl-d14 (Surr)	*78*	*S1-*	*79 - 130*	*04/07/21 11:00*	*04/08/21 17:49*	*1*
2-Fluorobiphenyl	*70*		*60 - 120*	*04/07/21 11:00*	*04/08/21 17:49*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		0.23	0.032	ug/Kg	☼	03/30/21 19:37	04/04/21 00:55	1
Perfluoropentanoic acid (PFPeA)	ND		0.23	0.088	ug/Kg	☼	03/30/21 19:37	04/04/21 00:55	1
Perfluorohexanoic acid (PFHxA)	ND		0.23	0.048	ug/Kg	☼	03/30/21 19:37	04/04/21 00:55	1
Perfluoroheptanoic acid (PFHpA)	ND		0.23	0.033	ug/Kg	☼	03/30/21 19:37	04/04/21 00:55	1
Perfluorooctanoic acid (PFOA)	ND		0.23	0.098	ug/Kg	☼	03/30/21 19:37	04/04/21 00:55	1
Perfluorononanoic acid (PFNA)	ND		0.23	0.041	ug/Kg	☼	03/30/21 19:37	04/04/21 00:55	1
Perfluorodecanoic acid (PFDA)	ND		0.23	0.025	ug/Kg	☼	03/30/21 19:37	04/04/21 00:55	1
Perfluoroundecanoic acid (PFUnA)	ND		0.23	0.041	ug/Kg	☼	03/30/21 19:37	04/04/21 00:55	1
Perfluorododecanoic acid (PFDoA)	ND		0.23	0.076	ug/Kg	☼	03/30/21 19:37	04/04/21 00:55	1
Perfluorotridecanoic acid (PFTriA)	ND		0.23	0.058	ug/Kg	☼	03/30/21 19:37	04/04/21 00:55	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.23	0.062	ug/Kg	☼	03/30/21 19:37	04/04/21 00:55	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.23	0.029	ug/Kg	☼	03/30/21 19:37	04/04/21 00:55	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.23	0.035	ug/Kg	☼	03/30/21 19:37	04/04/21 00:55	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.23	0.040	ug/Kg	☼	03/30/21 19:37	04/04/21 00:55	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.57	0.23	ug/Kg	☼	03/30/21 19:37	04/04/21 00:55	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.23	0.044	ug/Kg	☼	03/30/21 19:37	04/04/21 00:55	1
Perfluorooctanesulfonamide (FOSA)	ND		0.23	0.094	ug/Kg	☼	03/30/21 19:37	04/04/21 00:55	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.3	0.44	ug/Kg	☼	03/30/21 19:37	04/04/21 00:55	1

Client Sample ID: LPES-3 6-8

Lab Sample ID: 480-182523-10
Date Collected: 03/24/21 13:15
Matrix: Solid
Date Received: 03/26/21 08:00
Percent Solids: 81.6

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.3	0.42	ug/Kg	☼	03/30/21 19:37	04/04/21 00:55	1
6:2 FTS	ND		2.3	0.17	ug/Kg	☼	03/30/21 19:37	04/04/21 00:55	1
8:2 FTS	ND		2.3	0.29	ug/Kg	☼	03/30/21 19:37	04/04/21 00:55	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*65*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:55*	*1*
13C5 PFPeA	*72*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:55*	*1*
13C2 PFHxA	*69*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:55*	*1*
13C4 PFHpA	*83*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:55*	*1*
13C4 PFOA	*82*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:55*	*1*
13C5 PFNA	*88*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:55*	*1*
13C2 PFDA	*73*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:55*	*1*
13C2 PFUnA	*82*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:55*	*1*
13C2 PFDoA	*86*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:55*	*1*
13C2 PFTeDA	*79*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:55*	*1*
13C3 PFBS	*63*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:55*	*1*
18O2 PFHxS	*74*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:55*	*1*
13C4 PFOS	*70*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:55*	*1*
13C8 FOSA	*76*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:55*	*1*
d3-NMeFOSAA	*81*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:55*	*1*
d5-NEtFOSAA	*93*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:55*	*1*
M2-6:2 FTS	*108*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:55*	*1*
M2-8:2 FTS	*122*		*25 - 150*	*03/30/21 19:37*	*04/04/21 00:55*	*1*

Client Sample ID: LPES-4 0-6

Lab Sample ID: 480-182523-11
Date Collected: 03/24/21 14:15
Matrix: Solid
Date Received: 03/26/21 08:00
Percent Solids: 90.2

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		110	60	ug/Kg	☼	04/07/21 11:00	04/08/21 18:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5 (Surr)	*87*		*53 - 120*	*04/07/21 11:00*	*04/08/21 18:14*	*1*
p-Terphenyl-d14 (Surr)	*102*		*79 - 130*	*04/07/21 11:00*	*04/08/21 18:14*	*1*
2-Fluorobiphenyl	*91*		*60 - 120*	*04/07/21 11:00*	*04/08/21 18:14*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.056**	**J**	0.21	0.029	ug/Kg	☼	03/30/21 19:37	04/04/21 01:04	1
Perfluoropentanoic acid (PFPeA)	**0.13**	**J**	0.21	0.080	ug/Kg	☼	03/30/21 19:37	04/04/21 01:04	1
Perfluorohexanoic acid (PFHxA)	**0.096**	**J**	0.21	0.043	ug/Kg	☼	03/30/21 19:37	04/04/21 01:04	1
Perfluoroheptanoic acid (PFHpA)	**0.049**	**J**	0.21	0.030	ug/Kg	☼	03/30/21 19:37	04/04/21 01:04	1
Perfluorooctanoic acid (PFOA)	**0.10**	**J**	0.21	0.089	ug/Kg	☼	03/30/21 19:37	04/04/21 01:04	1
Perfluorononanoic acid (PFNA)	**0.069**	**J**	0.21	0.037	ug/Kg	☼	03/30/21 19:37	04/04/21 01:04	1
Perfluorodecanoic acid (PFDA)	**0.046**	**J I**	0.21	0.023	ug/Kg	☼	03/30/21 19:37	04/04/21 01:04	1
Perfluoroundecanoic acid (PFUnA)	**0.050**	**J**	0.21	0.037	ug/Kg	☼	03/30/21 19:37	04/04/21 01:04	1
Perfluorododecanoic acid (PFDoA)	ND		0.21	0.069	ug/Kg	☼	03/30/21 19:37	04/04/21 01:04	1
Perfluorotridecanoic acid (PFTriA)	ND		0.21	0.053	ug/Kg	☼	03/30/21 19:37	04/04/21 01:04	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.21	0.056	ug/Kg	☼	03/30/21 19:37	04/04/21 01:04	1

Client Sample ID: LPES-4 0-6

Lab Sample ID: 480-182523-11
Date Collected: 03/24/21 14:15
Matrix: Solid
Date Received: 03/26/21 08:00
Percent Solids: 90.2

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	ND		0.21	0.026	ug/Kg	☼	03/30/21 19:37	04/04/21 01:04	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.21	0.032	ug/Kg	☼	03/30/21 19:37	04/04/21 01:04	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.21	0.036	ug/Kg	☼	03/30/21 19:37	04/04/21 01:04	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.52	0.21	ug/Kg	☼	03/30/21 19:37	04/04/21 01:04	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.21	0.040	ug/Kg	☼	03/30/21 19:37	04/04/21 01:04	1
Perfluorooctanesulfonamide (FOSA)	ND		0.21	0.085	ug/Kg	☼	03/30/21 19:37	04/04/21 01:04	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.1	0.40	ug/Kg	☼	03/30/21 19:37	04/04/21 01:04	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.1	0.38	ug/Kg	☼	03/30/21 19:37	04/04/21 01:04	1
6:2 FTS	ND		2.1	0.16	ug/Kg	☼	03/30/21 19:37	04/04/21 01:04	1
8:2 FTS	ND		2.1	0.26	ug/Kg	☼	03/30/21 19:37	04/04/21 01:04	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*60*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:04*	*1*
13C5 PFPeA	*73*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:04*	*1*
13C2 PFHxA	*70*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:04*	*1*
13C4 PFHpA	*84*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:04*	*1*
13C4 PFOA	*83*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:04*	*1*
13C5 PFNA	*85*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:04*	*1*
13C2 PFDA	*87*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:04*	*1*
13C2 PFUnA	*78*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:04*	*1*
13C2 PFDoA	*93*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:04*	*1*
13C2 PFTeDA	*88*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:04*	*1*
13C3 PFBS	*66*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:04*	*1*
18O2 PFHxS	*72*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:04*	*1*
13C4 PFOS	*72*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:04*	*1*
13C8 FOSA	*80*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:04*	*1*
d3-NMeFOSAA	*97*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:04*	*1*
d5-NEtFOSAA	*99*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:04*	*1*
M2-6:2 FTS	*142*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:04*	*1*
M2-8:2 FTS	*153*	*5+	*25 - 150*	*03/30/21 19:37*	*04/04/21 01:04*	*1*

Client Sample ID: LPES-4 2-4

Lab Sample ID: 480-182523-12
Date Collected: 03/24/21 14:20
Matrix: Solid
Date Received: 03/26/21 08:00
Percent Solids: 86.3

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1100	630	ug/Kg	☼	04/07/21 11:00	04/08/21 18:38	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5 (Surr)	*86*		*53 - 120*	*04/07/21 11:00*	*04/08/21 18:38*	*10*
p-Terphenyl-d14 (Surr)	*102*		*79 - 130*	*04/07/21 11:00*	*04/08/21 18:38*	*10*
2-Fluorobiphenyl	*95*		*60 - 120*	*04/07/21 11:00*	*04/08/21 18:38*	*10*

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.33**		0.22	0.031	ug/Kg	☼	03/30/21 19:37	04/04/21 01:31	1
Perfluoropentanoic acid (PFPeA)	ND		0.22	0.086	ug/Kg	☼	03/30/21 19:37	04/04/21 01:31	1
Perfluorohexanoic acid (PFHxA)	ND		0.22	0.047	ug/Kg	☼	03/30/21 19:37	04/04/21 01:31	1

Client Sample ID: LPES-4 2-4

Lab Sample ID: 480-182523-12
Date Collected: 03/24/21 14:20
Matrix: Solid
Date Received: 03/26/21 08:00
Percent Solids: 86.3

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	ND		0.22	0.032	ug/Kg	☼	03/30/21 19:37	04/04/21 01:31	1
Perfluorooctanoic acid (PFOA)	ND		0.22	0.096	ug/Kg	☼	03/30/21 19:37	04/04/21 01:31	1
Perfluorononanoic acid (PFNA)	ND		0.22	0.040	ug/Kg	☼	03/30/21 19:37	04/04/21 01:31	1
Perfluorodecanoic acid (PFDA)	ND		0.22	0.024	ug/Kg	☼	03/30/21 19:37	04/04/21 01:31	1
Perfluoroundecanoic acid (PFUnA)	ND		0.22	0.040	ug/Kg	☼	03/30/21 19:37	04/04/21 01:31	1
Perfluorododecanoic acid (PFDoA)	ND		0.22	0.075	ug/Kg	☼	03/30/21 19:37	04/04/21 01:31	1
Perfluorotridecanoic acid (PFTriA)	ND		0.22	0.057	ug/Kg	☼	03/30/21 19:37	04/04/21 01:31	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.22	0.060	ug/Kg	☼	03/30/21 19:37	04/04/21 01:31	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.22	0.028	ug/Kg	☼	03/30/21 19:37	04/04/21 01:31	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.22	0.034	ug/Kg	☼	03/30/21 19:37	04/04/21 01:31	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.22	0.039	ug/Kg	☼	03/30/21 19:37	04/04/21 01:31	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.56	0.22	ug/Kg	☼	03/30/21 19:37	04/04/21 01:31	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.22	0.043	ug/Kg	☼	03/30/21 19:37	04/04/21 01:31	1
Perfluorooctanesulfonamide (FOSA)	ND		0.22	0.091	ug/Kg	☼	03/30/21 19:37	04/04/21 01:31	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.2	0.43	ug/Kg	☼	03/30/21 19:37	04/04/21 01:31	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.2	0.41	ug/Kg	☼	03/30/21 19:37	04/04/21 01:31	1
6:2 FTS	ND		2.2	0.17	ug/Kg	☼	03/30/21 19:37	04/04/21 01:31	1
8:2 FTS	ND		2.2	0.28	ug/Kg	☼	03/30/21 19:37	04/04/21 01:31	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*46*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:31*	*1*
13C5 PFPeA	*69*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:31*	*1*
13C2 PFHxA	*73*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:31*	*1*
13C4 PFHpA	*71*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:31*	*1*
13C4 PFOA	*80*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:31*	*1*
13C5 PFNA	*82*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:31*	*1*
13C2 PFDA	*80*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:31*	*1*
13C2 PFUnA	*76*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:31*	*1*
13C2 PFDoA	*76*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:31*	*1*
13C2 PFTeDA	*81*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:31*	*1*
13C3 PFBS	*66*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:31*	*1*
18O2 PFHxS	*76*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:31*	*1*
13C4 PFOS	*72*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:31*	*1*
13C8 FOSA	*73*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:31*	*1*
d3-NMeFOSAA	*77*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:31*	*1*
d5-NEtFOSAA	*83*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:31*	*1*
M2-6:2 FTS	*218*	**5+*	*25 - 150*	*03/30/21 19:37*	*04/04/21 01:31*	*1*
M2-8:2 FTS	*188*	**5+*	*25 - 150*	*03/30/21 19:37*	*04/04/21 01:31*	*1*

Client Sample ID: LPES-4 10.5-11.5

Lab Sample ID: 480-182523-13
Date Collected: 03/24/21 14:30
Matrix: Solid
Date Received: 03/26/21 08:00
Percent Solids: 85.6

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		120	63	ug/Kg	☼	04/07/21 11:00	04/08/21 19:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5 (Surr)	*110*		*53 - 120*	*04/07/21 11:00*	*04/08/21 19:03*	*1*

Client Sample ID: LPES-4 10.5-11.5
Date Collected: 03/24/21 14:30
Date Received: 03/26/21 08:00

Lab Sample ID: 480-182523-13
Matrix: Solid
Percent Solids: 85.6

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
p-Terphenyl-d14 (Surr)	*104*		*79 - 130*	*04/07/21 11:00*	*04/08/21 19:03*	*1*
2-Fluorobiphenyl	*100*		*60 - 120*	*04/07/21 11:00*	*04/08/21 19:03*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		0.22	0.031	ug/Kg	☼	03/30/21 19:37	04/04/21 01:40	1
Perfluoropentanoic acid (PFPeA)	ND		0.22	0.084	ug/Kg	☼	03/30/21 19:37	04/04/21 01:40	1
Perfluorohexanoic acid (PFHxA)	ND		0.22	0.046	ug/Kg	☼	03/30/21 19:37	04/04/21 01:40	1
Perfluoroheptanoic acid (PFHpA)	ND		0.22	0.032	ug/Kg	☼	03/30/21 19:37	04/04/21 01:40	1
Perfluorooctanoic acid (PFOA)	ND		0.22	0.094	ug/Kg	☼	03/30/21 19:37	04/04/21 01:40	1
Perfluorononanoic acid (PFNA)	ND		0.22	0.039	ug/Kg	☼	03/30/21 19:37	04/04/21 01:40	1
Perfluorodecanoic acid (PFDA)	ND		0.22	0.024	ug/Kg	☼	03/30/21 19:37	04/04/21 01:40	1
Perfluoroundecanoic acid (PFUnA)	ND		0.22	0.039	ug/Kg	☼	03/30/21 19:37	04/04/21 01:40	1
Perfluorododecanoic acid (PFDoA)	ND		0.22	0.073	ug/Kg	☼	03/30/21 19:37	04/04/21 01:40	1
Perfluorotridecanoic acid (PFTriA)	ND		0.22	0.056	ug/Kg	☼	03/30/21 19:37	04/04/21 01:40	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.22	0.059	ug/Kg	☼	03/30/21 19:37	04/04/21 01:40	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.22	0.027	ug/Kg	☼	03/30/21 19:37	04/04/21 01:40	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.22	0.034	ug/Kg	☼	03/30/21 19:37	04/04/21 01:40	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.22	0.038	ug/Kg	☼	03/30/21 19:37	04/04/21 01:40	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.55	0.22	ug/Kg	☼	03/30/21 19:37	04/04/21 01:40	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.22	0.043	ug/Kg	☼	03/30/21 19:37	04/04/21 01:40	1
Perfluorooctanesulfonamide (FOSA)	ND		0.22	0.090	ug/Kg	☼	03/30/21 19:37	04/04/21 01:40	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.2	0.43	ug/Kg	☼	03/30/21 19:37	04/04/21 01:40	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.2	0.40	ug/Kg	☼	03/30/21 19:37	04/04/21 01:40	1
6:2 FTS	ND		2.2	0.16	ug/Kg	☼	03/30/21 19:37	04/04/21 01:40	1
8:2 FTS	ND		2.2	0.27	ug/Kg	☼	03/30/21 19:37	04/04/21 01:40	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	*41*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:40*	*1*
13C5 PFPeA	*77*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:40*	*1*
13C2 PFHxA	*71*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:40*	*1*
13C4 PFHpA	*84*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:40*	*1*
13C4 PFOA	*87*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:40*	*1*
13C5 PFNA	*91*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:40*	*1*
13C2 PFDA	*78*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:40*	*1*
13C2 PFUnA	*79*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:40*	*1*
13C2 PFDoA	*91*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:40*	*1*
13C2 PFTeDA	*60*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:40*	*1*
13C3 PFBS	*73*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:40*	*1*
18O2 PFHxS	*76*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:40*	*1*
13C4 PFOS	*74*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:40*	*1*
13C8 FOSA	*86*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:40*	*1*
d3-NMeFOSAA	*86*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:40*	*1*
d5-NEtFOSAA	*86*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:40*	*1*
M2-6:2 FTS	*92*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:40*	*1*
M2-8:2 FTS	*93*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:40*	*1*

Client Sample ID: LPES-5 0-6
Date Collected: 03/25/21 11:15
Date Received: 03/26/21 08:00

Lab Sample ID: 480-182523-14
Matrix: Solid
Percent Solids: 84.7

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		580	320	ug/Kg	☼	04/07/21 11:00	04/08/21 19:27	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5 (Surr)	*98*		*53 - 120*	*04/07/21 11:00*	*04/08/21 19:27*	*5*
p-Terphenyl-d14 (Surr)	*110*		*79 - 130*	*04/07/21 11:00*	*04/08/21 19:27*	*5*
2-Fluorobiphenyl	*104*		*60 - 120*	*04/07/21 11:00*	*04/08/21 19:27*	*5*

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.39**		0.22	0.031	ug/Kg	☼	03/30/21 19:37	04/04/21 01:50	1
Perfluoropentanoic acid (PFPeA)	ND		0.22	0.085	ug/Kg	☼	03/30/21 19:37	04/04/21 01:50	1
Perfluorohexanoic acid (PFHxA)	**0.054**	**J**	0.22	0.046	ug/Kg	☼	03/30/21 19:37	04/04/21 01:50	1
Perfluoroheptanoic acid (PFHpA)	ND		0.22	0.032	ug/Kg	☼	03/30/21 19:37	04/04/21 01:50	1
Perfluorooctanoic acid (PFOA)	ND		0.22	0.094	ug/Kg	☼	03/30/21 19:37	04/04/21 01:50	1
Perfluorononanoic acid (PFNA)	**0.043**	**J**	0.22	0.040	ug/Kg	☼	03/30/21 19:37	04/04/21 01:50	1
Perfluorodecanoic acid (PFDA)	**0.050**	**J**	0.22	0.024	ug/Kg	☼	03/30/21 19:37	04/04/21 01:50	1
Perfluoroundecanoic acid (PFUnA)	**0.077**	**J**	0.22	0.040	ug/Kg	☼	03/30/21 19:37	04/04/21 01:50	1
Perfluorododecanoic acid (PFDoA)	ND		0.22	0.074	ug/Kg	☼	03/30/21 19:37	04/04/21 01:50	1
Perfluorotridecanoic acid (PFTriA)	ND		0.22	0.056	ug/Kg	☼	03/30/21 19:37	04/04/21 01:50	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.22	0.059	ug/Kg	☼	03/30/21 19:37	04/04/21 01:50	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.22	0.027	ug/Kg	☼	03/30/21 19:37	04/04/21 01:50	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.22	0.034	ug/Kg	☼	03/30/21 19:37	04/04/21 01:50	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.22	0.038	ug/Kg	☼	03/30/21 19:37	04/04/21 01:50	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.55	0.22	ug/Kg	☼	03/30/21 19:37	04/04/21 01:50	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.22	0.043	ug/Kg	☼	03/30/21 19:37	04/04/21 01:50	1
Perfluorooctanesulfonamide (FOSA)	ND		0.22	0.090	ug/Kg	☼	03/30/21 19:37	04/04/21 01:50	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.2	0.43	ug/Kg	☼	03/30/21 19:37	04/04/21 01:50	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.2	0.41	ug/Kg	☼	03/30/21 19:37	04/04/21 01:50	1
6:2 FTS	ND		2.2	0.16	ug/Kg	☼	03/30/21 19:37	04/04/21 01:50	1
8:2 FTS	ND		2.2	0.27	ug/Kg	☼	03/30/21 19:37	04/04/21 01:50	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*49*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:50*	*1*
13C5 PFPeA	*76*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:50*	*1*
13C2 PFHxA	*73*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:50*	*1*
13C4 PFHpA	*81*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:50*	*1*
13C4 PFOA	*81*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:50*	*1*
13C5 PFNA	*78*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:50*	*1*
13C2 PFDA	*69*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:50*	*1*
13C2 PFUnA	*65*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:50*	*1*
13C2 PFDoA	*80*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:50*	*1*
13C2 PFTeDA	*74*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:50*	*1*
13C3 PFBS	*74*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:50*	*1*
18O2 PFHxS	*77*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:50*	*1*
13C4 PFOS	*79*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:50*	*1*
13C8 FOSA	*69*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:50*	*1*
d3-NMeFOSAA	*63*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:50*	*1*
d5-NEtFOSAA	*70*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:50*	*1*

Client Sample ID: LPES-5 0-6

Lab Sample ID: 480-182523-14
Date Collected: 03/25/21 11:15
Matrix: Solid
Date Received: 03/26/21 08:00
Percent Solids: 84.7

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-6:2 FTS	*197*	**5+*	*25 - 150*	*03/30/21 19:37*	*04/04/21 01:50*	*1*
M2-8:2 FTS	*189*	**5+*	*25 - 150*	*03/30/21 19:37*	*04/04/21 01:50*	*1*

Client Sample ID: LPES-5 2-4

Lab Sample ID: 480-182523-15
Date Collected: 03/25/21 11:20
Matrix: Solid
Date Received: 03/26/21 08:00
Percent Solids: 79.1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		130	69	ug/Kg	☼	04/07/21 11:00	04/08/21 19:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5 (Surr)	*97*		*53 - 120*	*04/07/21 11:00*	*04/08/21 19:51*	*1*
p-Terphenyl-d14 (Surr)	*104*		*79 - 130*	*04/07/21 11:00*	*04/08/21 19:51*	*1*
2-Fluorobiphenyl	*87*		*60 - 120*	*04/07/21 11:00*	*04/08/21 19:51*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		0.23	0.032	ug/Kg	☼	03/30/21 19:37	04/04/21 01:59	1
Perfluoropentanoic acid (PFPeA)	ND		0.23	0.089	ug/Kg	☼	03/30/21 19:37	04/04/21 01:59	1
Perfluorohexanoic acid (PFHxA)	ND		0.23	0.049	ug/Kg	☼	03/30/21 19:37	04/04/21 01:59	1
Perfluoroheptanoic acid (PFHpA)	ND		0.23	0.034	ug/Kg	☼	03/30/21 19:37	04/04/21 01:59	1
Perfluorooctanoic acid (PFOA)	ND		0.23	0.10	ug/Kg	☼	03/30/21 19:37	04/04/21 01:59	1
Perfluorononanoic acid (PFNA)	ND		0.23	0.042	ug/Kg	☼	03/30/21 19:37	04/04/21 01:59	1
Perfluorodecanoic acid (PFDA)	ND		0.23	0.026	ug/Kg	☼	03/30/21 19:37	04/04/21 01:59	1
Perfluoroundecanoic acid (PFUnA)	ND		0.23	0.042	ug/Kg	☼	03/30/21 19:37	04/04/21 01:59	1
Perfluorododecanoic acid (PFDoA)	ND		0.23	0.078	ug/Kg	☼	03/30/21 19:37	04/04/21 01:59	1
Perfluorotridecanoic acid (PFTriA)	ND		0.23	0.059	ug/Kg	☼	03/30/21 19:37	04/04/21 01:59	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.23	0.063	ug/Kg	☼	03/30/21 19:37	04/04/21 01:59	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.23	0.029	ug/Kg	☼	03/30/21 19:37	04/04/21 01:59	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.23	0.036	ug/Kg	☼	03/30/21 19:37	04/04/21 01:59	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.23	0.041	ug/Kg	☼	03/30/21 19:37	04/04/21 01:59	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.58	0.23	ug/Kg	☼	03/30/21 19:37	04/04/21 01:59	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.23	0.045	ug/Kg	☼	03/30/21 19:37	04/04/21 01:59	1
Perfluorooctanesulfonamide (FOSA)	ND		0.23	0.095	ug/Kg	☼	03/30/21 19:37	04/04/21 01:59	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.3	0.45	ug/Kg	☼	03/30/21 19:37	04/04/21 01:59	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.3	0.43	ug/Kg	☼	03/30/21 19:37	04/04/21 01:59	1
6:2 FTS	ND		2.3	0.17	ug/Kg	☼	03/30/21 19:37	04/04/21 01:59	1
8:2 FTS	ND		2.3	0.29	ug/Kg	☼	03/30/21 19:37	04/04/21 01:59	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*65*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:59*	*1*
13C5 PFPeA	*66*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:59*	*1*
13C2 PFHxA	*66*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:59*	*1*
13C4 PFHpA	*82*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:59*	*1*
13C4 PFOA	*79*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:59*	*1*
13C5 PFNA	*76*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:59*	*1*
13C2 PFDA	*75*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:59*	*1*
13C2 PFUnA	*73*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:59*	*1*

Client Sample ID: LPES-5 2-4

Lab Sample ID: 480-182523-15
Date Collected: 03/25/21 11:20
Matrix: Solid
Date Received: 03/26/21 08:00
Percent Solids: 79.1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C2 PFDoA	*76*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:59*	*1*
13C2 PFTeDA	*62*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:59*	*1*
13C3 PFBS	*72*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:59*	*1*
18O2 PFHxS	*75*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:59*	*1*
13C4 PFOS	*70*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:59*	*1*
13C8 FOSA	*80*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:59*	*1*
d3-NMeFOSAA	*76*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:59*	*1*
d5-NEtFOSAA	*83*		*25 - 150*	*03/30/21 19:37*	*04/04/21 01:59*	*1*
M2-6:2 FTS	*154*	**5+*	*25 - 150*	*03/30/21 19:37*	*04/04/21 01:59*	*1*
M2-8:2 FTS	*165*	**5+*	*25 - 150*	*03/30/21 19:37*	*04/04/21 01:59*	*1*

Client Sample ID: LPES-5 7-8

Lab Sample ID: 480-182523-16
Date Collected: 03/25/21 11:30
Matrix: Solid
Date Received: 03/26/21 08:00
Percent Solids: 89.0

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		110	61	ug/Kg	☼	04/07/21 11:00	04/08/21 20:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5 (Surr)	*89*		*53 - 120*	*04/07/21 11:00*	*04/08/21 20:15*	*1*
p-Terphenyl-d14 (Surr)	*121*		*79 - 130*	*04/07/21 11:00*	*04/08/21 20:15*	*1*
2-Fluorobiphenyl	*99*		*60 - 120*	*04/07/21 11:00*	*04/08/21 20:15*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		0.21	0.030	ug/Kg	☼	03/30/21 19:37	04/04/21 02:08	1
Perfluoropentanoic acid (PFPeA)	ND		0.21	0.083	ug/Kg	☼	03/30/21 19:37	04/04/21 02:08	1
Perfluorohexanoic acid (PFHxA)	ND		0.21	0.045	ug/Kg	☼	03/30/21 19:37	04/04/21 02:08	1
Perfluoroheptanoic acid (PFHpA)	ND		0.21	0.031	ug/Kg	☼	03/30/21 19:37	04/04/21 02:08	1
Perfluorooctanoic acid (PFOA)	ND		0.21	0.092	ug/Kg	☼	03/30/21 19:37	04/04/21 02:08	1
Perfluorononanoic acid (PFNA)	ND		0.21	0.039	ug/Kg	☼	03/30/21 19:37	04/04/21 02:08	1
Perfluorodecanoic acid (PFDA)	ND		0.21	0.024	ug/Kg	☼	03/30/21 19:37	04/04/21 02:08	1
Perfluoroundecanoic acid (PFUnA)	ND		0.21	0.039	ug/Kg	☼	03/30/21 19:37	04/04/21 02:08	1
Perfluorododecanoic acid (PFDoA)	ND		0.21	0.072	ug/Kg	☼	03/30/21 19:37	04/04/21 02:08	1
Perfluorotridecanoic acid (PFTriA)	ND		0.21	0.055	ug/Kg	☼	03/30/21 19:37	04/04/21 02:08	1
Perfluorotetradecanoic acid (PFTeA)	ND		0.21	0.058	ug/Kg	☼	03/30/21 19:37	04/04/21 02:08	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.21	0.027	ug/Kg	☼	03/30/21 19:37	04/04/21 02:08	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.21	0.033	ug/Kg	☼	03/30/21 19:37	04/04/21 02:08	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		0.21	0.038	ug/Kg	☼	03/30/21 19:37	04/04/21 02:08	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.54	0.21	ug/Kg	☼	03/30/21 19:37	04/04/21 02:08	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.21	0.042	ug/Kg	☼	03/30/21 19:37	04/04/21 02:08	1
Perfluorooctanesulfonamide (FOSA)	ND		0.21	0.088	ug/Kg	☼	03/30/21 19:37	04/04/21 02:08	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		2.1	0.42	ug/Kg	☼	03/30/21 19:37	04/04/21 02:08	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		2.1	0.40	ug/Kg	☼	03/30/21 19:37	04/04/21 02:08	1
6:2 FTS	ND		2.1	0.16	ug/Kg	☼	03/30/21 19:37	04/04/21 02:08	1
8:2 FTS	ND		2.1	0.27	ug/Kg	☼	03/30/21 19:37	04/04/21 02:08	1

Client: New York State D.E.C.
Job ID: 480-182523-1
Project/Site: Lubricant Packaging Co. #336034

Client Sample ID: LPES-5 7-8
Lab Sample ID: 480-182523-16
Date Collected: 03/25/21 11:30
Matrix: Solid
Date Received: 03/26/21 08:00
Percent Solids: 89.0

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	62		25 - 150	03/30/21 19:37	04/04/21 02:08	1
13C5 PFPeA	68		25 - 150	03/30/21 19:37	04/04/21 02:08	1
13C2 PFHxA	67		25 - 150	03/30/21 19:37	04/04/21 02:08	1
13C4 PFHpA	89		25 - 150	03/30/21 19:37	04/04/21 02:08	1
13C4 PFOA	83		25 - 150	03/30/21 19:37	04/04/21 02:08	1
13C5 PFNA	81		25 - 150	03/30/21 19:37	04/04/21 02:08	1
13C2 PFDA	89		25 - 150	03/30/21 19:37	04/04/21 02:08	1
13C2 PFUnA	76		25 - 150	03/30/21 19:37	04/04/21 02:08	1
13C2 PFDoA	81		25 - 150	03/30/21 19:37	04/04/21 02:08	1
13C2 PFTeDA	70		25 - 150	03/30/21 19:37	04/04/21 02:08	1
13C3 PFBS	63		25 - 150	03/30/21 19:37	04/04/21 02:08	1
18O2 PFHxS	79		25 - 150	03/30/21 19:37	04/04/21 02:08	1
13C4 PFOS	69		25 - 150	03/30/21 19:37	04/04/21 02:08	1
13C8 FOSA	84		25 - 150	03/30/21 19:37	04/04/21 02:08	1
d3-NMeFOSAA	79		25 - 150	03/30/21 19:37	04/04/21 02:08	1
d5-NEtFOSAA	84		25 - 150	03/30/21 19:37	04/04/21 02:08	1
M2-6:2 FTS	94		25 - 150	03/30/21 19:37	04/04/21 02:08	1
M2-8:2 FTS	116		25 - 150	03/30/21 19:37	04/04/21 02:08	1

1,4-Dioxane

Data Section

ALPHA GEOSCIENCE

Geology
Hydrology
Remediation
Water Supply

QA/QC Review of Method 8270D SIM 1,4-Dioxane Data
for Eurofins TestAmerica-Buffalo, Job No: 480-182523-1

15 Soil Samples and 1 Field Duplicate
Collected March 24, 2021

Prepared by: Donald Anné
April 25, 2021

Holding Times: Samples were extracted and analyzed within USEPA SW-846 holding times.

GC/MS Tuning and Mass Calibration: The DFTPP tuning criteria were within control limits.

Initial Calibration: The average RRF for 1,4-dioxane was above the allowable minimum (0.010) and the %RSD was below the allowable maximum (30%), as required.

Continuing Calibration: The associated RRFs for 1,4-dioxane were above the allowable minimum (0.010) and the %Ds were below the allowable maximum (25%), as required.

Blanks: The analysis of the method blank reported 1,4-dioxane as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: One of three surrogate recoveries for sample LPES-3 6-8 was below QC limits, but not below 10%. The "not detected" result for 1,4-dioxane should be considered estimated (UJ) in sample LPES-3 6-8.

Matrix Spike/Matrix Spike Duplicate: The relative percent difference for 1,4-dioxane was below the allowable maximum and the percent recoveries were within QC limits for soil MS/MSD sample LPES-3 2-4.

Laboratory Control Sample: The percent recoveries for 1,4-dioxane were within QC limits for soil samples LCS 480-575134/2-A and LCS 480-575394/2-A.

Field Duplicates: The analyses of soil field duplicate pair LPES-1 4-5/DUPA reported 1,4-dioxane as not detected; therefore, a valid relative percent difference could not be calculated. The analyses for the field duplicate pair were acceptable.

Compound ID: Checked surrogate results were within GC/MS quantitation limits. The analyses of soil samples reported 1,4-dioxane as not detected.

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FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-182523-1

SDG No.:

Matrix: Solid Level: Low

GC Column (1): RXI-5Sil MS ID: 0.25(mm)

Client Sample ID	Lab Sample ID	NBZ #	FBP #	TPHd14 #
LPES-1 0-6	480-182523-1	93	87	97
LPES-1 2-4	480-182523-2	87	107	94
LPES-1 4-5	480-182523-3	86	82	98
DUPA	480-182523-4	80	96	94
LPES-2 0-6	480-182523-5	94	104	104
LPES-2 2-4	480-182523-6	86	105	94
LPES-2 3.5-4.5	480-182523-7	95	113	109
LPES-3 0-6	480-182523-8	97	103	103
LPES-3 2-4	480-182523-9	98	101	110
LPES-3 6-8	480-182523-10	76	70	78 S1-
LPES-4 0-6	480-182523-11	87	91	102
LPES-4 2-4	480-182523-12	86	95	102
LPES-4 10.5-11.5	480-182523-13	110	100	104
LPES-5 0-6	480-182523-14	98	104	110
LPES-5 2-4	480-182523-15	97	87	104
LPES-5 7-8	480-182523-16	89	99	121
	MB 480-575134/1-A	98	106	130
	MB 480-575394/1-A	83	92	114
	LCS 480-575134/2-A	89	99	115
	LCS 480-575394/2-A	76	85	95
LPES-3 2-4 MS	480-182523-9 MS	96	104	101
LPES-3 2-4 MSD	480-182523-9 MSD	81	94	86

	QC LIMITS
NBZ = Nitrobenzene-d5 (Surr)	53-120
FBP = 2-Fluorobiphenyl	60-120
TPHd14 = p-Terphenyl-d14 (Surr)	79-130

Column to be used to flag recovery values

FORM II 8270D

PFAS

Data Section

ALPHA GEOSCIENCE

Geology
Hydrology
Remediation
Water Supply

QA/QC Review of Method 537 (Modified) PFAS Data for Eurofins TestAmerica-Sacramento, Job No: 480-182523-1

15 Soil Samples and 1 Field Duplicate Collected March 24, 2021

Prepared by: Donald Anné
April 25, 2021

Holding Times: Samples were analyzed within USEPA holding times.

Initial Calibration: The %RSDs for applicable PFAS compounds were below the method maximums, as required.

Continuing Calibration: The %Ds for applicable PFAS compounds were below the allowable maximums, as required

Blanks: The analysis of the method blank reported target PFAS as not detected.

Surrogate Recovery: One of eighteen surrogate recoveries for samples LPES-2 0-6 and LPES-4 0-6 was above QC limits. Two of eighteen surrogate recoveries for the following samples were above QC limits.

LPES-1 0-6	LPES-1 2-4	DUPA	LPES-2 3.5-4.5
LPES-3 0-6	LPES-3 2-4	LPES-4 2-4	LPES-5 0-6
LPES-5 2-4			

Positive results for PFAS associated with the surrogate above QC limits should be considered estimated (J) in the samples.

One of eighteen surrogate recoveries for sample LPES-1 0-6 was below QC limits, but not below 10%. The positive result for PFBA should be considered estimated (J) in sample LPES-1 0-6.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

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Matrix Spike/Matrix Spike Duplicate: The relative percent differences for target compounds were below the allowable maximum, but 2 of 2 percent recoveries for PFUnA were above QC limits for soil MS/MSD sample LPES-3 2-4. Sample LPES-3 2-4 reported PFUnA as not detected; therefore, no action is taken.

Laboratory Control Sample: The percent recoveries for target PFAS were within QC limits for soil sample LCS 320-475219/2-A.

Field Duplicates: The analyses of soil field duplicate pair LPES-1 4-5/DUPA reported target PFAS as not detected; therefore, valid relative percent differences could not be calculated. The analyses for the field duplicate pair were acceptable.

Compound ID: Checked compound and surrogate results were within LC quantitation limits.

FORM II
LCMS SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 480-182523-1

SDG No.:

Matrix: Solid Level: Low

GC Column (1): Gemini C18 ID: 3 (mm)

Client Sample ID	Lab Sample ID	PFBA #	PFPeA #	C3PFBS #	PFHxA #	C4PFHA #	PFHxS #	M262FTS #	PFOA #
LPES-1 0-6	480-182523-1	13 *5-	32	68	43	54	74	182 *5+	55
LPES-1 2-4	480-182523-2	53	65	72	64	69	79	220 *5+	67
LPES-1 4-5	480-182523-3	45	52	49	52	62	53	113	57
DUPA	480-182523-4	62	73	62	71	78	71	176 *5+	80
LPES-2 0-6	480-182523-5	55	75	73	71	79	78	163 *5+	79
LPES-2 2-4	480-182523-6	63	67	69	70	83	79	101	74
LPES-2 3.5-4.5	480-182523-7	49	66	65	67	74	73	199 *5+	82
LPES-3 0-6	480-182523-8	53	75	68	71	71	75	206 *5+	77
LPES-3 2-4	480-182523-9	55	79	79	79	78	88	226 *5+	82
LPES-3 6-8	480-182523-10	65	72	63	69	83	74	108	82
LPES-4 0-6	480-182523-11	60	73	66	70	84	72	142	83
LPES-4 2-4	480-182523-12	46	69	66	73	71	76	218 *5+	80
LPES-4 10.5-11.5	480-182523-13	41	77	73	71	84	76	92	87
LPES-5 0-6	480-182523-14	49	76	74	73	81	77	197 *5+	81
LPES-5 2-4	480-182523-15	65	66	72	66	82	75	154 *5+	79
LPES-5 7-8	480-182523-16	62	68	63	67	89	79	94	83
	MB 320-475219/1-A	46	51	52	51	60	59	57	56
	LCS 320-475219/2-A	49	64	64	64	69	71	72	68
LPES-3 2-4 MS	480-182523-9 MS	41	73	79	81	79	87	218 *5+	82
LPES-3 2-4 MSD	480-182523-9 MSD	51	75	80	79	82	85	234 *5+	86

	QC LIMITS
PFBA = 13C4 PFBA	25-150
PFPeA = 13C5 PFPeA	25-150
C3PFBS = 13C3 PFBS	25-150
PFHxA = 13C2 PFHxA	25-150
PFHxS = 18O2 PFHxS	25-150
C4PFHA = 13C4 PFHpA	25-150
M262FTS = M2-6:2 FTS	25-150
PFOA = 13C4 PFOA	25-150

Column to be used to flag recovery values

FORM II 537 (modified)

FORM II
LCMS SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 480-182523-1

SDG No.:

Matrix: Solid Level: Low

GC Column (1): Gemini C18 ID: 3 (mm)

Client Sample ID	Lab Sample ID	PFOS #	PFNA #	PFOSA #	M282FTS #	PFDA #	d3NMFOS #	PFUnA #	d5NEFOS #
LPES-1 0-6	480-182523-1	96	46	29	209 *5+	44	25	48	25
LPES-1 2-4	480-182523-2	78	63	61	177 *5+	70	54	67	55
LPES-1 4-5	480-182523-3	56	64	65	133	66	67	62	75
DUPA	480-182523-4	71	80	79	174 *5+	85	80	86	90
LPES-2 0-6	480-182523-5	77	81	82	145	78	82	77	88
LPES-2 2-4	480-182523-6	69	89	80	126	82	88	82	97
LPES-2 3.5-4.5	480-182523-7	74	85	74	167 *5+	72	65	68	79
LPES-3 0-6	480-182523-8	73	74	63	173 *5+	69	60	74	59
LPES-3 2-4	480-182523-9	81	80	79	218 *5+	91	80	82	89
LPES-3 6-8	480-182523-10	70	88	76	122	73	81	82	93
LPES-4 0-6	480-182523-11	72	85	80	153 *5+	87	97	78	99
LPES-4 2-4	480-182523-12	72	82	73	188 *5+	80	77	76	83
LPES-4 10.5-11.5	480-182523-13	74	91	86	93	78	86	79	86
LPES-5 0-6	480-182523-14	79	78	69	189 *5+	69	63	65	70
LPES-5 2-4	480-182523-15	70	76	80	165 *5+	75	76	73	83
LPES-5 7-8	480-182523-16	69	81	84	116	89	79	76	84
	MB 320-475219/1-A	55	62	60	76	55	65	50	65
	LCS 320-475219/2-A	68	68	72	77	61	75	71	78
LPES-3 2-4 MS	480-182523-9 MS	84	88	68	188 *5+	82	63	72	67
LPES-3 2-4 MSD	480-182523-9 MSD	80	86	70	180 *5+	80	66	77	70

	QC LIMITS
PFOS = 13C4 PFOS	25-150
PFNA = 13C5 PFNA	25-150
PFOSA = 13C8 FOSA	25-150
M282FTS = M2-8:2 FTS	25-150
PFDA = 13C2 PFDA	25-150
d3NMFOS = d3-NMeFOSAA	25-150
PFUnA = 13C2 PFUnA	25-150
d5NEFOS = d5-NEtFOSAA	25-150

Column to be used to flag recovery values

FORM II 537 (modified)

FORM II
LCMS SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 480-182523-1

SDG No.:

Matrix: Solid Level: Low

GC Column (1): Gemini C18 ID: 3 (mm)

Client Sample ID	Lab Sample ID	PFDoA #	PFTDA #
LPES-1 0-6	480-182523-1	53	43
LPES-1 2-4	480-182523-2	69	57
LPES-1 4-5	480-182523-3	67	59
DUPA	480-182523-4	86	76
LPES-2 0-6	480-182523-5	78	79
LPES-2 2-4	480-182523-6	87	77
LPES-2 3.5-4.5	480-182523-7	76	75
LPES-3 0-6	480-182523-8	67	57
LPES-3 2-4	480-182523-9	93	78
LPES-3 6-8	480-182523-10	86	79
LPES-4 0-6	480-182523-11	93	88
LPES-4 2-4	480-182523-12	76	81
LPES-4 10.5-11.5	480-182523-13	91	60
LPES-5 0-6	480-182523-14	80	74
LPES-5 2-4	480-182523-15	76	62
LPES-5 7-8	480-182523-16	81	70
	MB 320-475219/1-A	53	58
	LCS 320-475219/2-A	72	65
LPES-3 2-4 MS	480-182523-9 MS	77	68
LPES-3 2-4 MSD	480-182523-9 MSD	77	70

	QC LIMITS
PFDoA = 13C2 PFDoA	25-150
PFTDA = 13C2 PFTeDA	25-150

Column to be used to flag recovery values

FORM II 537 (modified)

FORM III
LCMS MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 480-182523-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 2021.04.03_A17_PFC+_BX_020.d

Lab ID: 480-182523-9 MS Client ID: LPES-3 2-4 MS

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	QC LIMITS REC	#
Perfluorobutanoic acid (PFBA)	2.36	0.096 J	2.72	111	76-136	
Perfluoropentanoic acid (PFPeA)	2.36	ND	2.81	119	69-129	
Perfluorohexanoic acid (PFHxA)	2.36	ND	2.58	109	71-131	
Perfluoroheptanoic acid (PFHpA)	2.36	ND	2.64	112	71-131	
Perfluorooctanoic acid (PFOA)	2.36	ND	2.74	116	72-132	
Perfluorononanoic acid (PFNA)	2.36	0.044 J	2.58	107	73-133	
Perfluorodecanoic acid (PFDA)	2.36	0.061 J	2.64	109	72-132	
Perfluoroundecanoic acid (PFUnA)	2.36	ND	3.62	153	66-126	F1
Perfluorododecanoic acid (PFDoA)	2.36	ND	2.35	100	71-131	
Perfluorotridecanoic acid (PFTriA)	2.36	ND	2.12	90	71-131	
Perfluorotetradecanoic acid (PFTeA)	2.36	ND	2.63	111	67-127	
Perfluorobutanesulfonic acid (PFBS)	2.09	ND	2.24	107	69-129	
Perfluorohexanesulfonic acid (PFHxS)	2.15	ND	2.42	112	62-122	
Perfluoroheptanesulfonic Acid (PFHpS)	2.25	ND	2.32	103	76-136	
Perfluorooctanesulfonic acid (PFOS)	2.19	0.24 J	2.48	103	68-141	
Perfluorodecanesulfonic acid (PFDS)	2.28	ND	2.33	102	71-131	
Perfluorooctanesulfonamide (FOSA)	2.36	ND	2.74	116	77-137	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.36	ND	2.68	114	72-132	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.36	ND	2.70	114	72-132	
6:2 FTS	2.24	ND	2.55	114	73-139	
8:2 FTS	2.26	ND	2.30 J	102	75-135	
13C4 PFBA	2.95	1.5	1.22	41	25-150	
13C5 PFPeA	2.95	2.2	2.17	73	25-150	
13C2 PFHxA	2.95	2.2	2.38	81	25-150	
13C4 PFHpA	2.95	2.2	2.35	79	25-150	
13C4 PFOA	2.95	2.3	2.43	82	25-150	
13C5 PFNA	2.95	2.2	2.59	88	25-150	
13C2 PFDA	2.95	2.5	2.42	82	25-150	
13C2 PFUnA	2.95	2.3	2.11	72	25-150	
13C2 PFDoA	2.95	2.6	2.27	77	25-150	
13C2 PFTeDA	2.95	2.2	2.00	68	25-150	

Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM III
LCMS MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 480-182523-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 2021.04.03_A17_PFC+_BX_020.d

Lab ID: 480-182523-9 MS Client ID: LPES-3 2-4 MS

COMPOUND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC	QC LIMITS REC	#
13C3 PFBS	2.75	2.0	2.18	79	25-150	
18O2 PFHxS	2.79	2.3	2.44	87	25-150	
13C4 PFOS	2.82	2.2	2.36	84	25-150	
13C8 FOSA	2.95	2.2	2.02	68	25-150	
d3-NMeFOSAA	2.95	2.2	1.87	63	25-150	
d5-NEtFOSAA	2.95	2.5	1.97	67	25-150	
M2-6:2 FTS	2.81	6.0	6.13	218	25-150	*5+
M2-8:2 FTS	2.83	5.8	5.32	188	25-150	*5+

Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM III
LCMS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 480-182523-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 2021.04.03_A17_PFC+_BX_021.d

Lab ID: 480-182523-9 MSD Client ID: LPES-3 2-4 MSD

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Perfluorobutanoic acid (PFBA)	2.22	2.51	109	8	30	76-136	
Perfluoropentanoic acid (PFPeA)	2.22	2.54	114	10	30	69-129	
Perfluorohexanoic acid (PFHxA)	2.22	2.37	107	9	30	71-131	
Perfluoroheptanoic acid (PFHpA)	2.22	2.20	99	18	30	71-131	
Perfluorooctanoic acid (PFOA)	2.22	2.47	111	11	30	72-132	
Perfluorononanoic acid (PFNA)	2.22	2.60	115	1	30	73-133	
Perfluorodecanoic acid (PFDA)	2.22	2.47	108	7	30	72-132	
Perfluoroundecanoic acid (PFUnA)	2.22	3.28	148	10	30	66-126	F1
Perfluorododecanoic acid (PFDoA)	2.22	2.58	116	9	30	71-131	
Perfluorotridecanoic acid (PFTriA)	2.22	2.24	101	6	30	71-131	
Perfluorotetradecanoic acid (PFTeA)	2.22	2.49	112	6	30	67-127	
Perfluorobutanesulfonic acid (PFBS)	1.96	2.05	105	9	30	69-129	
Perfluorohexanesulfonic acid (PFHxS)	2.02	2.24	111	8	30	62-122	
Perfluoroheptanesulfonic Acid (PFHpS)	2.11	2.47	117	6	30	76-136	
Perfluorooctanesulfonic acid (PFOS)	2.06	2.55	112	3	30	68-141	
Perfluorodecanesulfonic acid (PFDS)	2.14	2.27	106	3	30	71-131	
Perfluorooctanesulfonamide (FOSA)	2.22	2.49	112	10	30	77-137	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.22	2.52	113	6	30	72-132	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.22	2.53	114	7	30	72-132	
6:2 FTS	2.11	2.29	109	11	30	73-139	
8:2 FTS	2.13	2.32	109	1	30	75-135	
13C4 PFBA	2.78	1.43	51			25-150	
13C5 PFPeA	2.78	2.09	75			25-150	
13C2 PFHxA	2.78	2.19	79			25-150	
13C4 PFHpA	2.78	2.27	82			25-150	
13C4 PFOA	2.78	2.40	86			25-150	
13C5 PFNA	2.78	2.40	86			25-150	
13C2 PFDA	2.78	2.21	80			25-150	
13C2 PFUnA	2.78	2.14	77			25-150	
13C2 PFDoA	2.78	2.13	77			25-150	
13C2 PFTeDA	2.78	1.95	70			25-150	

Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM III
LCMS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 480-182523-1

SDG No.:

Matrix: Solid Level: Low Lab File ID: 2021.04.03_A17_PFC+_BX_021.d

Lab ID: 480-182523-9 MSD Client ID: LPES-3 2-4 MSD

COMPOUND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
13C3 PFBS	2.58	2.06	80			25-150	
18O2 PFHxS	2.63	2.23	85			25-150	
13C4 PFOS	2.65	2.12	80			25-150	
13C8 FOSA	2.78	1.95	70			25-150	
d3-NMeFOSAA	2.78	1.83	66			25-150	
d5-NEtFOSAA	2.78	1.94	70			25-150	
M2-6:2 FTS	2.64	6.18	234			25-150	*5+
M2-8:2 FTS	2.66	4.79	180			25-150	*5+

Column to be used to flag recovery and RPD values

FORM III 537 (modified)

Alpha Geoscience: Acronyms and Definitions

Data Validation Acronyms

AA	Atomic absorption, flame technique
BHC	Hexachlorocyclohexane
BFB	Bromofluorobenzene
CCB	Continuing calibration blank
CCC	Calibration check compound
CCV	Continuing calibration verification
CN	Cyanide
CRDL	Contract required detection limit
CRQL	Contract required quantitation limit
CVAA	Atomic adsorption, cold vapor technique
DCAA	2,4-Dichlophenylacetic acid
DCB	Decachlorobiphenyl
DFTPP	Decafluorotriphenyl phosphine
ECD	Electron capture detector
FAA	Atomic absorption, furnace technique
FID	Flame ionization detector
FNP	1-Fluoronaphthalene
GC	Gas chromatography
GC/MS	Gas chromatography/mass spectrometry
GPC	Gel permeation chromatography
ICB	Initial calibration blank
ICP	Inductively coupled plasma-atomic emission spectrometer
ICV	Initial calibration verification
IDL	Instrument detection limit
IS	Internal standard
LCS	Laboratory control sample
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate
MSA	Method of standard additions
MS/MSD	Matrix spike/matrix spike duplicate
PID	Photo ionization detector
PCB	Polychlorinated biphenyl
PCDD	Polychlorinated dibenzodioxins
PCDF	Polychlorinated dibenzofurans
QA	Quality assurance
QC	Quality control
RF	Response factor
RPD	Relative percent difference
RRF	Relative response factor
RRF(number)	Relative response factor at concentration of the number following
RT	Retention time
RRT	Relative retention time
SDG	Sample delivery group
SPCC	System performance check compound
TCX	Tetrachloro-m-xylene
%D	Percent difference
%R	Percent recovery
%RSD	Percent relative standard deviation

Data Validation Qualifiers Used in the QA/QC Reviews for USEPA Region II

U	=	Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.
R	=	Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information is necessary to confirm the result.
N	=	Tentative identification. Analyte is considered present. Special methods may be needed to confirm its presence or absence during future sampling efforts.
J	=	Analyte is present. Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method.
J-	=	Analyte is present. Reported value may be biased low and associated with a higher level of uncertainty than is normally expected with the analytical method.
J+	=	Analyte is present. Reported value may be biased high andassociated with a higher level of uncertainty than is normally expected with the analytical method.
UJ	=	Not detected, quantitation limit may be inaccurate or imprecise.

Note: These qualifiers are used for data validation purposes. The data validation qualifiers may differ from the qualifiers that the laboratory assigns to the data. Refer to the laboratory analytical report for the definitions of the laboratory qualifiers.

Polyfluorinated Alkyl Substances (PFAS) Acronyms

PFBA	Perfluorobutanoic acid
PFPeA	Perfluoropentanoic acid
PFHxA	Perfluorohexanoic acid
PFHpA	Perfluoroheptanoic acid
PFOA	Perfluorooctanoic acid
PFNA	Perfluorononanoic acid
PFDA	Perfluorodecanoic acid
PFUnA	Perfluoroundecanoic acid
PFDoA	Perfluorododecanoic acid
PFTriA or PFTrDA	Perfluorotridecanoic acid
PFTeA or PFTA	Perfluorotetradecanoic acid
PFBS	Perfluorobutanesulfonic acid
PFPeS	Perfluoropentanesulfonic acid
PFHxS	Perfluorohexanesulfonic acid
PFHpS	Perfluoroheptanesulfonic acid
PFOS	Perfluorooctanesulfonic acid
PFNS	Perfluorononanesulfonic acid
PFDS	Perfluorodecanesulfonic acid
FOSA	Perfluorooctane Sulfonamide
NMeFOSAA	N-methyl perfluorooctane sulfonamidoacetic acid
NEtFOSAA	N-ethyl perfluorooctane sulfonamidoacetic acid
4:2 FTS or 4:2	1H, 1H, 2H, 2H-perfluorohexanesulfonic acid
6:2 FTS or 6:2	1H, 1H, 2H, 2H-perfluorooctanesulfonic acid or 6:2 Fluorotelomersulfonate
8:2 FTS or 8:2	1H, 1H, 2H, 2H-perfluorodecanesulfonic acid or 8:2 Fluorotelomersulfonate

ALPHA GEOSCIENCE

Geology
Hydrology
Remediation
Water Supply

Data Usability Summary Report for Eurofins TestAmerica-Buffalo and Sacramento
Job No: 480-182523-2

5 Ground Water Samples and 1 Field Duplicate
Collected March 25, 2021

Prepared by: Donald Anné
April 25, 2021

The data package contains the documentation as required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. All information appears legible and complete. The data pack contains the results of 5 ground water sample and 1 field duplicate analyzed for 1,4-dioxane and PFAS.

The overall performances of the analyses are acceptable. Eurofins TestAmerica-Buffalo and Sacramento labs did fulfill the requirements of the analytical methods.

The data are acceptable with some minor issues that are identified in the accompanying data validation reviews. There were no data that were qualified as either rejected, unusable (R) or unusable; therefore, all data are considered usable. Detailed information on data quality is included in the data validation reviews.

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Qualified Data Section

(No Data Qualified)

Client Sample ID: LPES-1
Date Collected: 03/25/21 08:30
Date Received: 03/26/21 08:00

Lab Sample ID: 480-182523-17
Matrix: Water

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.15	J	0.20	0.10	ug/L		03/26/21 14:54	03/29/21 17:26	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*34*		*15 - 110*	*03/26/21 14:54*	*03/29/21 17:26*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		46	22	ng/L		03/29/21 04:30	04/05/21 20:33	10
Perfluoropentanoic acid (PFPeA)	ND		19	4.5	ng/L		03/29/21 04:30	04/05/21 20:33	10
Perfluorohexanoic acid (PFHxA)	ND		19	5.4	ng/L		03/29/21 04:30	04/05/21 20:33	10
Perfluoroheptanoic acid (PFHpA)	ND		19	2.3	ng/L		03/29/21 04:30	04/05/21 20:33	10
Perfluorooctanoic acid (PFOA)	ND		19	7.9	ng/L		03/29/21 04:30	04/05/21 20:33	10
Perfluorononanoic acid (PFNA)	ND		19	2.5	ng/L		03/29/21 04:30	04/05/21 20:33	10
Perfluorodecanoic acid (PFDA)	ND		19	2.9	ng/L		03/29/21 04:30	04/05/21 20:33	10
Perfluoroundecanoic acid (PFUnA)	ND		19	10	ng/L		03/29/21 04:30	04/05/21 20:33	10
Perfluorododecanoic acid (PFDoA)	ND		19	5.1	ng/L		03/29/21 04:30	04/05/21 20:33	10
Perfluorotridecanoic acid (PFTriA)	ND		19	12	ng/L		03/29/21 04:30	04/05/21 20:33	10
Perfluorotetradecanoic acid (PFTeA)	ND		19	6.8	ng/L		03/29/21 04:30	04/05/21 20:33	10
Perfluorobutanesulfonic acid (PFBS)	ND		19	1.9	ng/L		03/29/21 04:30	04/05/21 20:33	10
Perfluorohexanesulfonic acid (PFHxS)	ND		19	5.3	ng/L		03/29/21 04:30	04/05/21 20:33	10
Perfluoroheptanesulfonic Acid (PFHpS)	ND		19	1.8	ng/L		03/29/21 04:30	04/05/21 20:33	10
Perfluorooctanesulfonic acid (PFOS)	ND		19	5.0	ng/L		03/29/21 04:30	04/05/21 20:33	10
Perfluorodecanesulfonic acid (PFDS)	ND		19	3.0	ng/L		03/29/21 04:30	04/05/21 20:33	10
Perfluorooctanesulfonamide (FOSA)	ND		19	9.1	ng/L		03/29/21 04:30	04/05/21 20:33	10
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		46	11	ng/L		03/29/21 04:30	04/05/21 20:33	10
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		46	12	ng/L		03/29/21 04:30	04/05/21 20:33	10
6:2 FTS	ND		46	23	ng/L		03/29/21 04:30	04/05/21 20:33	10
8:2 FTS	ND		19	4.3	ng/L		03/29/21 04:30	04/05/21 20:33	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*56*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:33*	*10*
13C5 PFPeA	*82*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:33*	*10*
13C2 PFHxA	*82*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:33*	*10*
13C4 PFHpA	*75*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:33*	*10*
13C4 PFOA	*87*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:33*	*10*
13C5 PFNA	*90*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:33*	*10*
13C2 PFDA	*75*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:33*	*10*
13C2 PFUnA	*67*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:33*	*10*
13C2 PFDoA	*48*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:33*	*10*
13C2 PFTeDA	*21*	*5-	*25 - 150*	*03/29/21 04:30*	*04/05/21 20:33*	*10*
13C3 PFBS	*96*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:33*	*10*
18O2 PFHxS	*78*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:33*	*10*
13C4 PFOS	*69*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:33*	*10*
13C8 FOSA	*42*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:33*	*10*
d3-NMeFOSAA	*56*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:33*	*10*
d5-NEtFOSAA	*39*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:33*	*10*
M2-6:2 FTS	*154*	*5+	*25 - 150*	*03/29/21 04:30*	*04/05/21 20:33*	*10*
M2-8:2 FTS	*118*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:33*	*10*

Client Sample ID: LPES-2
Date Collected: 03/25/21 09:00
Date Received: 03/26/21 08:00

Lab Sample ID: 480-182523-18
Matrix: Water

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.12**	**J**	0.20	0.10	ug/L		03/26/21 14:54	03/29/21 17:49	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*28*		*15 - 110*	*03/26/21 14:54*	*03/29/21 17:49*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**6.3**		4.6	2.2	ng/L		03/29/21 04:30	04/02/21 18:06	1
Perfluoropentanoic acid (PFPeA)	**6.1**		1.8	0.45	ng/L		03/29/21 04:30	04/02/21 18:06	1
Perfluorohexanoic acid (PFHxA)	**4.8**		1.8	0.53	ng/L		03/29/21 04:30	04/02/21 18:06	1
Perfluoroheptanoic acid (PFHpA)	**3.4**		1.8	0.23	ng/L		03/29/21 04:30	04/02/21 18:06	1
Perfluorooctanoic acid (PFOA)	**6.1**		1.8	0.78	ng/L		03/29/21 04:30	04/02/21 18:06	1
Perfluorononanoic acid (PFNA)	**1.2**	**J**	1.8	0.25	ng/L		03/29/21 04:30	04/02/21 18:06	1
Perfluorodecanoic acid (PFDA)	**0.66**	**J**	1.8	0.28	ng/L		03/29/21 04:30	04/02/21 18:06	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	1.0	ng/L		03/29/21 04:30	04/02/21 18:06	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.50	ng/L		03/29/21 04:30	04/02/21 18:06	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8	1.2	ng/L		03/29/21 04:30	04/02/21 18:06	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.67	ng/L		03/29/21 04:30	04/02/21 18:06	1
Perfluorobutanesulfonic acid (PFBS)	**6.2**		1.8	0.18	ng/L		03/29/21 04:30	04/02/21 18:06	1
Perfluorohexanesulfonic acid (PFHxS)	**1.7**	**J**	1.8	0.52	ng/L		03/29/21 04:30	04/02/21 18:06	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.17	ng/L		03/29/21 04:30	04/02/21 18:06	1
Perfluorooctanesulfonic acid (PFOS)	**4.8**		1.8	0.50	ng/L		03/29/21 04:30	04/02/21 18:06	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.29	ng/L		03/29/21 04:30	04/02/21 18:06	1
Perfluorooctanesulfonamide (FOSA)	ND		1.8	0.90	ng/L		03/29/21 04:30	04/02/21 18:06	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.6	1.1	ng/L		03/29/21 04:30	04/02/21 18:06	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.6	1.2	ng/L		03/29/21 04:30	04/02/21 18:06	1
6:2 FTS	ND		4.6	2.3	ng/L		03/29/21 04:30	04/02/21 18:06	1
8:2 FTS	ND		1.8	0.42	ng/L		03/29/21 04:30	04/02/21 18:06	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*36*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:06*	*1*
13C5 PFPeA	*76*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:06*	*1*
13C2 PFHxA	*83*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:06*	*1*
13C4 PFHpA	*72*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:06*	*1*
13C4 PFOA	*85*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:06*	*1*
13C5 PFNA	*104*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:06*	*1*
13C2 PFDA	*94*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:06*	*1*
13C2 PFUnA	*73*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:06*	*1*
13C2 PFDoA	*52*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:06*	*1*
13C2 PFTeDA	*15*	**5-*	*25 - 150*	*03/29/21 04:30*	*04/02/21 18:06*	*1*
13C3 PFBS	*124*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:06*	*1*
18O2 PFHxS	*101*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:06*	*1*
13C4 PFOS	*96*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:06*	*1*
13C8 FOSA	*50*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:06*	*1*
d3-NMeFOSAA	*73*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:06*	*1*
d5-NEtFOSAA	*64*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:06*	*1*
M2-6:2 FTS	*158*	**5+*	*25 - 150*	*03/29/21 04:30*	*04/02/21 18:06*	*1*

Client Sample ID: LPES-2
Lab Sample ID: 480-182523-18
Date Collected: 03/25/21 09:00
Matrix: Water
Date Received: 03/26/21 08:00

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-8:2 FTS	*164*	**5+*	*25 - 150*	*03/29/21 04:30*	*04/02/21 18:06*	*1*

Client Sample ID: LPES-3
Lab Sample ID: 480-182523-19
Date Collected: 03/25/21 09:15
Matrix: Water
Date Received: 03/26/21 08:00

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.89**		0.20	0.10	ug/L		03/26/21 14:54	03/29/21 18:13	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*28*		*15 - 110*	*03/26/21 14:54*	*03/29/21 18:13*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**4.0**	**J**	4.5	2.2	ng/L		03/29/21 04:30	04/02/21 18:16	1
Perfluoropentanoic acid (PFPeA)	**3.9**		1.8	0.44	ng/L		03/29/21 04:30	04/02/21 18:16	1
Perfluorohexanoic acid (PFHxA)	**2.9**		1.8	0.53	ng/L		03/29/21 04:30	04/02/21 18:16	1
Perfluoroheptanoic acid (PFHpA)	**1.2**	**J**	1.8	0.23	ng/L		03/29/21 04:30	04/02/21 18:16	1
Perfluorooctanoic acid (PFOA)	**4.1**		1.8	0.77	ng/L		03/29/21 04:30	04/02/21 18:16	1
Perfluorononanoic acid (PFNA)	**0.53**	**J**	1.8	0.25	ng/L		03/29/21 04:30	04/02/21 18:16	1
Perfluorodecanoic acid (PFDA)	**0.36**	**J**	1.8	0.28	ng/L		03/29/21 04:30	04/02/21 18:16	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	1.0	ng/L		03/29/21 04:30	04/02/21 18:16	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.50	ng/L		03/29/21 04:30	04/02/21 18:16	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8	1.2	ng/L		03/29/21 04:30	04/02/21 18:16	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.66	ng/L		03/29/21 04:30	04/02/21 18:16	1
Perfluorobutanesulfonic acid (PFBS)	**2.2**		1.8	0.18	ng/L		03/29/21 04:30	04/02/21 18:16	1
Perfluorohexanesulfonic acid (PFHxS)	**2.1**		1.8	0.52	ng/L		03/29/21 04:30	04/02/21 18:16	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.17	ng/L		03/29/21 04:30	04/02/21 18:16	1
Perfluorooctanesulfonic acid (PFOS)	**2.6**		1.8	0.49	ng/L		03/29/21 04:30	04/02/21 18:16	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.29	ng/L		03/29/21 04:30	04/02/21 18:16	1
Perfluorooctanesulfonamide (FOSA)	**4.2**		1.8	0.89	ng/L		03/29/21 04:30	04/02/21 18:16	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.5	1.1	ng/L		03/29/21 04:30	04/02/21 18:16	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.5	1.2	ng/L		03/29/21 04:30	04/02/21 18:16	1
6:2 FTS	ND		4.5	2.3	ng/L		03/29/21 04:30	04/02/21 18:16	1
8:2 FTS	ND		1.8	0.42	ng/L		03/29/21 04:30	04/02/21 18:16	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*49*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:16*	*1*
13C5 PFPeA	*80*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:16*	*1*
13C2 PFHxA	*79*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:16*	*1*
13C4 PFHpA	*82*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:16*	*1*
13C4 PFOA	*90*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:16*	*1*
13C5 PFNA	*99*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:16*	*1*
13C2 PFDA	*80*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:16*	*1*
13C2 PFUnA	*77*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:16*	*1*

Client Sample ID: LPES-3
Date Collected: 03/25/21 09:15
Date Received: 03/26/21 08:00

Lab Sample ID: 480-182523-19
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDoA	77		25 - 150	03/29/21 04:30	04/02/21 18:16	1
13C2 PFTeDA	73		25 - 150	03/29/21 04:30	04/02/21 18:16	1
13C3 PFBS	105		25 - 150	03/29/21 04:30	04/02/21 18:16	1
18O2 PFHxS	93		25 - 150	03/29/21 04:30	04/02/21 18:16	1
13C4 PFOS	83		25 - 150	03/29/21 04:30	04/02/21 18:16	1
13C8 FOSA	73		25 - 150	03/29/21 04:30	04/02/21 18:16	1
d3-NMeFOSAA	76		25 - 150	03/29/21 04:30	04/02/21 18:16	1
d5-NEtFOSAA	76		25 - 150	03/29/21 04:30	04/02/21 18:16	1
M2-6:2 FTS	143		25 - 150	03/29/21 04:30	04/02/21 18:16	1
M2-8:2 FTS	112		25 - 150	03/29/21 04:30	04/02/21 18:16	1

Client Sample ID: LPES-4
Date Collected: 03/25/21 09:45
Date Received: 03/26/21 08:00

Lab Sample ID: 480-182523-20
Matrix: Water

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		20	10	ug/L		03/26/21 14:54	03/31/21 03:44	100

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	18		15 - 110	03/26/21 14:54	03/31/21 03:44	100

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**2.6**	**J**	4.4	2.1	ng/L		03/29/21 04:30	04/02/21 18:25	1
Perfluoropentanoic acid (PFPeA)	**1.3**	**J**	1.8	0.44	ng/L		03/29/21 04:30	04/02/21 18:25	1
Perfluorohexanoic acid (PFHxA)	**1.3**	**J**	1.8	0.52	ng/L		03/29/21 04:30	04/02/21 18:25	1
Perfluoroheptanoic acid (PFHpA)	**1.3**	**J**	1.8	0.22	ng/L		03/29/21 04:30	04/02/21 18:25	1
Perfluorooctanoic acid (PFOA)	**7.4**		1.8	0.76	ng/L		03/29/21 04:30	04/02/21 18:25	1
Perfluorononanoic acid (PFNA)	**0.36**	**J**	1.8	0.24	ng/L		03/29/21 04:30	04/02/21 18:25	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.28	ng/L		03/29/21 04:30	04/02/21 18:25	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.98	ng/L		03/29/21 04:30	04/02/21 18:25	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.49	ng/L		03/29/21 04:30	04/02/21 18:25	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8	1.2	ng/L		03/29/21 04:30	04/02/21 18:25	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.65	ng/L		03/29/21 04:30	04/02/21 18:25	1
Perfluorobutanesulfonic acid (PFBS)	**1.9**		1.8	0.18	ng/L		03/29/21 04:30	04/02/21 18:25	1
Perfluorohexanesulfonic acid (PFHxS)	**0.65**	**J**	1.8	0.51	ng/L		03/29/21 04:30	04/02/21 18:25	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.17	ng/L		03/29/21 04:30	04/02/21 18:25	1
Perfluorooctanesulfonic acid (PFOS)	**1.8**		1.8	0.48	ng/L		03/29/21 04:30	04/02/21 18:25	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.28	ng/L		03/29/21 04:30	04/02/21 18:25	1
Perfluorooctanesulfonamide (FOSA)	ND		1.8	0.87	ng/L		03/29/21 04:30	04/02/21 18:25	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.4	1.1	ng/L		03/29/21 04:30	04/02/21 18:25	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.4	1.2	ng/L		03/29/21 04:30	04/02/21 18:25	1
6:2 FTS	ND		4.4	2.2	ng/L		03/29/21 04:30	04/02/21 18:25	1
8:2 FTS	ND		1.8	0.41	ng/L		03/29/21 04:30	04/02/21 18:25	1

Client Sample ID: LPES-4
Date Collected: 03/25/21 09:45
Date Received: 03/26/21 08:00

Lab Sample ID: 480-182523-20
Matrix: Water

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	46		25 - 150	03/29/21 04:30	04/02/21 18:25	1
13C5 PFPeA	87		25 - 150	03/29/21 04:30	04/02/21 18:25	1
13C2 PFHxA	86		25 - 150	03/29/21 04:30	04/02/21 18:25	1
13C4 PFHpA	79		25 - 150	03/29/21 04:30	04/02/21 18:25	1
13C4 PFOA	94		25 - 150	03/29/21 04:30	04/02/21 18:25	1
13C5 PFNA	104		25 - 150	03/29/21 04:30	04/02/21 18:25	1
13C2 PFDA	94		25 - 150	03/29/21 04:30	04/02/21 18:25	1
13C2 PFUnA	88		25 - 150	03/29/21 04:30	04/02/21 18:25	1
13C2 PFDoA	76		25 - 150	03/29/21 04:30	04/02/21 18:25	1
13C2 PFTeDA	69		25 - 150	03/29/21 04:30	04/02/21 18:25	1
13C3 PFBS	116		25 - 150	03/29/21 04:30	04/02/21 18:25	1
18O2 PFHxS	93		25 - 150	03/29/21 04:30	04/02/21 18:25	1
13C4 PFOS	90		25 - 150	03/29/21 04:30	04/02/21 18:25	1
13C8 FOSA	79		25 - 150	03/29/21 04:30	04/02/21 18:25	1
d3-NMeFOSAA	88		25 - 150	03/29/21 04:30	04/02/21 18:25	1
d5-NEtFOSAA	85		25 - 150	03/29/21 04:30	04/02/21 18:25	1
M2-6:2 FTS	158	*5+	25 - 150	03/29/21 04:30	04/02/21 18:25	1
M2-8:2 FTS	158	*5+	25 - 150	03/29/21 04:30	04/02/21 18:25	1

Client Sample ID: LPES-5
Date Collected: 03/25/21 12:30
Date Received: 03/26/21 08:00

Lab Sample ID: 480-182523-21
Matrix: Water

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20	0.10	ug/L		03/26/21 14:54	03/29/21 18:36	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	35		15 - 110	03/26/21 14:54	03/29/21 18:36	1

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		4.6	2.2	ng/L		03/29/21 04:30	04/02/21 18:52	1
Perfluoropentanoic acid (PFPeA)	**0.74**	**J**	1.8	0.45	ng/L		03/29/21 04:30	04/02/21 18:52	1
Perfluorohexanoic acid (PFHxA)	**0.75**	**J**	1.8	0.53	ng/L		03/29/21 04:30	04/02/21 18:52	1
Perfluoroheptanoic acid (PFHpA)	**0.61**	**J**	1.8	0.23	ng/L		03/29/21 04:30	04/02/21 18:52	1
Perfluorooctanoic acid (PFOA)	**2.4**		1.8	0.78	ng/L		03/29/21 04:30	04/02/21 18:52	1
Perfluorononanoic acid (PFNA)	**0.59**	**J**	1.8	0.25	ng/L		03/29/21 04:30	04/02/21 18:52	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.28	ng/L		03/29/21 04:30	04/02/21 18:52	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	1.0	ng/L		03/29/21 04:30	04/02/21 18:52	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.50	ng/L		03/29/21 04:30	04/02/21 18:52	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8	1.2	ng/L		03/29/21 04:30	04/02/21 18:52	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.67	ng/L		03/29/21 04:30	04/02/21 18:52	1
Perfluorobutanesulfonic acid (PFBS)	**1.0**	**J**	1.8	0.18	ng/L		03/29/21 04:30	04/02/21 18:52	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.8	0.52	ng/L		03/29/21 04:30	04/02/21 18:52	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.17	ng/L		03/29/21 04:30	04/02/21 18:52	1
Perfluorooctanesulfonic acid (PFOS)	**1.1**	**J**	1.8	0.50	ng/L		03/29/21 04:30	04/02/21 18:52	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.29	ng/L		03/29/21 04:30	04/02/21 18:52	1
Perfluorooctanesulfonamide (FOSA)	ND		1.8	0.90	ng/L		03/29/21 04:30	04/02/21 18:52	1

Client Sample ID: LPES-5
Lab Sample ID: 480-182523-21
Date Collected: 03/25/21 12:30
Matrix: Water
Date Received: 03/26/21 08:00

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		4.6	1.1	ng/L		03/29/21 04:30	04/02/21 18:52	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		4.6	1.2	ng/L		03/29/21 04:30	04/02/21 18:52	1
6:2 FTS	ND		4.6	2.3	ng/L		03/29/21 04:30	04/02/21 18:52	1
8:2 FTS	ND		1.8	0.42	ng/L		03/29/21 04:30	04/02/21 18:52	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*55*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:52*	*1*
13C5 PFPeA	*70*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:52*	*1*
13C2 PFHxA	*69*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:52*	*1*
13C4 PFHpA	*76*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:52*	*1*
13C4 PFOA	*79*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:52*	*1*
13C5 PFNA	*75*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:52*	*1*
13C2 PFDA	*61*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:52*	*1*
13C2 PFUnA	*58*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:52*	*1*
13C2 PFDoA	*57*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:52*	*1*
13C2 PFTeDA	*59*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:52*	*1*
13C3 PFBS	*77*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:52*	*1*
18O2 PFHxS	*75*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:52*	*1*
13C4 PFOS	*68*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:52*	*1*
13C8 FOSA	*60*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:52*	*1*
d3-NMeFOSAA	*63*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:52*	*1*
d5-NEtFOSAA	*61*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:52*	*1*
M2-6:2 FTS	*95*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:52*	*1*
M2-8:2 FTS	*70*		*25 - 150*	*03/29/21 04:30*	*04/02/21 18:52*	*1*

Client Sample ID: DUP B
Lab Sample ID: 480-182523-22
Date Collected: 03/25/21 09:45
Matrix: Water
Date Received: 03/26/21 08:00

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		20	10	ug/L		03/26/21 14:54	03/31/21 04:08	100

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*17*		*15 - 110*	*03/26/21 14:54*	*03/31/21 04:08*	*100*

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		46	22	ng/L		03/29/21 04:30	04/05/21 20:43	10
Perfluoropentanoic acid (PFPeA)	ND		18	4.5	ng/L		03/29/21 04:30	04/05/21 20:43	10
Perfluorohexanoic acid (PFHxA)	ND		18	5.3	ng/L		03/29/21 04:30	04/05/21 20:43	10
Perfluoroheptanoic acid (PFHpA)	ND		18	2.3	ng/L		03/29/21 04:30	04/05/21 20:43	10
Perfluorooctanoic acid (PFOA)	ND		18	7.8	ng/L		03/29/21 04:30	04/05/21 20:43	10
Perfluorononanoic acid (PFNA)	ND		18	2.5	ng/L		03/29/21 04:30	04/05/21 20:43	10
Perfluorodecanoic acid (PFDA)	ND		18	2.9	ng/L		03/29/21 04:30	04/05/21 20:43	10
Perfluoroundecanoic acid (PFUnA)	ND		18	10	ng/L		03/29/21 04:30	04/05/21 20:43	10
Perfluorododecanoic acid (PFDoA)	ND		18	5.1	ng/L		03/29/21 04:30	04/05/21 20:43	10
Perfluorotridecanoic acid (PFTriA)	ND		18	12	ng/L		03/29/21 04:30	04/05/21 20:43	10
Perfluorotetradecanoic acid (PFTeA)	ND		18	6.7	ng/L		03/29/21 04:30	04/05/21 20:43	10

Client Sample ID: DUP B
Date Collected: 03/25/21 09:45
Date Received: 03/26/21 08:00

Lab Sample ID: 480-182523-22
Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	**2.0**	**J**	18	1.8	ng/L		03/29/21 04:30	04/05/21 20:43	10
Perfluorohexanesulfonic acid (PFHxS)	ND		18	5.3	ng/L		03/29/21 04:30	04/05/21 20:43	10
Perfluoroheptanesulfonic Acid (PFHpS)	ND		18	1.8	ng/L		03/29/21 04:30	04/05/21 20:43	10
Perfluorooctanesulfonic acid (PFOS)	ND		18	5.0	ng/L		03/29/21 04:30	04/05/21 20:43	10
Perfluorodecanesulfonic acid (PFDS)	ND		18	2.9	ng/L		03/29/21 04:30	04/05/21 20:43	10
Perfluorooctanesulfonamide (FOSA)	ND		18	9.0	ng/L		03/29/21 04:30	04/05/21 20:43	10
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		46	11	ng/L		03/29/21 04:30	04/05/21 20:43	10
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		46	12	ng/L		03/29/21 04:30	04/05/21 20:43	10
6:2 FTS	ND		46	23	ng/L		03/29/21 04:30	04/05/21 20:43	10
8:2 FTS	ND		18	4.2	ng/L		03/29/21 04:30	04/05/21 20:43	10

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*63*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:43*	*10*
13C5 PFPeA	*96*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:43*	*10*
13C2 PFHxA	*87*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:43*	*10*
13C4 PFHpA	*83*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:43*	*10*
13C4 PFOA	*96*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:43*	*10*
13C5 PFNA	*95*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:43*	*10*
13C2 PFDA	*80*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:43*	*10*
13C2 PFUnA	*76*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:43*	*10*
13C2 PFDoA	*63*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:43*	*10*
13C2 PFTeDA	*61*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:43*	*10*
13C3 PFBS	*99*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:43*	*10*
18O2 PFHxS	*83*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:43*	*10*
13C4 PFOS	*80*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:43*	*10*
13C8 FOSA	*64*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:43*	*10*
d3-NMeFOSAA	*73*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:43*	*10*
d5-NEtFOSAA	*71*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:43*	*10*
M2-6:2 FTS	*170*	**5+*	*25 - 150*	*03/29/21 04:30*	*04/05/21 20:43*	*10*
M2-8:2 FTS	*124*		*25 - 150*	*03/29/21 04:30*	*04/05/21 20:43*	*10*

1,4-Dioxane

Data Section

ALPHA GEOSCIENCE

Geology
Hydrology
Remediation
Water Supply

QA/QC Review of Method 8270D SIM 1,4-Dioxane Data
for Eurofins TestAmerica-Buffalo, Job No: 480-182523-2

5 Ground Water Samples and 1 Field Duplicate
Collected March 25, 2021

Prepared by: Donald Anné
April 25, 2021

Holding Times: Samples were extracted and analyzed within USEPA SW-846 holding times.

GC/MS Tuning and Mass Calibration: The DFTPP tuning criteria were within control limits.

Initial Calibration: The average RRF for 1,4-dioxane was above the allowable minimum (0.010) and the %RSD was below the allowable maximum (30%), as required.

Continuing Calibration: The associated RRFs for 1,4-dioxane were above the allowable minimum (0.010) and the %Ds were below the allowable maximum (25%), as required.

Blanks: The analysis of the method blank reported 1,4-dioxane as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogate recoveries were within QC limits for the ground water samples.

Matrix Spike/Matrix Spike Duplicate: The 1,4-dioxane spike was diluted beyond detection limits (100x) for aqueous MS/MSD sample LPES-4. No action is taken.

Laboratory Control Sample: The percent recoveries for 1,4-dioxane were within QC limits for aqueous sample LCS 480-574003/2-A.

Field Duplicates: The analyses of aqueous field duplicate pair LPES-1/DUP B reported 1,4-dioxane as not detected; therefore, a valid relative percent difference could not be calculated. The analyses for the field duplicate pair were acceptable.

Compound ID: Checked surrogate results were within GC/MS quantitation limits. The analyses of ground water samples reported 1,4-dioxane as not detected.

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PFAS

Data Section

ALPHA GEOSCIENCE

Geology
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QA/QC Review of Method 537 (Modified) PFAS Data for Eurofins TestAmerica-Sacramento, Job No: 480-182523-2

5 Ground Samples and 1 Field Duplicate Collected March 25, 2021

Prepared by: Donald Anné
April 25, 2021

Holding Times: Samples were analyzed within USEPA holding times.

Initial Calibration: The %RSDs for applicable PFAS compounds were below the method maximums, as required.

Continuing Calibration: The %Ds for applicable PFAS compounds were below the allowable maximums, as required

Blanks: The analysis of the method blank reported target PFAS as not detected.

Surrogate Recovery: One of eighteen surrogate recoveries for samples LPES-1 and DUP B was above QC limits. Two of eighteen surrogate recoveries for samples LPES-2 and LPES-4 were above QC limits. Positive results for PFAS associated with the surrogate above QC limits should be considered estimated (J) in the samples.

One of eighteen surrogate recoveries for samples LPES-1 and LPES-2 was below QC limits, but not below 10%. No target PFAS were associated with this surrogate in the samples.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Matrix Spike/Matrix Spike Duplicate: The relative percent differences for target compounds were below the allowable maximum and the percent recoveries were within QC limits for aqueous MS/MSD sample LPES-4.

Laboratory Control Sample: The percent recoveries for target PFAS were within QC limits for aqueous sample LCS 320-474500/2-A.

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Field Duplicates: The analyses of aqueous field duplicate pair LPES-1/DUP B reported target PFAS as either not detected or below the lowest standard; therefore, valid relative percent differences could not be calculated. The analyses for the field duplicate pair were acceptable.

Compound ID: Checked compound and surrogate results were within LC quantitation limits.

FORM II
LCMS SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 480-182523-2

SDG No.:

Matrix: Water Level: Low

GC Column (1): Gemini C18 ID: 3 (mm)

Client Sample ID	Lab Sample ID	PFBA #	PFPeA #	C3PFBS #	PFHxA #	C4PFHA #	PFHxS #	M262FTS #	PFOA #
LPES-1	480-182523-17	56	82	96	82	75	78	154 *5+	87
LPES-2	480-182523-18	36	76	124	83	72	101	158 *5+	85
LPES-3	480-182523-19	49	80	105	79	82	93	143	90
LPES-4	480-182523-20	46	87	116	86	79	93	158 *5+	94
LPES-5	480-182523-21	55	70	77	69	76	75	95	79
DUP B	480-182523-22	63	96	99	87	83	83	170 *5+	96
	MB 320-474500/1-A	120	116	109	119	121	123	136	127
	LCS 320-474500/2-A	103	106	112	105	114	116	136	117
LPES-4 MS	480-182523-20 MS	47	80	109	81	72	88	144	87
LPES-4 MSD	480-182523-20 MSD	45	82	110	79	75	93	144	84

	QC LIMITS
PFBA = 13C4 PFBA	25-150
PFPeA = 13C5 PFPeA	25-150
C3PFBS = 13C3 PFBS	25-150
PFHxA = 13C2 PFHxA	25-150
C4PFHA = 13C4 PFHpA	25-150
PFHxS = 18O2 PFHxS	25-150
M262FTS = M2-6:2 FTS	25-150
PFOA = 13C4 PFOA	25-150

Column to be used to flag recovery values

FORM II 537 (modified)

FORM II
LCMS SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 480-182523-2

SDG No.:

Matrix: Water Level: Low

GC Column (1): Gemini C18 ID: 3 (mm)

Client Sample ID	Lab Sample ID	PFOS #	PFNA #	PFOSA #	M282FTS #	PFDA #	d3NMFOS #	PFUnA #	d5NEFOS #
LPES-1	480-182523-17	69	90	42	118	75	56	67	39
LPES-2	480-182523-18	96	104	50	164 *5+	94	73	73	64
LPES-3	480-182523-19	83	99	73	112	80	76	77	76
LPES-4	480-182523-20	90	104	79	158 *5+	94	88	88	85
LPES-5	480-182523-21	68	75	60	70	61	63	58	61
DUP B	480-182523-22	80	95	64	124	80	73	76	71
	MB 320-474500/1-A	117	129	111	119	117	115	129	123
	LCS 320-474500/2-A	114	124	110	127	117	134	120	138
LPES-4 MS	480-182523-20 MS	86	95	69	129	84	75	80	77
LPES-4 MSD	480-182523-20 MSD	85	95	75	133	85	82	80	77

	QC LIMITS
PFOS = 13C4 PFOS	25-150
PFNA = 13C5 PFNA	25-150
PFOSA = 13C8 FOSA	25-150
M282FTS = M2-8:2 FTS	25-150
PFDA = 13C2 PFDA	25-150
d3NMFOS = d3-NMeFOSAA	25-150
PFUnA = 13C2 PFUnA	25-150
d5NEFOS = d5-NEtFOSAA	25-150

Column to be used to flag recovery values

FORM II 537 (modified)

FORM II
LCMS SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Sacramento Job No.: 480-182523-2

SDG No.:

Matrix: Water Level: Low

GC Column (1): Gemini C18 ID: 3 (mm)

Client Sample ID	Lab Sample ID	PFDoA #	PFTDA #
LPES-1	480-182523-17	48	21 *5-
LPES-2	480-182523-18	52	15 *5-
LPES-3	480-182523-19	77	73
LPES-4	480-182523-20	76	69
LPES-5	480-182523-21	57	59
DUP B	480-182523-22	63	61
	MB 320-474500/1-A	120	118
	LCS 320-474500/2-A	112	107
LPES-4 MS	480-182523-20 MS	66	61
LPES-4 MSD	480-182523-20 MSD	72	65

	QC LIMITS
PFDoA = 13C2 PFDoA	25-150
PFTDA = 13C2 PFTeDA	25-150

Column to be used to flag recovery values

FORM II 537 (modified)

Alpha Geoscience: Acronyms and Definitions

Data Validation Acronyms

AA	Atomic absorption, flame technique
BHC	Hexachlorocyclohexane
BFB	Bromofluorobenzene
CCB	Continuing calibration blank
CCC	Calibration check compound
CCV	Continuing calibration verification
CN	Cyanide
CRDL	Contract required detection limit
CRQL	Contract required quantitation limit
CVAA	Atomic adsorption, cold vapor technique
DCAA	2,4-Dichlophenylacetic acid
DCB	Decachlorobiphenyl
DFTPP	Decafluorotriphenyl phosphine
ECD	Electron capture detector
FAA	Atomic absorption, furnace technique
FID	Flame ionization detector
FNP	1-Fluoronaphthalene
GC	Gas chromatography
GC/MS	Gas chromatography/mass spectrometry
GPC	Gel permeation chromatography
ICB	Initial calibration blank
ICP	Inductively coupled plasma-atomic emission spectrometer
ICV	Initial calibration verification
IDL	Instrument detection limit
IS	Internal standard
LCS	Laboratory control sample
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate
MSA	Method of standard additions
MS/MSD	Matrix spike/matrix spike duplicate
PID	Photo ionization detector
PCB	Polychlorinated biphenyl
PCDD	Polychlorinated dibenzodioxins
PCDF	Polychlorinated dibenzofurans
QA	Quality assurance
QC	Quality control
RF	Response factor
RPD	Relative percent difference
RRF	Relative response factor
RRF(number)	Relative response factor at concentration of the number following
RT	Retention time
RRT	Relative retention time
SDG	Sample delivery group
SPCC	System performance check compound
TCX	Tetrachloro-m-xylene
%D	Percent difference
%R	Percent recovery
%RSD	Percent relative standard deviation

Data Validation Qualifiers Used in the QA/QC Reviews for USEPA Region II

U	=	Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.
R	=	Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information is necessary to confirm the result.
N	=	Tentative identification. Analyte is considered present. Special methods may be needed to confirm its presence or absence during future sampling efforts.
J	=	Analyte is present. Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method.
J-	=	Analyte is present. Reported value may be biased low and associated with a higher level of uncertainty than is normally expected with the analytical method.
J+	=	Analyte is present. Reported value may be biased high andassociated with a higher level of uncertainty than is normally expected with the analytical method.
UJ	=	Not detected, quantitation limit may be inaccurate or imprecise.

Note: These qualifiers are used for data validation purposes. The data validation qualifiers may differ from the qualifiers that the laboratory assigns to the data. Refer to the laboratory analytical report for the definitions of the laboratory qualifiers.

Polyfluorinated Alkyl Substances (PFAS) Acronyms

PFBA	Perfluorobutanoic acid
PFPeA	Perfluoropentanoic acid
PFHxA	Perfluorohexanoic acid
PFHpA	Perfluoroheptanoic acid
PFOA	Perfluorooctanoic acid
PFNA	Perfluorononanoic acid
PFDA	Perfluorodecanoic acid
PFUnA	Perfluoroundecanoic acid
PFDoA	Perfluorododecanoic acid
PFTriA or PFTrDA	Perfluorotridecanoic acid
PFTeA or PFTA	Perfluorotetradecanoic acid
PFBS	Perfluorobutanesulfonic acid
PFPeS	Perfluoropentanesulfonic acid
PFHxS	Perfluorohexanesulfonic acid
PFHpS	Perfluoroheptanesulfonic acid
PFOS	Perfluorooctanesulfonic acid
PFNS	Perfluorononanesulfonic acid
PFDS	Perfluorodecanesulfonic acid
FOSA	Perfluorooctane Sulfonamide
NMeFOSAA	N-methyl perfluorooctane sulfonamidoacetic acid
NEtFOSAA	N-ethyl perfluorooctane sulfonamidoacetic acid
4:2 FTS or 4:2	1H, 1H, 2H, 2H-perfluorohexanesulfonic acid
6:2 FTS or 6:2	1H, 1H, 2H, 2H-perfluorooctanesulfonic acid or 6:2 Fluorotelomersulfonate
8:2 FTS or 8:2	1H, 1H, 2H, 2H-perfluorodecanesulfonic acid or 8:2 Fluorotelomersulfonate

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Data Usability Summary Report for Eurofins TestAmerica-Knoxville, Job No: 140-22612-1

9 Soil Vapor/Air Samples and 1 Field Duplicate Collected March 31, 2021

Prepared by: Donald Anné
April 25, 2021

The data package contains the documentation required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. All information appeared legible and complete. The data pack contained the results of TO-15 volatile analyses for 9 soil vapor/air samples and 1 field duplicate.

The overall performances of the analyses are acceptable. Eurofins TestAmerica-Knoxville did fulfill the requirements of the analytical method.

The data are acceptable with minor issues that are identified in the accompanying data validation review. The following data were qualified:

- The positive volatile result for ethanol in sample IA-07 was quantitated using data that were extrapolated beyond the highest calibration standard and flagged "E" by the laboratory. The result for ethanol marked "E" in the undiluted sample was qualified as estimated (J).

- The positive volatile results for the following 8 compounds were qualified as estimated (J) in samples SS-SV-05 and DUP because the relative percent differences for these 8 compounds were above the allowable maximum in the soil field duplicate pair SS-SV-05/DUP.

1,2,4-trimethylbenzene	1,4-dioxane	benzene
chloroethane	ethylbenzene	m&p-xylene
o-xylene	toluene	

- The positive volatile results for dichlorodifluoromethane were qualified as "estimated" (J) in samples SS-SV-04, SS-SV-06, SS-SV-07, and AA-02 because the %Ds for dichlorodifluoromethane were above the allowable maximum for the associated continuing calibrations.

- The positive volatile results for trichlorofluoromethane were qualified as "estimated" (J) in samples SS-SV-04 and SS-SV-06 because the %D for trichlorofluoromethane was above the allowable maximum for the associated continuing calibration.

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All data are considered usable, with estimated (J) data associated with a higher level of quantitative uncertainty. Detailed information on data quality is included in the data validation review.

Qualified Data Section

Client Sample ID: SS-SV-05
Lab Sample ID: 140-22612-1

Date Collected: 03/31/21 11:01
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**20**		1.0		ppb v/v			04/12/21 14:03	2.57
1,1,2,2-Tetrachloroethane	ND		1.0		ppb v/v			04/12/21 14:03	2.57
1,1,2-Trichloroethane	ND		1.0		ppb v/v			04/12/21 14:03	2.57
1,1,2-Trichlorotrifluoroethane	ND		1.0		ppb v/v			04/12/21 14:03	2.57
1,1-Dichloroethane	ND		1.0		ppb v/v			04/12/21 14:03	2.57
1,1-Dichloroethene	ND		0.51		ppb v/v			04/12/21 14:03	2.57
1,2,4-Trichlorobenzene	ND		1.0		ppb v/v			04/12/21 14:03	2.57
1,2,4-Trimethylbenzene	**5.3**	J	1.0		ppb v/v			04/12/21 14:03	2.57
1,2-Dibromoethane	ND		1.0		ppb v/v			04/12/21 14:03	2.57
1,2-Dichlorobenzene	ND		1.0		ppb v/v			04/12/21 14:03	2.57
1,2-Dichloroethane	ND		1.0		ppb v/v			04/12/21 14:03	2.57
1,2-Dichloropropane	ND		1.0		ppb v/v			04/12/21 14:03	2.57
1,2-Dichlorotetrafluoroethane	ND		1.0		ppb v/v			04/12/21 14:03	2.57
1,3,5-Trimethylbenzene	**2.0**		1.0		ppb v/v			04/12/21 14:03	2.57
1,3-Dichlorobenzene	ND		1.0		ppb v/v			04/12/21 14:03	2.57
1,4-Dichlorobenzene	ND		1.0		ppb v/v			04/12/21 14:03	2.57
1,4-Dioxane	**2.9**	J	2.6		ppb v/v			04/12/21 14:03	2.57
2,2,4-Trimethylpentane	ND		2.6		ppb v/v			04/12/21 14:03	2.57
2-Butanone	ND		4.1		ppb v/v			04/12/21 14:03	2.57
4-Methyl-2-pentanone (MIBK)	ND		2.6		ppb v/v			04/12/21 14:03	2.57
Benzene	**1.3**	J	1.0		ppb v/v			04/12/21 14:03	2.57
Benzyl chloride	ND		2.1		ppb v/v			04/12/21 14:03	2.57
Bromodichloromethane	ND		1.0		ppb v/v			04/12/21 14:03	2.57
Bromoform	ND		1.0		ppb v/v			04/12/21 14:03	2.57
Bromomethane	ND		1.0		ppb v/v			04/12/21 14:03	2.57
Carbon tetrachloride	ND		0.41		ppb v/v			04/12/21 14:03	2.57
Chlorobenzene	ND		1.0		ppb v/v			04/12/21 14:03	2.57
Chloroethane	**1.1**	J	1.0		ppb v/v			04/12/21 14:03	2.57
Chloroform	ND		1.0		ppb v/v			04/12/21 14:03	2.57
Chloromethane	ND		2.6		ppb v/v			04/12/21 14:03	2.57
cis-1,2-Dichloroethene	ND		0.51		ppb v/v			04/12/21 14:03	2.57
cis-1,3-Dichloropropene	ND		1.0		ppb v/v			04/12/21 14:03	2.57
Cyclohexane	ND		2.6		ppb v/v			04/12/21 14:03	2.57
Dibromochloromethane	ND		1.0		ppb v/v			04/12/21 14:03	2.57
Dichlorodifluoromethane	ND		1.0		ppb v/v			04/12/21 14:03	2.57
Ethanol	ND		26		ppb v/v			04/12/21 14:03	2.57
Ethylbenzene	**29**	J	1.0		ppb v/v			04/12/21 14:03	2.57
Hexachlorobutadiene	ND		1.0		ppb v/v			04/12/21 14:03	2.57
Hexane	ND		2.6		ppb v/v			04/12/21 14:03	2.57
Methyl tert-butyl ether	ND		2.1		ppb v/v			04/12/21 14:03	2.57
Methylene Chloride	ND		5.1		ppb v/v			04/12/21 14:03	2.57
m-Xylene & p-Xylene	**140**	J	1.0		ppb v/v			04/12/21 14:03	2.57
Naphthalene	**11**		2.6		ppb v/v			04/12/21 14:03	2.57
o-Xylene	**69**	J	1.0		ppb v/v			04/12/21 14:03	2.57
Styrene	ND		1.0		ppb v/v			04/12/21 14:03	2.57
t-Butyl alcohol	**9.3**		4.1		ppb v/v			04/12/21 14:03	2.57
Tetrachloroethene	**1.3**		1.0		ppb v/v			04/12/21 14:03	2.57
Toluene	**4.2**	J	1.5		ppb v/v			04/12/21 14:03	2.57

Client Sample ID: SS-SV-05
Lab Sample ID: 140-22612-1

Date Collected: 03/31/21 11:01
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0		ppb v/v			04/12/21 14:03	2.57
trans-1,3-Dichloropropene	ND		1.0		ppb v/v			04/12/21 14:03	2.57
Trichloroethene	**2.3**		0.46		ppb v/v			04/12/21 14:03	2.57
Trichlorofluoromethane	ND		1.0		ppb v/v			04/12/21 14:03	2.57
Vinyl chloride	ND		0.51		ppb v/v			04/12/21 14:03	2.57

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**110**		5.6		ug/m3			04/12/21 14:03	2.57
1,1,2,2-Tetrachloroethane	ND		7.1		ug/m3			04/12/21 14:03	2.57
1,1,2-Trichloroethane	ND		5.6		ug/m3			04/12/21 14:03	2.57
1,1,2-Trichlorotrifluoroethane	ND		7.9		ug/m3			04/12/21 14:03	2.57
1,1-Dichloroethane	ND		4.2		ug/m3			04/12/21 14:03	2.57
1,1-Dichloroethene	ND		2.0		ug/m3			04/12/21 14:03	2.57
1,2,4-Trichlorobenzene	ND		7.6		ug/m3			04/12/21 14:03	2.57
1,2,4-Trimethylbenzene	**26**	J	5.1		ug/m3			04/12/21 14:03	2.57
1,2-Dibromoethane	ND		7.9		ug/m3			04/12/21 14:03	2.57
1,2-Dichlorobenzene	ND		6.2		ug/m3			04/12/21 14:03	2.57
1,2-Dichloroethane	ND		4.2		ug/m3			04/12/21 14:03	2.57
1,2-Dichloropropane	ND		4.8		ug/m3			04/12/21 14:03	2.57
1,2-Dichlorotetrafluoroethane	ND		7.2		ug/m3			04/12/21 14:03	2.57
1,3,5-Trimethylbenzene	**9.9**		5.1		ug/m3			04/12/21 14:03	2.57
1,3-Dichlorobenzene	ND		6.2		ug/m3			04/12/21 14:03	2.57
1,4-Dichlorobenzene	ND		6.2		ug/m3			04/12/21 14:03	2.57
1,4-Dioxane	**10**	J	9.3		ug/m3			04/12/21 14:03	2.57
2,2,4-Trimethylpentane	ND		12		ug/m3			04/12/21 14:03	2.57
2-Butanone	ND		12		ug/m3			04/12/21 14:03	2.57
4-Methyl-2-pentanone (MIBK)	ND		11		ug/m3			04/12/21 14:03	2.57
Benzene	**4.1**	J	3.3		ug/m3			04/12/21 14:03	2.57
Benzyl chloride	ND		11		ug/m3			04/12/21 14:03	2.57
Bromodichloromethane	ND		6.9		ug/m3			04/12/21 14:03	2.57
Bromoform	ND		11		ug/m3			04/12/21 14:03	2.57
Bromomethane	ND		4.0		ug/m3			04/12/21 14:03	2.57
Carbon tetrachloride	ND		2.6		ug/m3			04/12/21 14:03	2.57
Chlorobenzene	ND		4.7		ug/m3			04/12/21 14:03	2.57
Chloroethane	**2.8**	J	2.7		ug/m3			04/12/21 14:03	2.57
Chloroform	ND		5.0		ug/m3			04/12/21 14:03	2.57
Chloromethane	ND		5.3		ug/m3			04/12/21 14:03	2.57
cis-1,2-Dichloroethene	ND		2.0		ug/m3			04/12/21 14:03	2.57
cis-1,3-Dichloropropene	ND		4.7		ug/m3			04/12/21 14:03	2.57
Cyclohexane	ND		8.8		ug/m3			04/12/21 14:03	2.57
Dibromochloromethane	ND		8.8		ug/m3			04/12/21 14:03	2.57
Dichlorodifluoromethane	ND		5.1		ug/m3			04/12/21 14:03	2.57
Ethanol	ND		48		ug/m3			04/12/21 14:03	2.57
Ethylbenzene	**130**	J	4.5		ug/m3			04/12/21 14:03	2.57
Hexachlorobutadiene	ND		11		ug/m3			04/12/21 14:03	2.57
Hexane	ND		9.1		ug/m3			04/12/21 14:03	2.57
Methyl tert-butyl ether	ND		7.4		ug/m3			04/12/21 14:03	2.57
Methylene Chloride	ND		18		ug/m3			04/12/21 14:03	2.57
m-Xylene & p-Xylene	**620**	J	4.5		ug/m3			04/12/21 14:03	2.57

Client Sample ID: SS-SV-05
Lab Sample ID: 140-22612-1

Date Collected: 03/31/21 11:01
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**56**		13		ug/m3			04/12/21 14:03	2.57
o-Xylene	**300**	**J**	4.5		ug/m3			04/12/21 14:03	2.57
Styrene	ND		4.4		ug/m3			04/12/21 14:03	2.57
t-Butyl alcohol	**28**		12		ug/m3			04/12/21 14:03	2.57
Tetrachloroethene	**8.8**		7.0		ug/m3			04/12/21 14:03	2.57
Toluene	**16**	**J**	5.8		ug/m3			04/12/21 14:03	2.57
trans-1,2-Dichloroethene	ND		4.1		ug/m3			04/12/21 14:03	2.57
trans-1,3-Dichloropropene	ND		4.7		ug/m3			04/12/21 14:03	2.57
Trichloroethene	**12**		2.5		ug/m3			04/12/21 14:03	2.57
Trichlorofluoromethane	ND		5.8		ug/m3			04/12/21 14:03	2.57
Vinyl chloride	ND		1.3		ug/m3			04/12/21 14:03	2.57

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*60 - 140*		*04/12/21 14:03*	*2.57*

Client Sample ID: IA-05
Lab Sample ID: 140-22612-2

Date Collected: 03/31/21 11:00
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.53**		0.40		ppb v/v			04/12/21 14:53	1
1,1,2,2-Tetrachloroethane	ND		0.40		ppb v/v			04/12/21 14:53	1
1,1,2-Trichloroethane	ND		0.40		ppb v/v			04/12/21 14:53	1
1,1,2-Trichlorotrifluoroethane	ND		0.40		ppb v/v			04/12/21 14:53	1
1,1-Dichloroethane	ND		0.40		ppb v/v			04/12/21 14:53	1
1,1-Dichloroethene	ND		0.20		ppb v/v			04/12/21 14:53	1
1,2,4-Trichlorobenzene	ND		0.40		ppb v/v			04/12/21 14:53	1
1,2,4-Trimethylbenzene	ND		0.40		ppb v/v			04/12/21 14:53	1
1,2-Dibromoethane	ND		0.40		ppb v/v			04/12/21 14:53	1
1,2-Dichlorobenzene	ND		0.40		ppb v/v			04/12/21 14:53	1
1,2-Dichloroethane	ND		0.40		ppb v/v			04/12/21 14:53	1
1,2-Dichloropropane	ND		0.40		ppb v/v			04/12/21 14:53	1
1,2-Dichlorotetrafluoroethane	ND		0.40		ppb v/v			04/12/21 14:53	1
1,3,5-Trimethylbenzene	ND		0.40		ppb v/v			04/12/21 14:53	1
1,3-Dichlorobenzene	ND		0.40		ppb v/v			04/12/21 14:53	1
1,4-Dichlorobenzene	ND		0.40		ppb v/v			04/12/21 14:53	1
1,4-Dioxane	ND		1.0		ppb v/v			04/12/21 14:53	1
2,2,4-Trimethylpentane	ND		1.0		ppb v/v			04/12/21 14:53	1
2-Butanone	**4.7**		1.6		ppb v/v			04/12/21 14:53	1
4-Methyl-2-pentanone (MIBK)	ND		1.0		ppb v/v			04/12/21 14:53	1
Benzene	**0.66**		0.40		ppb v/v			04/12/21 14:53	1
Benzyl chloride	ND		0.80		ppb v/v			04/12/21 14:53	1
Bromodichloromethane	ND		0.40		ppb v/v			04/12/21 14:53	1
Bromoform	ND		0.40		ppb v/v			04/12/21 14:53	1
Bromomethane	ND		0.40		ppb v/v			04/12/21 14:53	1
Carbon tetrachloride	ND		0.16		ppb v/v			04/12/21 14:53	1
Chlorobenzene	ND		0.40		ppb v/v			04/12/21 14:53	1

Client Sample ID: IA-05
Lab Sample ID: 140-22612-2

Date Collected: 03/31/21 11:00
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND		0.40		ppb v/v			04/12/21 14:53	1
Chloroform	**0.70**		0.40		ppb v/v			04/12/21 14:53	1
Chloromethane	ND		1.0		ppb v/v			04/12/21 14:53	1
cis-1,2-Dichloroethene	ND		0.20		ppb v/v			04/12/21 14:53	1
cis-1,3-Dichloropropene	ND		0.40		ppb v/v			04/12/21 14:53	1
Cyclohexane	ND		1.0		ppb v/v			04/12/21 14:53	1
Dibromochloromethane	ND		0.40		ppb v/v			04/12/21 14:53	1
Dichlorodifluoromethane	ND		0.40		ppb v/v			04/12/21 14:53	1
Ethanol	**210**		10		ppb v/v			04/12/21 14:53	1
Ethylbenzene	ND		0.40		ppb v/v			04/12/21 14:53	1
Hexachlorobutadiene	ND		0.40		ppb v/v			04/12/21 14:53	1
Hexane	ND		1.0		ppb v/v			04/12/21 14:53	1
Methyl tert-butyl ether	ND		0.80		ppb v/v			04/12/21 14:53	1
Methylene Chloride	ND		2.0		ppb v/v			04/12/21 14:53	1
m-Xylene & p-Xylene	**0.64**		0.40		ppb v/v			04/12/21 14:53	1
Naphthalene	ND		1.0		ppb v/v			04/12/21 14:53	1
o-Xylene	ND		0.40		ppb v/v			04/12/21 14:53	1
Styrene	ND		0.40		ppb v/v			04/12/21 14:53	1
t-Butyl alcohol	ND		1.6		ppb v/v			04/12/21 14:53	1
Tetrachloroethene	ND		0.40		ppb v/v			04/12/21 14:53	1
Toluene	**0.86**		0.60		ppb v/v			04/12/21 14:53	1
trans-1,2-Dichloroethene	ND		0.40		ppb v/v			04/12/21 14:53	1
trans-1,3-Dichloropropene	ND		0.40		ppb v/v			04/12/21 14:53	1
Trichloroethene	ND		0.18		ppb v/v			04/12/21 14:53	1
Trichlorofluoromethane	ND		0.40		ppb v/v			04/12/21 14:53	1
Vinyl chloride	ND		0.20		ppb v/v			04/12/21 14:53	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**2.9**		2.2		ug/m3			04/12/21 14:53	1
1,1,2,2-Tetrachloroethane	ND		2.7		ug/m3			04/12/21 14:53	1
1,1,2-Trichloroethane	ND		2.2		ug/m3			04/12/21 14:53	1
1,1,2-Trichlorotrifluoroethane	ND		3.1		ug/m3			04/12/21 14:53	1
1,1-Dichloroethane	ND		1.6		ug/m3			04/12/21 14:53	1
1,1-Dichloroethene	ND		0.79		ug/m3			04/12/21 14:53	1
1,2,4-Trichlorobenzene	ND		3.0		ug/m3			04/12/21 14:53	1
1,2,4-Trimethylbenzene	ND		2.0		ug/m3			04/12/21 14:53	1
1,2-Dibromoethane	ND		3.1		ug/m3			04/12/21 14:53	1
1,2-Dichlorobenzene	ND		2.4		ug/m3			04/12/21 14:53	1
1,2-Dichloroethane	ND		1.6		ug/m3			04/12/21 14:53	1
1,2-Dichloropropane	ND		1.8		ug/m3			04/12/21 14:53	1
1,2-Dichlorotetrafluoroethane	ND		2.8		ug/m3			04/12/21 14:53	1
1,3,5-Trimethylbenzene	ND		2.0		ug/m3			04/12/21 14:53	1
1,3-Dichlorobenzene	ND		2.4		ug/m3			04/12/21 14:53	1
1,4-Dichlorobenzene	ND		2.4		ug/m3			04/12/21 14:53	1
1,4-Dioxane	ND		3.6		ug/m3			04/12/21 14:53	1
2,2,4-Trimethylpentane	ND		4.7		ug/m3			04/12/21 14:53	1
2-Butanone	**14**		4.7		ug/m3			04/12/21 14:53	1
4-Methyl-2-pentanone (MIBK)	ND		4.1		ug/m3			04/12/21 14:53	1
Benzene	**2.1**		1.3		ug/m3			04/12/21 14:53	1

Client Sample ID: IA-05
Lab Sample ID: 140-22612-2

Date Collected: 03/31/21 11:00
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzyl chloride	ND		4.1		ug/m3			04/12/21 14:53	1
Bromodichloromethane	ND		2.7		ug/m3			04/12/21 14:53	1
Bromoform	ND		4.1		ug/m3			04/12/21 14:53	1
Bromomethane	ND		1.6		ug/m3			04/12/21 14:53	1
Carbon tetrachloride	ND		1.0		ug/m3			04/12/21 14:53	1
Chlorobenzene	ND		1.8		ug/m3			04/12/21 14:53	1
Chloroethane	ND		1.1		ug/m3			04/12/21 14:53	1
Chloroform	**3.4**		2.0		ug/m3			04/12/21 14:53	1
Chloromethane	ND		2.1		ug/m3			04/12/21 14:53	1
cis-1,2-Dichloroethene	ND		0.79		ug/m3			04/12/21 14:53	1
cis-1,3-Dichloropropene	ND		1.8		ug/m3			04/12/21 14:53	1
Cyclohexane	ND		3.4		ug/m3			04/12/21 14:53	1
Dibromochloromethane	ND		3.4		ug/m3			04/12/21 14:53	1
Dichlorodifluoromethane	ND		2.0		ug/m3			04/12/21 14:53	1
Ethanol	**390**		19		ug/m3			04/12/21 14:53	1
Ethylbenzene	ND		1.7		ug/m3			04/12/21 14:53	1
Hexachlorobutadiene	ND		4.3		ug/m3			04/12/21 14:53	1
Hexane	ND		3.5		ug/m3			04/12/21 14:53	1
Methyl tert-butyl ether	ND		2.9		ug/m3			04/12/21 14:53	1
Methylene Chloride	ND		6.9		ug/m3			04/12/21 14:53	1
m-Xylene & p-Xylene	**2.8**		1.7		ug/m3			04/12/21 14:53	1
Naphthalene	ND		5.2		ug/m3			04/12/21 14:53	1
o-Xylene	ND		1.7		ug/m3			04/12/21 14:53	1
Styrene	ND		1.7		ug/m3			04/12/21 14:53	1
t-Butyl alcohol	ND		4.9		ug/m3			04/12/21 14:53	1
Tetrachloroethene	ND		2.7		ug/m3			04/12/21 14:53	1
Toluene	**3.3**		2.3		ug/m3			04/12/21 14:53	1
trans-1,2-Dichloroethene	ND		1.6		ug/m3			04/12/21 14:53	1
trans-1,3-Dichloropropene	ND		1.8		ug/m3			04/12/21 14:53	1
Trichloroethene	ND		0.97		ug/m3			04/12/21 14:53	1
Trichlorofluoromethane	ND		2.2		ug/m3			04/12/21 14:53	1
Vinyl chloride	ND		0.51		ug/m3			04/12/21 14:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*60 - 140*		*04/12/21 14:53*	*1*

Client Sample ID: SS-SV-07
Lab Sample ID: 140-22612-3

Date Collected: 03/31/21 11:35
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**8.8**		0.16		ppb v/v			04/13/21 08:10	1
1,1,2,2-Tetrachloroethane	ND		0.16		ppb v/v			04/13/21 08:10	1
1,1,2-Trichloroethane	ND		0.16		ppb v/v			04/13/21 08:10	1
1,1,2-Trichlorotrifluoroethane	ND		0.16		ppb v/v			04/13/21 08:10	1
1,1-Dichloroethane	**0.31**		0.16		ppb v/v			04/13/21 08:10	1
1,1-Dichloroethene	**0.12**		0.080		ppb v/v			04/13/21 08:10	1

Client Sample ID: SS-SV-07
Lab Sample ID: 140-22612-3

Date Collected: 03/31/21 11:35
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.16		ppb v/v			04/13/21 08:10	1
1,2,4-Trimethylbenzene	**0.29**		0.16		ppb v/v			04/13/21 08:10	1
1,2-Dibromoethane	ND		0.16		ppb v/v			04/13/21 08:10	1
1,2-Dichlorobenzene	ND		0.16		ppb v/v			04/13/21 08:10	1
1,2-Dichloroethane	ND		0.16		ppb v/v			04/13/21 08:10	1
1,2-Dichloropropane	ND		0.16		ppb v/v			04/13/21 08:10	1
1,2-Dichlorotetrafluoroethane	ND		0.16		ppb v/v			04/13/21 08:10	1
1,3,5-Trimethylbenzene	**0.62**	**CI**	0.16		ppb v/v			04/13/21 08:10	1
1,3-Dichlorobenzene	ND		0.16		ppb v/v			04/13/21 08:10	1
1,4-Dichlorobenzene	ND		0.16		ppb v/v			04/13/21 08:10	1
1,4-Dioxane	ND		0.40		ppb v/v			04/13/21 08:10	1
2,2,4-Trimethylpentane	ND		0.40		ppb v/v			04/13/21 08:10	1
2-Butanone	**0.75**		0.64		ppb v/v			04/13/21 08:10	1
4-Methyl-2-pentanone (MIBK)	ND		0.40		ppb v/v			04/13/21 08:10	1
Benzene	ND		0.16		ppb v/v			04/13/21 08:10	1
Benzyl chloride	ND		0.32		ppb v/v			04/13/21 08:10	1
Bromodichloromethane	ND		0.16		ppb v/v			04/13/21 08:10	1
Bromoform	ND		0.16		ppb v/v			04/13/21 08:10	1
Bromomethane	ND		0.16		ppb v/v			04/13/21 08:10	1
Carbon tetrachloride	**0.11**		0.064		ppb v/v			04/13/21 08:10	1
Chlorobenzene	ND		0.16		ppb v/v			04/13/21 08:10	1
Chloroethane	**0.40**		0.16		ppb v/v			04/13/21 08:10	1
Chloroform	**6.1**		0.16		ppb v/v			04/13/21 08:10	1
Chloromethane	**0.74**		0.40		ppb v/v			04/13/21 08:10	1
cis-1,2-Dichloroethene	**0.16**		0.080		ppb v/v			04/13/21 08:10	1
cis-1,3-Dichloropropene	ND		0.16		ppb v/v			04/13/21 08:10	1
Cyclohexane	ND		0.40		ppb v/v			04/13/21 08:10	1
Dibromochloromethane	ND		0.16		ppb v/v			04/13/21 08:10	1
Dichlorodifluoromethane	**0.25**	**J**	0.16		ppb v/v			04/13/21 08:10	1
Ethanol	**15**		4.0		ppb v/v			04/13/21 08:10	1
Ethylbenzene	**0.22**		0.16		ppb v/v			04/13/21 08:10	1
Hexachlorobutadiene	ND		0.16		ppb v/v			04/13/21 08:10	1
Hexane	ND		0.40		ppb v/v			04/13/21 08:10	1
Methyl tert-butyl ether	ND		0.32		ppb v/v			04/13/21 08:10	1
Methylene Chloride	ND		0.80		ppb v/v			04/13/21 08:10	1
m-Xylene & p-Xylene	**0.63**		0.16		ppb v/v			04/13/21 08:10	1
Naphthalene	ND		0.40		ppb v/v			04/13/21 08:10	1
o-Xylene	**0.45**		0.16		ppb v/v			04/13/21 08:10	1
Styrene	ND		0.16		ppb v/v			04/13/21 08:10	1
t-Butyl alcohol	**0.92**		0.64		ppb v/v			04/13/21 08:10	1
Tetrachloroethene	**11**		0.16		ppb v/v			04/13/21 08:10	1
Toluene	**0.96**		0.24		ppb v/v			04/13/21 08:10	1
trans-1,2-Dichloroethene	**0.70**		0.16		ppb v/v			04/13/21 08:10	1
trans-1,3-Dichloropropene	ND		0.16		ppb v/v			04/13/21 08:10	1
Trichloroethene	**2.6**		0.072		ppb v/v			04/13/21 08:10	1
Trichlorofluoromethane	**0.35**		0.16		ppb v/v			04/13/21 08:10	1
Vinyl chloride	ND		0.080		ppb v/v			04/13/21 08:10	1

Client Sample ID: SS-SV-07
Lab Sample ID: 140-22612-3

Date Collected: 03/31/21 11:35
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**48**		0.87		ug/m3			04/13/21 08:10	1
1,1,2,2-Tetrachloroethane	ND		1.1		ug/m3			04/13/21 08:10	1
1,1,2-Trichloroethane	ND		0.87		ug/m3			04/13/21 08:10	1
1,1,2-Trichlorotrifluoroethane	ND		1.2		ug/m3			04/13/21 08:10	1
1,1-Dichloroethane	**1.2**		0.65		ug/m3			04/13/21 08:10	1
1,1-Dichloroethene	**0.47**		0.32		ug/m3			04/13/21 08:10	1
1,2,4-Trichlorobenzene	ND		1.2		ug/m3			04/13/21 08:10	1
1,2,4-Trimethylbenzene	**1.4**		0.79		ug/m3			04/13/21 08:10	1
1,2-Dibromoethane	ND		1.2		ug/m3			04/13/21 08:10	1
1,2-Dichlorobenzene	ND		0.96		ug/m3			04/13/21 08:10	1
1,2-Dichloroethane	ND		0.65		ug/m3			04/13/21 08:10	1
1,2-Dichloropropane	ND		0.74		ug/m3			04/13/21 08:10	1
1,2-Dichlorotetrafluoroethane	ND		1.1		ug/m3			04/13/21 08:10	1
1,3,5-Trimethylbenzene	**3.0**	**CI**	0.79		ug/m3			04/13/21 08:10	1
1,3-Dichlorobenzene	ND		0.96		ug/m3			04/13/21 08:10	1
1,4-Dichlorobenzene	ND		0.96		ug/m3			04/13/21 08:10	1
1,4-Dioxane	ND		1.4		ug/m3			04/13/21 08:10	1
2,2,4-Trimethylpentane	ND		1.9		ug/m3			04/13/21 08:10	1
2-Butanone	**2.2**		1.9		ug/m3			04/13/21 08:10	1
4-Methyl-2-pentanone (MIBK)	ND		1.6		ug/m3			04/13/21 08:10	1
Benzene	ND		0.51		ug/m3			04/13/21 08:10	1
Benzyl chloride	ND		1.7		ug/m3			04/13/21 08:10	1
Bromodichloromethane	ND		1.1		ug/m3			04/13/21 08:10	1
Bromoform	ND		1.7		ug/m3			04/13/21 08:10	1
Bromomethane	ND		0.62		ug/m3			04/13/21 08:10	1
Carbon tetrachloride	**0.70**		0.40		ug/m3			04/13/21 08:10	1
Chlorobenzene	ND		0.74		ug/m3			04/13/21 08:10	1
Chloroethane	**1.1**		0.42		ug/m3			04/13/21 08:10	1
Chloroform	**30**		0.78		ug/m3			04/13/21 08:10	1
Chloromethane	**1.5**		0.83		ug/m3			04/13/21 08:10	1
cis-1,2-Dichloroethene	**0.62**		0.32		ug/m3			04/13/21 08:10	1
cis-1,3-Dichloropropene	ND		0.73		ug/m3			04/13/21 08:10	1
Cyclohexane	ND		1.4		ug/m3			04/13/21 08:10	1
Dibromochloromethane	ND		1.4		ug/m3			04/13/21 08:10	1
Dichlorodifluoromethane	**1.3**	**J**	0.79		ug/m3			04/13/21 08:10	1
Ethanol	**29**		7.5		ug/m3			04/13/21 08:10	1
Ethylbenzene	**0.96**		0.69		ug/m3			04/13/21 08:10	1
Hexachlorobutadiene	ND		1.7		ug/m3			04/13/21 08:10	1
Hexane	ND		1.4		ug/m3			04/13/21 08:10	1
Methyl tert-butyl ether	ND		1.2		ug/m3			04/13/21 08:10	1
Methylene Chloride	ND		2.8		ug/m3			04/13/21 08:10	1
m-Xylene & p-Xylene	**2.8**		0.69		ug/m3			04/13/21 08:10	1
Naphthalene	ND		2.1		ug/m3			04/13/21 08:10	1
o-Xylene	**2.0**		0.69		ug/m3			04/13/21 08:10	1
Styrene	ND		0.68		ug/m3			04/13/21 08:10	1
t-Butyl alcohol	**2.8**		1.9		ug/m3			04/13/21 08:10	1
Tetrachloroethene	**71**		1.1		ug/m3			04/13/21 08:10	1
Toluene	**3.6**		0.90		ug/m3			04/13/21 08:10	1
trans-1,2-Dichloroethene	**2.8**		0.63		ug/m3			04/13/21 08:10	1

Client Sample ID: SS-SV-07
Lab Sample ID: 140-22612-3
Date Collected: 03/31/21 11:35
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		0.73		ug/m3			04/13/21 08:10	1
Trichloroethene	**14**		0.39		ug/m3			04/13/21 08:10	1
Trichlorofluoromethane	**2.0**		0.90		ug/m3			04/13/21 08:10	1
Vinyl chloride	ND		0.20		ug/m3			04/13/21 08:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*60 - 140*		*04/13/21 08:10*	*1*

Client Sample ID: IA-07
Lab Sample ID: 140-22612-4
Date Collected: 03/31/21 11:36
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.66**		0.40		ppb v/v			04/13/21 00:00	1
1,1,2,2-Tetrachloroethane	ND		0.40		ppb v/v			04/13/21 00:00	1
1,1,2-Trichloroethane	ND		0.40		ppb v/v			04/13/21 00:00	1
1,1,2-Trichlorotrifluoroethane	ND		0.40		ppb v/v			04/13/21 00:00	1
1,1-Dichloroethane	ND		0.40		ppb v/v			04/13/21 00:00	1
1,1-Dichloroethene	ND		0.20		ppb v/v			04/13/21 00:00	1
1,2,4-Trichlorobenzene	ND		0.40		ppb v/v			04/13/21 00:00	1
1,2,4-Trimethylbenzene	ND		0.40		ppb v/v			04/13/21 00:00	1
1,2-Dibromoethane	ND		0.40		ppb v/v			04/13/21 00:00	1
1,2-Dichlorobenzene	ND		0.40		ppb v/v			04/13/21 00:00	1
1,2-Dichloroethane	ND		0.40		ppb v/v			04/13/21 00:00	1
1,2-Dichloropropane	ND		0.40		ppb v/v			04/13/21 00:00	1
1,2-Dichlorotetrafluoroethane	ND		0.40		ppb v/v			04/13/21 00:00	1
1,3,5-Trimethylbenzene	ND		0.40		ppb v/v			04/13/21 00:00	1
1,3-Dichlorobenzene	ND		0.40		ppb v/v			04/13/21 00:00	1
1,4-Dichlorobenzene	ND		0.40		ppb v/v			04/13/21 00:00	1
1,4-Dioxane	ND		1.0		ppb v/v			04/13/21 00:00	1
2,2,4-Trimethylpentane	ND		1.0		ppb v/v			04/13/21 00:00	1
2-Butanone	**18**		1.6		ppb v/v			04/13/21 00:00	1
4-Methyl-2-pentanone (MIBK)	ND		1.0		ppb v/v			04/13/21 00:00	1
Benzene	ND		0.40		ppb v/v			04/13/21 00:00	1
Benzyl chloride	ND		0.80		ppb v/v			04/13/21 00:00	1
Bromodichloromethane	ND		0.40		ppb v/v			04/13/21 00:00	1
Bromoform	ND		0.40		ppb v/v			04/13/21 00:00	1
Bromomethane	ND		0.40		ppb v/v			04/13/21 00:00	1
Carbon tetrachloride	ND		0.16		ppb v/v			04/13/21 00:00	1
Chlorobenzene	ND		0.40		ppb v/v			04/13/21 00:00	1
Chloroethane	ND		0.40		ppb v/v			04/13/21 00:00	1
Chloroform	**0.51**		0.40		ppb v/v			04/13/21 00:00	1
Chloromethane	ND		1.0		ppb v/v			04/13/21 00:00	1
cis-1,2-Dichloroethene	ND		0.20		ppb v/v			04/13/21 00:00	1
cis-1,3-Dichloropropene	ND		0.40		ppb v/v			04/13/21 00:00	1
Cyclohexane	ND		1.0		ppb v/v			04/13/21 00:00	1
Dibromochloromethane	ND		0.40		ppb v/v			04/13/21 00:00	1

Client Sample ID: IA-07
Lab Sample ID: 140-22612-4

Date Collected: 03/31/21 11:36
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40		ppb v/v			04/13/21 00:00	1
Ethanol	**1800**	**E J**	10		ppb v/v			04/13/21 00:00	1
Ethylbenzene	ND		0.40		ppb v/v			04/13/21 00:00	1
Hexachlorobutadiene	ND		0.40		ppb v/v			04/13/21 00:00	1
Hexane	ND		1.0		ppb v/v			04/13/21 00:00	1
Methyl tert-butyl ether	ND		0.80		ppb v/v			04/13/21 00:00	1
Methylene Chloride	ND		2.0		ppb v/v			04/13/21 00:00	1
m-Xylene & p-Xylene	**0.91**		0.40		ppb v/v			04/13/21 00:00	1
Naphthalene	ND		1.0		ppb v/v			04/13/21 00:00	1
o-Xylene	ND		0.40		ppb v/v			04/13/21 00:00	1
Styrene	ND		0.40		ppb v/v			04/13/21 00:00	1
t-Butyl alcohol	ND		1.6		ppb v/v			04/13/21 00:00	1
Tetrachloroethene	ND		0.40		ppb v/v			04/13/21 00:00	1
Toluene	**1.1**		0.60		ppb v/v			04/13/21 00:00	1
trans-1,2-Dichloroethene	**5.4**		0.40		ppb v/v			04/13/21 00:00	1
trans-1,3-Dichloropropene	ND		0.40		ppb v/v			04/13/21 00:00	1
Trichloroethene	ND		0.18		ppb v/v			04/13/21 00:00	1
Trichlorofluoromethane	ND		0.40		ppb v/v			04/13/21 00:00	1
Vinyl chloride	ND		0.20		ppb v/v			04/13/21 00:00	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**3.6**		2.2		ug/m3			04/13/21 00:00	1
1,1,2,2-Tetrachloroethane	ND		2.7		ug/m3			04/13/21 00:00	1
1,1,2-Trichloroethane	ND		2.2		ug/m3			04/13/21 00:00	1
1,1,2-Trichlorotrifluoroethane	ND		3.1		ug/m3			04/13/21 00:00	1
1,1-Dichloroethane	ND		1.6		ug/m3			04/13/21 00:00	1
1,1-Dichloroethene	ND		0.79		ug/m3			04/13/21 00:00	1
1,2,4-Trichlorobenzene	ND		3.0		ug/m3			04/13/21 00:00	1
1,2,4-Trimethylbenzene	ND		2.0		ug/m3			04/13/21 00:00	1
1,2-Dibromoethane	ND		3.1		ug/m3			04/13/21 00:00	1
1,2-Dichlorobenzene	ND		2.4		ug/m3			04/13/21 00:00	1
1,2-Dichloroethane	ND		1.6		ug/m3			04/13/21 00:00	1
1,2-Dichloropropane	ND		1.8		ug/m3			04/13/21 00:00	1
1,2-Dichlorotetrafluoroethane	ND		2.8		ug/m3			04/13/21 00:00	1
1,3,5-Trimethylbenzene	ND		2.0		ug/m3			04/13/21 00:00	1
1,3-Dichlorobenzene	ND		2.4		ug/m3			04/13/21 00:00	1
1,4-Dichlorobenzene	ND		2.4		ug/m3			04/13/21 00:00	1
1,4-Dioxane	ND		3.6		ug/m3			04/13/21 00:00	1
2,2,4-Trimethylpentane	ND		4.7		ug/m3			04/13/21 00:00	1
2-Butanone	**52**		4.7		ug/m3			04/13/21 00:00	1
4-Methyl-2-pentanone (MIBK)	ND		4.1		ug/m3			04/13/21 00:00	1
Benzene	ND		1.3		ug/m3			04/13/21 00:00	1
Benzyl chloride	ND		4.1		ug/m3			04/13/21 00:00	1
Bromodichloromethane	ND		2.7		ug/m3			04/13/21 00:00	1
Bromoform	ND		4.1		ug/m3			04/13/21 00:00	1
Bromomethane	ND		1.6		ug/m3			04/13/21 00:00	1
Carbon tetrachloride	ND		1.0		ug/m3			04/13/21 00:00	1
Chlorobenzene	ND		1.8		ug/m3			04/13/21 00:00	1
Chloroethane	ND		1.1		ug/m3			04/13/21 00:00	1

Client Sample ID: IA-07
Lab Sample ID: 140-22612-4

Date Collected: 03/31/21 11:36
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	**2.5**		2.0		ug/m3			04/13/21 00:00	1
Chloromethane	ND		2.1		ug/m3			04/13/21 00:00	1
cis-1,2-Dichloroethene	ND		0.79		ug/m3			04/13/21 00:00	1
cis-1,3-Dichloropropene	ND		1.8		ug/m3			04/13/21 00:00	1
Cyclohexane	ND		3.4		ug/m3			04/13/21 00:00	1
Dibromochloromethane	ND		3.4		ug/m3			04/13/21 00:00	1
Dichlorodifluoromethane	ND		2.0		ug/m3			04/13/21 00:00	1
Ethanol	**3400**	**E J**	19		ug/m3			04/13/21 00:00	1
Ethylbenzene	ND		1.7		ug/m3			04/13/21 00:00	1
Hexachlorobutadiene	ND		4.3		ug/m3			04/13/21 00:00	1
Hexane	ND		3.5		ug/m3			04/13/21 00:00	1
Methyl tert-butyl ether	ND		2.9		ug/m3			04/13/21 00:00	1
Methylene Chloride	ND		6.9		ug/m3			04/13/21 00:00	1
m-Xylene & p-Xylene	**4.0**		1.7		ug/m3			04/13/21 00:00	1
Naphthalene	ND		5.2		ug/m3			04/13/21 00:00	1
o-Xylene	ND		1.7		ug/m3			04/13/21 00:00	1
Styrene	ND		1.7		ug/m3			04/13/21 00:00	1
t-Butyl alcohol	ND		4.9		ug/m3			04/13/21 00:00	1
Tetrachloroethene	ND		2.7		ug/m3			04/13/21 00:00	1
Toluene	**4.3**		2.3		ug/m3			04/13/21 00:00	1
trans-1,2-Dichloroethene	**21**		1.6		ug/m3			04/13/21 00:00	1
trans-1,3-Dichloropropene	ND		1.8		ug/m3			04/13/21 00:00	1
Trichloroethene	ND		0.97		ug/m3			04/13/21 00:00	1
Trichlorofluoromethane	ND		2.2		ug/m3			04/13/21 00:00	1
Vinyl chloride	ND		0.51		ug/m3			04/13/21 00:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*60 - 140*		*04/13/21 00:00*	*1*

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	**1700**	**D**	50		ppb v/v			04/16/21 04:01	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	**3200**	**D**	94		ug/m3			04/16/21 04:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*60 - 140*		*04/16/21 04:01*	*1*

Client Sample ID: SS-SV-06
Lab Sample ID: 140-22612-5

Date Collected: 03/31/21 12:05
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**1.3**		0.080		ppb v/v			04/13/21 22:11	1
1,1,2,2-Tetrachloroethane	ND		0.080		ppb v/v			04/13/21 22:11	1
1,1,2-Trichloroethane	ND		0.080		ppb v/v			04/13/21 22:11	1
1,1,2-Trichlorotrifluoroethane	**0.082**		0.080		ppb v/v			04/13/21 22:11	1

Client Sample ID: SS-SV-06
Lab Sample ID: 140-22612-5

Date Collected: 03/31/21 12:05
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	ND		0.080		ppb v/v			04/13/21 22:11	1
1,1-Dichloroethene	ND		0.040		ppb v/v			04/13/21 22:11	1
1,2,4-Trichlorobenzene	ND		0.080		ppb v/v			04/13/21 22:11	1
1,2,4-Trimethylbenzene	**0.57**		0.080		ppb v/v			04/13/21 22:11	1
1,2-Dibromoethane	ND		0.080		ppb v/v			04/13/21 22:11	1
1,2-Dichlorobenzene	ND		0.080		ppb v/v			04/13/21 22:11	1
1,2-Dichloroethane	ND		0.080		ppb v/v			04/13/21 22:11	1
1,2-Dichloropropane	ND		0.080		ppb v/v			04/13/21 22:11	1
1,2-Dichlorotetrafluoroethane	ND		0.080		ppb v/v			04/13/21 22:11	1
1,3,5-Trimethylbenzene	**0.27**		0.080		ppb v/v			04/13/21 22:11	1
1,3-Dichlorobenzene	ND		0.080		ppb v/v			04/13/21 22:11	1
1,4-Dichlorobenzene	ND		0.080		ppb v/v			04/13/21 22:11	1
1,4-Dioxane	ND		0.20		ppb v/v			04/13/21 22:11	1
2,2,4-Trimethylpentane	ND		0.20		ppb v/v			04/13/21 22:11	1
2-Butanone	**0.66**		0.32		ppb v/v			04/13/21 22:11	1
4-Methyl-2-pentanone (MIBK)	**0.34**		0.20		ppb v/v			04/13/21 22:11	1
Benzene	**0.96**		0.080		ppb v/v			04/13/21 22:11	1
Benzyl chloride	ND		0.16		ppb v/v			04/13/21 22:11	1
Bromodichloromethane	ND		0.080		ppb v/v			04/13/21 22:11	1
Bromoform	ND		0.080		ppb v/v			04/13/21 22:11	1
Bromomethane	ND		0.080		ppb v/v			04/13/21 22:11	1
Carbon tetrachloride	**0.080**		0.032		ppb v/v			04/13/21 22:11	1
Chlorobenzene	ND		0.080		ppb v/v			04/13/21 22:11	1
Chloroethane	ND		0.080		ppb v/v			04/13/21 22:11	1
Chloroform	**1.2**		0.080		ppb v/v			04/13/21 22:11	1
Chloromethane	ND		0.20		ppb v/v			04/13/21 22:11	1
cis-1,2-Dichloroethene	ND		0.040		ppb v/v			04/13/21 22:11	1
cis-1,3-Dichloropropene	ND		0.080		ppb v/v			04/13/21 22:11	1
Cyclohexane	ND		0.20		ppb v/v			04/13/21 22:11	1
Dibromochloromethane	ND		0.080		ppb v/v			04/13/21 22:11	1
Dichlorodifluoromethane	**0.20**	J	0.080		ppb v/v			04/13/21 22:11	1
Ethanol	**4.9**		2.0		ppb v/v			04/13/21 22:11	1
Ethylbenzene	**0.13**		0.080		ppb v/v			04/13/21 22:11	1
Hexachlorobutadiene	ND		0.080		ppb v/v			04/13/21 22:11	1
Hexane	**0.70**		0.20		ppb v/v			04/13/21 22:11	1
Methyl tert-butyl ether	ND		0.16		ppb v/v			04/13/21 22:11	1
Methylene Chloride	**0.48**		0.40		ppb v/v			04/13/21 22:11	1
m-Xylene & p-Xylene	**0.62**		0.080		ppb v/v			04/13/21 22:11	1
Naphthalene	ND		0.20		ppb v/v			04/13/21 22:11	1
o-Xylene	**0.27**		0.080		ppb v/v			04/13/21 22:11	1
Styrene	ND		0.080		ppb v/v			04/13/21 22:11	1
t-Butyl alcohol	**0.79**		0.32		ppb v/v			04/13/21 22:11	1
Tetrachloroethene	**0.44**		0.080		ppb v/v			04/13/21 22:11	1
Toluene	**0.68**		0.12		ppb v/v			04/13/21 22:11	1
trans-1,2-Dichloroethene	ND		0.080		ppb v/v			04/13/21 22:11	1
trans-1,3-Dichloropropene	ND		0.080		ppb v/v			04/13/21 22:11	1
Trichloroethene	**5.8**		0.036		ppb v/v			04/13/21 22:11	1
Trichlorofluoromethane	**0.26**	J	0.080		ppb v/v			04/13/21 22:11	1

Client Sample ID: SS-SV-06
Lab Sample ID: 140-22612-5

Date Collected: 03/31/21 12:05
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.040		ppb v/v			04/13/21 22:11	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**7.3**		0.44		ug/m3			04/13/21 22:11	1
1,1,2,2-Tetrachloroethane	ND		0.55		ug/m3			04/13/21 22:11	1
1,1,2-Trichloroethane	ND		0.44		ug/m3			04/13/21 22:11	1
1,1,2-Trichlorotrifluoroethane	**0.62**		0.61		ug/m3			04/13/21 22:11	1
1,1-Dichloroethane	ND		0.32		ug/m3			04/13/21 22:11	1
1,1-Dichloroethene	ND		0.16		ug/m3			04/13/21 22:11	1
1,2,4-Trichlorobenzene	ND		0.59		ug/m3			04/13/21 22:11	1
1,2,4-Trimethylbenzene	**2.8**		0.39		ug/m3			04/13/21 22:11	1
1,2-Dibromoethane	ND		0.61		ug/m3			04/13/21 22:11	1
1,2-Dichlorobenzene	ND		0.48		ug/m3			04/13/21 22:11	1
1,2-Dichloroethane	ND		0.32		ug/m3			04/13/21 22:11	1
1,2-Dichloropropane	ND		0.37		ug/m3			04/13/21 22:11	1
1,2-Dichlorotetrafluoroethane	ND		0.56		ug/m3			04/13/21 22:11	1
1,3,5-Trimethylbenzene	**1.3**		0.39		ug/m3			04/13/21 22:11	1
1,3-Dichlorobenzene	ND		0.48		ug/m3			04/13/21 22:11	1
1,4-Dichlorobenzene	ND		0.48		ug/m3			04/13/21 22:11	1
1,4-Dioxane	ND		0.72		ug/m3			04/13/21 22:11	1
2,2,4-Trimethylpentane	ND		0.93		ug/m3			04/13/21 22:11	1
2-Butanone	**1.9**		0.94		ug/m3			04/13/21 22:11	1
4-Methyl-2-pentanone (MIBK)	**1.4**		0.82		ug/m3			04/13/21 22:11	1
Benzene	**3.1**		0.26		ug/m3			04/13/21 22:11	1
Benzyl chloride	ND		0.83		ug/m3			04/13/21 22:11	1
Bromodichloromethane	ND		0.54		ug/m3			04/13/21 22:11	1
Bromoform	ND		0.83		ug/m3			04/13/21 22:11	1
Bromomethane	ND		0.31		ug/m3			04/13/21 22:11	1
Carbon tetrachloride	**0.50**		0.20		ug/m3			04/13/21 22:11	1
Chlorobenzene	ND		0.37		ug/m3			04/13/21 22:11	1
Chloroethane	ND		0.21		ug/m3			04/13/21 22:11	1
Chloroform	**6.1**		0.39		ug/m3			04/13/21 22:11	1
Chloromethane	ND		0.41		ug/m3			04/13/21 22:11	1
cis-1,2-Dichloroethene	ND		0.16		ug/m3			04/13/21 22:11	1
cis-1,3-Dichloropropene	ND		0.36		ug/m3			04/13/21 22:11	1
Cyclohexane	ND		0.69		ug/m3			04/13/21 22:11	1
Dibromochloromethane	ND		0.68		ug/m3			04/13/21 22:11	1
Dichlorodifluoromethane	**0.98**	J	0.40		ug/m3			04/13/21 22:11	1
Ethanol	**9.3**		3.8		ug/m3			04/13/21 22:11	1
Ethylbenzene	**0.58**		0.35		ug/m3			04/13/21 22:11	1
Hexachlorobutadiene	ND		0.85		ug/m3			04/13/21 22:11	1
Hexane	**2.5**		0.70		ug/m3			04/13/21 22:11	1
Methyl tert-butyl ether	ND		0.58		ug/m3			04/13/21 22:11	1
Methylene Chloride	**1.7**		1.4		ug/m3			04/13/21 22:11	1
m-Xylene & p-Xylene	**2.7**		0.35		ug/m3			04/13/21 22:11	1
Naphthalene	ND		1.0		ug/m3			04/13/21 22:11	1
o-Xylene	**1.2**		0.35		ug/m3			04/13/21 22:11	1
Styrene	ND		0.34		ug/m3			04/13/21 22:11	1
t-Butyl alcohol	**2.4**		0.97		ug/m3			04/13/21 22:11	1

Client Sample ID: SS-SV-06
Lab Sample ID: 140-22612-5
Date Collected: 03/31/21 12:05
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**3.0**		0.54		ug/m3			04/13/21 22:11	1
Toluene	**2.5**		0.45		ug/m3			04/13/21 22:11	1
trans-1,2-Dichloroethene	ND		0.32		ug/m3			04/13/21 22:11	1
trans-1,3-Dichloropropene	ND		0.36		ug/m3			04/13/21 22:11	1
Trichloroethene	**31**		0.19		ug/m3			04/13/21 22:11	1
Trichlorofluoromethane	**1.5**	J	0.45		ug/m3			04/13/21 22:11	1
Vinyl chloride	ND		0.10		ug/m3			04/13/21 22:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*60 - 140*		*04/13/21 22:11*	*1*

Client Sample ID: IA-06
Lab Sample ID: 140-22612-6
Date Collected: 03/31/21 12:06
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.40		ppb v/v			04/13/21 01:36	1
1,1,2,2-Tetrachloroethane	ND		0.40		ppb v/v			04/13/21 01:36	1
1,1,2-Trichloroethane	ND		0.40		ppb v/v			04/13/21 01:36	1
1,1,2-Trichlorotrifluoroethane	ND		0.40		ppb v/v			04/13/21 01:36	1
1,1-Dichloroethane	ND		0.40		ppb v/v			04/13/21 01:36	1
1,1-Dichloroethene	ND		0.20		ppb v/v			04/13/21 01:36	1
1,2,4-Trichlorobenzene	ND		0.40		ppb v/v			04/13/21 01:36	1
1,2,4-Trimethylbenzene	ND		0.40		ppb v/v			04/13/21 01:36	1
1,2-Dibromoethane	ND		0.40		ppb v/v			04/13/21 01:36	1
1,2-Dichlorobenzene	ND		0.40		ppb v/v			04/13/21 01:36	1
1,2-Dichloroethane	ND		0.40		ppb v/v			04/13/21 01:36	1
1,2-Dichloropropane	ND		0.40		ppb v/v			04/13/21 01:36	1
1,2-Dichlorotetrafluoroethane	ND		0.40		ppb v/v			04/13/21 01:36	1
1,3,5-Trimethylbenzene	ND		0.40		ppb v/v			04/13/21 01:36	1
1,3-Dichlorobenzene	ND		0.40		ppb v/v			04/13/21 01:36	1
1,4-Dichlorobenzene	ND		0.40		ppb v/v			04/13/21 01:36	1
1,4-Dioxane	ND		1.0		ppb v/v			04/13/21 01:36	1
2,2,4-Trimethylpentane	ND		1.0		ppb v/v			04/13/21 01:36	1
2-Butanone	**2.8**		1.6		ppb v/v			04/13/21 01:36	1
4-Methyl-2-pentanone (MIBK)	**1.1**		1.0		ppb v/v			04/13/21 01:36	1
Benzene	ND		0.40		ppb v/v			04/13/21 01:36	1
Benzyl chloride	ND		0.80		ppb v/v			04/13/21 01:36	1
Bromodichloromethane	ND		0.40		ppb v/v			04/13/21 01:36	1
Bromoform	ND		0.40		ppb v/v			04/13/21 01:36	1
Bromomethane	ND		0.40		ppb v/v			04/13/21 01:36	1
Carbon tetrachloride	ND		0.16		ppb v/v			04/13/21 01:36	1
Chlorobenzene	ND		0.40		ppb v/v			04/13/21 01:36	1
Chloroethane	ND		0.40		ppb v/v			04/13/21 01:36	1
Chloroform	**0.46**		0.40		ppb v/v			04/13/21 01:36	1
Chloromethane	**1.1**		1.0		ppb v/v			04/13/21 01:36	1
cis-1,2-Dichloroethene	ND		0.20		ppb v/v			04/13/21 01:36	1

Client Sample ID: IA-06
Lab Sample ID: 140-22612-6

Date Collected: 03/31/21 12:06
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		0.40		ppb v/v			04/13/21 01:36	1
Cyclohexane	ND		1.0		ppb v/v			04/13/21 01:36	1
Dibromochloromethane	ND		0.40		ppb v/v			04/13/21 01:36	1
Dichlorodifluoromethane	ND		0.40		ppb v/v			04/13/21 01:36	1
Ethanol	**310**		10		ppb v/v			04/13/21 01:36	1
Ethylbenzene	ND		0.40		ppb v/v			04/13/21 01:36	1
Hexachlorobutadiene	ND		0.40		ppb v/v			04/13/21 01:36	1
Hexane	ND		1.0		ppb v/v			04/13/21 01:36	1
Methyl tert-butyl ether	ND		0.80		ppb v/v			04/13/21 01:36	1
Methylene Chloride	**2.6**		2.0		ppb v/v			04/13/21 01:36	1
m-Xylene & p-Xylene	ND		0.40		ppb v/v			04/13/21 01:36	1
Naphthalene	ND		1.0		ppb v/v			04/13/21 01:36	1
o-Xylene	ND		0.40		ppb v/v			04/13/21 01:36	1
Styrene	ND		0.40		ppb v/v			04/13/21 01:36	1
t-Butyl alcohol	ND		1.6		ppb v/v			04/13/21 01:36	1
Tetrachloroethene	ND		0.40		ppb v/v			04/13/21 01:36	1
Toluene	**0.64**		0.60		ppb v/v			04/13/21 01:36	1
trans-1,2-Dichloroethene	ND		0.40		ppb v/v			04/13/21 01:36	1
trans-1,3-Dichloropropene	ND		0.40		ppb v/v			04/13/21 01:36	1
Trichloroethene	ND		0.18		ppb v/v			04/13/21 01:36	1
Trichlorofluoromethane	ND		0.40		ppb v/v			04/13/21 01:36	1
Vinyl chloride	ND		0.20		ppb v/v			04/13/21 01:36	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		2.2		ug/m3			04/13/21 01:36	1
1,1,2,2-Tetrachloroethane	ND		2.7		ug/m3			04/13/21 01:36	1
1,1,2-Trichloroethane	ND		2.2		ug/m3			04/13/21 01:36	1
1,1,2-Trichlorotrifluoroethane	ND		3.1		ug/m3			04/13/21 01:36	1
1,1-Dichloroethane	ND		1.6		ug/m3			04/13/21 01:36	1
1,1-Dichloroethene	ND		0.79		ug/m3			04/13/21 01:36	1
1,2,4-Trichlorobenzene	ND		3.0		ug/m3			04/13/21 01:36	1
1,2,4-Trimethylbenzene	ND		2.0		ug/m3			04/13/21 01:36	1
1,2-Dibromoethane	ND		3.1		ug/m3			04/13/21 01:36	1
1,2-Dichlorobenzene	ND		2.4		ug/m3			04/13/21 01:36	1
1,2-Dichloroethane	ND		1.6		ug/m3			04/13/21 01:36	1
1,2-Dichloropropane	ND		1.8		ug/m3			04/13/21 01:36	1
1,2-Dichlorotetrafluoroethane	ND		2.8		ug/m3			04/13/21 01:36	1
1,3,5-Trimethylbenzene	ND		2.0		ug/m3			04/13/21 01:36	1
1,3-Dichlorobenzene	ND		2.4		ug/m3			04/13/21 01:36	1
1,4-Dichlorobenzene	ND		2.4		ug/m3			04/13/21 01:36	1
1,4-Dioxane	ND		3.6		ug/m3			04/13/21 01:36	1
2,2,4-Trimethylpentane	ND		4.7		ug/m3			04/13/21 01:36	1
2-Butanone	**8.2**		4.7		ug/m3			04/13/21 01:36	1
4-Methyl-2-pentanone (MIBK)	**4.6**		4.1		ug/m3			04/13/21 01:36	1
Benzene	ND		1.3		ug/m3			04/13/21 01:36	1
Benzyl chloride	ND		4.1		ug/m3			04/13/21 01:36	1
Bromodichloromethane	ND		2.7		ug/m3			04/13/21 01:36	1
Bromoform	ND		4.1		ug/m3			04/13/21 01:36	1
Bromomethane	ND		1.6		ug/m3			04/13/21 01:36	1

Client Sample ID: IA-06
Lab Sample ID: 140-22612-6

Date Collected: 03/31/21 12:06
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		1.0		ug/m3			04/13/21 01:36	1
Chlorobenzene	ND		1.8		ug/m3			04/13/21 01:36	1
Chloroethane	ND		1.1		ug/m3			04/13/21 01:36	1
Chloroform	**2.2**		2.0		ug/m3			04/13/21 01:36	1
Chloromethane	**2.2**		2.1		ug/m3			04/13/21 01:36	1
cis-1,2-Dichloroethene	ND		0.79		ug/m3			04/13/21 01:36	1
cis-1,3-Dichloropropene	ND		1.8		ug/m3			04/13/21 01:36	1
Cyclohexane	ND		3.4		ug/m3			04/13/21 01:36	1
Dibromochloromethane	ND		3.4		ug/m3			04/13/21 01:36	1
Dichlorodifluoromethane	ND		2.0		ug/m3			04/13/21 01:36	1
Ethanol	**580**		19		ug/m3			04/13/21 01:36	1
Ethylbenzene	ND		1.7		ug/m3			04/13/21 01:36	1
Hexachlorobutadiene	ND		4.3		ug/m3			04/13/21 01:36	1
Hexane	ND		3.5		ug/m3			04/13/21 01:36	1
Methyl tert-butyl ether	ND		2.9		ug/m3			04/13/21 01:36	1
Methylene Chloride	**8.9**		6.9		ug/m3			04/13/21 01:36	1
m-Xylene & p-Xylene	ND		1.7		ug/m3			04/13/21 01:36	1
Naphthalene	ND		5.2		ug/m3			04/13/21 01:36	1
o-Xylene	ND		1.7		ug/m3			04/13/21 01:36	1
Styrene	ND		1.7		ug/m3			04/13/21 01:36	1
t-Butyl alcohol	ND		4.9		ug/m3			04/13/21 01:36	1
Tetrachloroethene	ND		2.7		ug/m3			04/13/21 01:36	1
Toluene	**2.4**		2.3		ug/m3			04/13/21 01:36	1
trans-1,2-Dichloroethene	ND		1.6		ug/m3			04/13/21 01:36	1
trans-1,3-Dichloropropene	ND		1.8		ug/m3			04/13/21 01:36	1
Trichloroethene	ND		0.97		ug/m3			04/13/21 01:36	1
Trichlorofluoromethane	ND		2.2		ug/m3			04/13/21 01:36	1
Vinyl chloride	ND		0.51		ug/m3			04/13/21 01:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*60 - 140*		*04/13/21 01:36*	*1*

Client Sample ID: SS-SV-04
Lab Sample ID: 140-22612-7

Date Collected: 03/31/21 12:40
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**3.0**		0.13		ppb v/v			04/13/21 23:02	1
1,1,2,2-Tetrachloroethane	ND		0.13		ppb v/v			04/13/21 23:02	1
1,1,2-Trichloroethane	ND		0.13		ppb v/v			04/13/21 23:02	1
1,1,2-Trichlorotrifluoroethane	ND		0.13		ppb v/v			04/13/21 23:02	1
1,1-Dichloroethane	ND		0.13		ppb v/v			04/13/21 23:02	1
1,1-Dichloroethene	ND		0.067		ppb v/v			04/13/21 23:02	1
1,2,4-Trichlorobenzene	ND		0.13		ppb v/v			04/13/21 23:02	1
1,2,4-Trimethylbenzene	**0.21**		0.13		ppb v/v			04/13/21 23:02	1
1,2-Dibromoethane	ND		0.13		ppb v/v			04/13/21 23:02	1
1,2-Dichlorobenzene	ND		0.13		ppb v/v			04/13/21 23:02	1

Client Sample ID: SS-SV-04
Lab Sample ID: 140-22612-7

Date Collected: 03/31/21 12:40
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		0.13		ppb v/v			04/13/21 23:02	1
1,2-Dichloropropane	ND		0.13		ppb v/v			04/13/21 23:02	1
1,2-Dichlorotetrafluoroethane	ND		0.13		ppb v/v			04/13/21 23:02	1
1,3,5-Trimethylbenzene	ND		0.13		ppb v/v			04/13/21 23:02	1
1,3-Dichlorobenzene	ND		0.13		ppb v/v			04/13/21 23:02	1
1,4-Dichlorobenzene	ND		0.13		ppb v/v			04/13/21 23:02	1
1,4-Dioxane	ND		0.33		ppb v/v			04/13/21 23:02	1
2,2,4-Trimethylpentane	ND		0.33		ppb v/v			04/13/21 23:02	1
2-Butanone	**0.75**		0.53		ppb v/v			04/13/21 23:02	1
4-Methyl-2-pentanone (MIBK)	ND		0.33		ppb v/v			04/13/21 23:02	1
Benzene	ND		0.13		ppb v/v			04/13/21 23:02	1
Benzyl chloride	ND		0.27		ppb v/v			04/13/21 23:02	1
Bromodichloromethane	ND		0.13		ppb v/v			04/13/21 23:02	1
Bromoform	ND		0.13		ppb v/v			04/13/21 23:02	1
Bromomethane	ND		0.13		ppb v/v			04/13/21 23:02	1
Carbon tetrachloride	**0.089**		0.053		ppb v/v			04/13/21 23:02	1
Chlorobenzene	ND		0.13		ppb v/v			04/13/21 23:02	1
Chloroethane	ND		0.13		ppb v/v			04/13/21 23:02	1
Chloroform	**11**		0.13		ppb v/v			04/13/21 23:02	1
Chloromethane	ND		0.33		ppb v/v			04/13/21 23:02	1
cis-1,2-Dichloroethene	ND		0.067		ppb v/v			04/13/21 23:02	1
cis-1,3-Dichloropropene	ND		0.13		ppb v/v			04/13/21 23:02	1
Cyclohexane	ND		0.33		ppb v/v			04/13/21 23:02	1
Dibromochloromethane	ND		0.13		ppb v/v			04/13/21 23:02	1
Dichlorodifluoromethane	**0.22**	**J**	0.13		ppb v/v			04/13/21 23:02	1
Ethanol	**5.9**		3.3		ppb v/v			04/13/21 23:02	1
Ethylbenzene	**0.27**		0.13		ppb v/v			04/13/21 23:02	1
Hexachlorobutadiene	ND		0.13		ppb v/v			04/13/21 23:02	1
Hexane	ND		0.33		ppb v/v			04/13/21 23:02	1
Methyl tert-butyl ether	ND		0.27		ppb v/v			04/13/21 23:02	1
Methylene Chloride	**2.3**		0.67		ppb v/v			04/13/21 23:02	1
m-Xylene & p-Xylene	**0.76**		0.13		ppb v/v			04/13/21 23:02	1
Naphthalene	ND		0.33		ppb v/v			04/13/21 23:02	1
o-Xylene	**0.33**		0.13		ppb v/v			04/13/21 23:02	1
Styrene	ND		0.13		ppb v/v			04/13/21 23:02	1
t-Butyl alcohol	**2.1**		0.53		ppb v/v			04/13/21 23:02	1
Tetrachloroethene	**0.19**		0.13		ppb v/v			04/13/21 23:02	1
Toluene	**0.53**		0.20		ppb v/v			04/13/21 23:02	1
trans-1,2-Dichloroethene	ND		0.13		ppb v/v			04/13/21 23:02	1
trans-1,3-Dichloropropene	ND		0.13		ppb v/v			04/13/21 23:02	1
Trichloroethene	**5.6**		0.060		ppb v/v			04/13/21 23:02	1
Trichlorofluoromethane	**0.33**	**J**	0.13		ppb v/v			04/13/21 23:02	1
Vinyl chloride	ND		0.067		ppb v/v			04/13/21 23:02	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**16**		0.73		ug/m3			04/13/21 23:02	1
1,1,2,2-Tetrachloroethane	ND		0.92		ug/m3			04/13/21 23:02	1
1,1,2-Trichloroethane	ND		0.73		ug/m3			04/13/21 23:02	1
1,1,2-Trichlorotrifluoroethane	ND		1.0		ug/m3			04/13/21 23:02	1

Client Sample ID: SS-SV-04
Lab Sample ID: 140-22612-7

Date Collected: 03/31/21 12:40
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	ND		0.54		ug/m3			04/13/21 23:02	1
1,1-Dichloroethene	ND		0.26		ug/m3			04/13/21 23:02	1
1,2,4-Trichlorobenzene	ND		0.99		ug/m3			04/13/21 23:02	1
1,2,4-Trimethylbenzene	**1.1**		0.66		ug/m3			04/13/21 23:02	1
1,2-Dibromoethane	ND		1.0		ug/m3			04/13/21 23:02	1
1,2-Dichlorobenzene	ND		0.80		ug/m3			04/13/21 23:02	1
1,2-Dichloroethane	ND		0.54		ug/m3			04/13/21 23:02	1
1,2-Dichloropropane	ND		0.62		ug/m3			04/13/21 23:02	1
1,2-Dichlorotetrafluoroethane	ND		0.93		ug/m3			04/13/21 23:02	1
1,3,5-Trimethylbenzene	ND		0.66		ug/m3			04/13/21 23:02	1
1,3-Dichlorobenzene	ND		0.80		ug/m3			04/13/21 23:02	1
1,4-Dichlorobenzene	ND		0.80		ug/m3			04/13/21 23:02	1
1,4-Dioxane	ND		1.2		ug/m3			04/13/21 23:02	1
2,2,4-Trimethylpentane	ND		1.6		ug/m3			04/13/21 23:02	1
2-Butanone	**2.2**		1.6		ug/m3			04/13/21 23:02	1
4-Methyl-2-pentanone (MIBK)	ND		1.4		ug/m3			04/13/21 23:02	1
Benzene	ND		0.43		ug/m3			04/13/21 23:02	1
Benzyl chloride	ND		1.4		ug/m3			04/13/21 23:02	1
Bromodichloromethane	ND		0.89		ug/m3			04/13/21 23:02	1
Bromoform	ND		1.4		ug/m3			04/13/21 23:02	1
Bromomethane	ND		0.52		ug/m3			04/13/21 23:02	1
Carbon tetrachloride	**0.56**		0.34		ug/m3			04/13/21 23:02	1
Chlorobenzene	ND		0.61		ug/m3			04/13/21 23:02	1
Chloroethane	ND		0.35		ug/m3			04/13/21 23:02	1
Chloroform	**55**		0.65		ug/m3			04/13/21 23:02	1
Chloromethane	ND		0.69		ug/m3			04/13/21 23:02	1
cis-1,2-Dichloroethene	ND		0.26		ug/m3			04/13/21 23:02	1
cis-1,3-Dichloropropene	ND		0.61		ug/m3			04/13/21 23:02	1
Cyclohexane	ND		1.1		ug/m3			04/13/21 23:02	1
Dibromochloromethane	ND		1.1		ug/m3			04/13/21 23:02	1
Dichlorodifluoromethane	**1.1**	J	0.66		ug/m3			04/13/21 23:02	1
Ethanol	**11**		6.3		ug/m3			04/13/21 23:02	1
Ethylbenzene	**1.2**		0.58		ug/m3			04/13/21 23:02	1
Hexachlorobutadiene	ND		1.4		ug/m3			04/13/21 23:02	1
Hexane	ND		1.2		ug/m3			04/13/21 23:02	1
Methyl tert-butyl ether	ND		0.96		ug/m3			04/13/21 23:02	1
Methylene Chloride	**7.9**		2.3		ug/m3			04/13/21 23:02	1
m-Xylene & p-Xylene	**3.3**		0.58		ug/m3			04/13/21 23:02	1
Naphthalene	ND		1.7		ug/m3			04/13/21 23:02	1
o-Xylene	**1.4**		0.58		ug/m3			04/13/21 23:02	1
Styrene	ND		0.57		ug/m3			04/13/21 23:02	1
t-Butyl alcohol	**6.5**		1.6		ug/m3			04/13/21 23:02	1
Tetrachloroethene	**1.3**		0.90		ug/m3			04/13/21 23:02	1
Toluene	**2.0**		0.75		ug/m3			04/13/21 23:02	1
trans-1,2-Dichloroethene	ND		0.53		ug/m3			04/13/21 23:02	1
trans-1,3-Dichloropropene	ND		0.61		ug/m3			04/13/21 23:02	1
Trichloroethene	**30**		0.32		ug/m3			04/13/21 23:02	1
Trichlorofluoromethane	**1.9**	J	0.75		ug/m3			04/13/21 23:02	1

Client Sample ID: SS-SV-04
Lab Sample ID: 140-22612-7

Date Collected: 03/31/21 12:40
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.17		ug/m3			04/13/21 23:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*60 - 140*		*04/13/21 23:02*	*1*

Client Sample ID: IA-04
Lab Sample ID: 140-22612-8

Date Collected: 03/31/21 12:41
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.40		ppb v/v			04/13/21 03:11	1
1,1,2,2-Tetrachloroethane	ND		0.40		ppb v/v			04/13/21 03:11	1
1,1,2-Trichloroethane	ND		0.40		ppb v/v			04/13/21 03:11	1
1,1,2-Trichlorotrifluoroethane	ND		0.40		ppb v/v			04/13/21 03:11	1
1,1-Dichloroethane	ND		0.40		ppb v/v			04/13/21 03:11	1
1,1-Dichloroethene	ND		0.20		ppb v/v			04/13/21 03:11	1
1,2,4-Trichlorobenzene	ND		0.40		ppb v/v			04/13/21 03:11	1
1,2,4-Trimethylbenzene	ND		0.40		ppb v/v			04/13/21 03:11	1
1,2-Dibromoethane	ND		0.40		ppb v/v			04/13/21 03:11	1
1,2-Dichlorobenzene	ND		0.40		ppb v/v			04/13/21 03:11	1
1,2-Dichloroethane	ND		0.40		ppb v/v			04/13/21 03:11	1
1,2-Dichloropropane	ND		0.40		ppb v/v			04/13/21 03:11	1
1,2-Dichlorotetrafluoroethane	ND		0.40		ppb v/v			04/13/21 03:11	1
1,3,5-Trimethylbenzene	ND		0.40		ppb v/v			04/13/21 03:11	1
1,3-Dichlorobenzene	ND		0.40		ppb v/v			04/13/21 03:11	1
1,4-Dichlorobenzene	ND		0.40		ppb v/v			04/13/21 03:11	1
1,4-Dioxane	ND		1.0		ppb v/v			04/13/21 03:11	1
2,2,4-Trimethylpentane	ND		1.0		ppb v/v			04/13/21 03:11	1
2-Butanone	**2.9**		1.6		ppb v/v			04/13/21 03:11	1
4-Methyl-2-pentanone (MIBK)	ND		1.0		ppb v/v			04/13/21 03:11	1
Benzene	ND		0.40		ppb v/v			04/13/21 03:11	1
Benzyl chloride	ND		0.80		ppb v/v			04/13/21 03:11	1
Bromodichloromethane	ND		0.40		ppb v/v			04/13/21 03:11	1
Bromoform	ND		0.40		ppb v/v			04/13/21 03:11	1
Bromomethane	ND		0.40		ppb v/v			04/13/21 03:11	1
Carbon tetrachloride	ND		0.16		ppb v/v			04/13/21 03:11	1
Chlorobenzene	ND		0.40		ppb v/v			04/13/21 03:11	1
Chloroethane	ND		0.40		ppb v/v			04/13/21 03:11	1
Chloroform	**4.0**		0.40		ppb v/v			04/13/21 03:11	1
Chloromethane	ND		1.0		ppb v/v			04/13/21 03:11	1
cis-1,2-Dichloroethene	ND		0.20		ppb v/v			04/13/21 03:11	1
cis-1,3-Dichloropropene	ND		0.40		ppb v/v			04/13/21 03:11	1
Cyclohexane	ND		1.0		ppb v/v			04/13/21 03:11	1
Dibromochloromethane	ND		0.40		ppb v/v			04/13/21 03:11	1
Dichlorodifluoromethane	ND		0.40		ppb v/v			04/13/21 03:11	1
Ethanol	**260**		10		ppb v/v			04/13/21 03:11	1
Ethylbenzene	ND		0.40		ppb v/v			04/13/21 03:11	1

Client Sample ID: IA-04
Lab Sample ID: 140-22612-8

Date Collected: 03/31/21 12:41
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	ND		0.40		ppb v/v			04/13/21 03:11	1
Hexane	ND		1.0		ppb v/v			04/13/21 03:11	1
Methyl tert-butyl ether	ND		0.80		ppb v/v			04/13/21 03:11	1
Methylene Chloride	ND		2.0		ppb v/v			04/13/21 03:11	1
m-Xylene & p-Xylene	**0.41**		0.40		ppb v/v			04/13/21 03:11	1
Naphthalene	ND		1.0		ppb v/v			04/13/21 03:11	1
o-Xylene	ND		0.40		ppb v/v			04/13/21 03:11	1
Styrene	ND		0.40		ppb v/v			04/13/21 03:11	1
t-Butyl alcohol	ND		1.6		ppb v/v			04/13/21 03:11	1
Tetrachloroethene	ND		0.40		ppb v/v			04/13/21 03:11	1
Toluene	**0.81**		0.60		ppb v/v			04/13/21 03:11	1
trans-1,2-Dichloroethene	ND		0.40		ppb v/v			04/13/21 03:11	1
trans-1,3-Dichloropropene	ND		0.40		ppb v/v			04/13/21 03:11	1
Trichloroethene	ND		0.18		ppb v/v			04/13/21 03:11	1
Trichlorofluoromethane	ND		0.40		ppb v/v			04/13/21 03:11	1
Vinyl chloride	ND		0.20		ppb v/v			04/13/21 03:11	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		2.2		ug/m3			04/13/21 03:11	1
1,1,2,2-Tetrachloroethane	ND		2.7		ug/m3			04/13/21 03:11	1
1,1,2-Trichloroethane	ND		2.2		ug/m3			04/13/21 03:11	1
1,1,2-Trichlorotrifluoroethane	ND		3.1		ug/m3			04/13/21 03:11	1
1,1-Dichloroethane	ND		1.6		ug/m3			04/13/21 03:11	1
1,1-Dichloroethene	ND		0.79		ug/m3			04/13/21 03:11	1
1,2,4-Trichlorobenzene	ND		3.0		ug/m3			04/13/21 03:11	1
1,2,4-Trimethylbenzene	ND		2.0		ug/m3			04/13/21 03:11	1
1,2-Dibromoethane	ND		3.1		ug/m3			04/13/21 03:11	1
1,2-Dichlorobenzene	ND		2.4		ug/m3			04/13/21 03:11	1
1,2-Dichloroethane	ND		1.6		ug/m3			04/13/21 03:11	1
1,2-Dichloropropane	ND		1.8		ug/m3			04/13/21 03:11	1
1,2-Dichlorotetrafluoroethane	ND		2.8		ug/m3			04/13/21 03:11	1
1,3,5-Trimethylbenzene	ND		2.0		ug/m3			04/13/21 03:11	1
1,3-Dichlorobenzene	ND		2.4		ug/m3			04/13/21 03:11	1
1,4-Dichlorobenzene	ND		2.4		ug/m3			04/13/21 03:11	1
1,4-Dioxane	ND		3.6		ug/m3			04/13/21 03:11	1
2,2,4-Trimethylpentane	ND		4.7		ug/m3			04/13/21 03:11	1
2-Butanone	**8.6**		4.7		ug/m3			04/13/21 03:11	1
4-Methyl-2-pentanone (MIBK)	ND		4.1		ug/m3			04/13/21 03:11	1
Benzene	ND		1.3		ug/m3			04/13/21 03:11	1
Benzyl chloride	ND		4.1		ug/m3			04/13/21 03:11	1
Bromodichloromethane	ND		2.7		ug/m3			04/13/21 03:11	1
Bromoform	ND		4.1		ug/m3			04/13/21 03:11	1
Bromomethane	ND		1.6		ug/m3			04/13/21 03:11	1
Carbon tetrachloride	ND		1.0		ug/m3			04/13/21 03:11	1
Chlorobenzene	ND		1.8		ug/m3			04/13/21 03:11	1
Chloroethane	ND		1.1		ug/m3			04/13/21 03:11	1
Chloroform	**19**		2.0		ug/m3			04/13/21 03:11	1
Chloromethane	ND		2.1		ug/m3			04/13/21 03:11	1
cis-1,2-Dichloroethene	ND		0.79		ug/m3			04/13/21 03:11	1

Client Sample ID: IA-04
Lab Sample ID: 140-22612-8

Date Collected: 03/31/21 12:41
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		1.8		ug/m3			04/13/21 03:11	1
Cyclohexane	ND		3.4		ug/m3			04/13/21 03:11	1
Dibromochloromethane	ND		3.4		ug/m3			04/13/21 03:11	1
Dichlorodifluoromethane	ND		2.0		ug/m3			04/13/21 03:11	1
Ethanol	**490**		19		ug/m3			04/13/21 03:11	1
Ethylbenzene	ND		1.7		ug/m3			04/13/21 03:11	1
Hexachlorobutadiene	ND		4.3		ug/m3			04/13/21 03:11	1
Hexane	ND		3.5		ug/m3			04/13/21 03:11	1
Methyl tert-butyl ether	ND		2.9		ug/m3			04/13/21 03:11	1
Methylene Chloride	ND		6.9		ug/m3			04/13/21 03:11	1
m-Xylene & p-Xylene	**1.8**		1.7		ug/m3			04/13/21 03:11	1
Naphthalene	ND		5.2		ug/m3			04/13/21 03:11	1
o-Xylene	ND		1.7		ug/m3			04/13/21 03:11	1
Styrene	ND		1.7		ug/m3			04/13/21 03:11	1
t-Butyl alcohol	ND		4.9		ug/m3			04/13/21 03:11	1
Tetrachloroethene	ND		2.7		ug/m3			04/13/21 03:11	1
Toluene	**3.1**		2.3		ug/m3			04/13/21 03:11	1
trans-1,2-Dichloroethene	ND		1.6		ug/m3			04/13/21 03:11	1
trans-1,3-Dichloropropene	ND		1.8		ug/m3			04/13/21 03:11	1
Trichloroethene	ND		0.97		ug/m3			04/13/21 03:11	1
Trichlorofluoromethane	ND		2.2		ug/m3			04/13/21 03:11	1
Vinyl chloride	ND		0.51		ug/m3			04/13/21 03:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*60 - 140*		*04/13/21 03:11*	*1*

Client Sample ID: AA-02
Lab Sample ID: 140-22612-9

Date Collected: 03/31/21 12:55
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.080		ppb v/v			04/12/21 22:24	1
1,1,2,2-Tetrachloroethane	ND		0.080		ppb v/v			04/12/21 22:24	1
1,1,2-Trichloroethane	ND		0.080		ppb v/v			04/12/21 22:24	1
1,1,2-Trichlorotrifluoroethane	**0.081**		0.080		ppb v/v			04/12/21 22:24	1
1,1-Dichloroethane	ND		0.080		ppb v/v			04/12/21 22:24	1
1,1-Dichloroethene	ND		0.040		ppb v/v			04/12/21 22:24	1
1,2,4-Trichlorobenzene	ND		0.080		ppb v/v			04/12/21 22:24	1
1,2,4-Trimethylbenzene	**0.095**		0.080		ppb v/v			04/12/21 22:24	1
1,2-Dibromoethane	ND		0.080		ppb v/v			04/12/21 22:24	1
1,2-Dichlorobenzene	ND		0.080		ppb v/v			04/12/21 22:24	1
1,2-Dichloroethane	ND		0.080		ppb v/v			04/12/21 22:24	1
1,2-Dichloropropane	ND		0.080		ppb v/v			04/12/21 22:24	1
1,2-Dichlorotetrafluoroethane	ND		0.080		ppb v/v			04/12/21 22:24	1
1,3,5-Trimethylbenzene	ND		0.080		ppb v/v			04/12/21 22:24	1
1,3-Dichlorobenzene	ND		0.080		ppb v/v			04/12/21 22:24	1
1,4-Dichlorobenzene	ND		0.080		ppb v/v			04/12/21 22:24	1

Client Sample ID: AA-02
Lab Sample ID: 140-22612-9

Date Collected: 03/31/21 12:55
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20		ppb v/v			04/12/21 22:24	1
2,2,4-Trimethylpentane	**0.21**		0.20		ppb v/v			04/12/21 22:24	1
2-Butanone	**0.48**		0.32		ppb v/v			04/12/21 22:24	1
4-Methyl-2-pentanone (MIBK)	ND		0.20		ppb v/v			04/12/21 22:24	1
Benzene	**0.25**		0.080		ppb v/v			04/12/21 22:24	1
Benzyl chloride	ND		0.16		ppb v/v			04/12/21 22:24	1
Bromodichloromethane	ND		0.080		ppb v/v			04/12/21 22:24	1
Bromoform	ND		0.080		ppb v/v			04/12/21 22:24	1
Bromomethane	ND		0.080		ppb v/v			04/12/21 22:24	1
Carbon tetrachloride	**0.083**		0.032		ppb v/v			04/12/21 22:24	1
Chlorobenzene	ND		0.080		ppb v/v			04/12/21 22:24	1
Chloroethane	ND		0.080		ppb v/v			04/12/21 22:24	1
Chloroform	ND		0.080		ppb v/v			04/12/21 22:24	1
Chloromethane	**0.59**		0.20		ppb v/v			04/12/21 22:24	1
cis-1,2-Dichloroethene	**0.041**		0.040		ppb v/v			04/12/21 22:24	1
cis-1,3-Dichloropropene	ND		0.080		ppb v/v			04/12/21 22:24	1
Cyclohexane	ND		0.20		ppb v/v			04/12/21 22:24	1
Dibromochloromethane	ND		0.080		ppb v/v			04/12/21 22:24	1
Dichlorodifluoromethane	**0.19**	J	0.080		ppb v/v			04/12/21 22:24	1
Ethanol	**22**		2.0		ppb v/v			04/12/21 22:24	1
Ethylbenzene	**0.097**		0.080		ppb v/v			04/12/21 22:24	1
Hexachlorobutadiene	ND		0.080		ppb v/v			04/12/21 22:24	1
Hexane	**0.30**		0.20		ppb v/v			04/12/21 22:24	1
Methyl tert-butyl ether	ND		0.16		ppb v/v			04/12/21 22:24	1
Methylene Chloride	**0.82**		0.40		ppb v/v			04/12/21 22:24	1
m-Xylene & p-Xylene	**0.34**		0.080		ppb v/v			04/12/21 22:24	1
Naphthalene	ND		0.20		ppb v/v			04/12/21 22:24	1
o-Xylene	**0.14**		0.080		ppb v/v			04/12/21 22:24	1
Styrene	ND		0.080		ppb v/v			04/12/21 22:24	1
t-Butyl alcohol	ND		0.32		ppb v/v			04/12/21 22:24	1
Tetrachloroethene	**0.17**		0.080		ppb v/v			04/12/21 22:24	1
Toluene	**0.64**		0.12		ppb v/v			04/12/21 22:24	1
trans-1,2-Dichloroethene	ND		0.080		ppb v/v			04/12/21 22:24	1
trans-1,3-Dichloropropene	ND		0.080		ppb v/v			04/12/21 22:24	1
Trichloroethene	ND		0.036		ppb v/v			04/12/21 22:24	1
Trichlorofluoromethane	**0.23**		0.080		ppb v/v			04/12/21 22:24	1
Vinyl chloride	ND		0.040		ppb v/v			04/12/21 22:24	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.44		ug/m3			04/12/21 22:24	1
1,1,2,2-Tetrachloroethane	ND		0.55		ug/m3			04/12/21 22:24	1
1,1,2-Trichloroethane	ND		0.44		ug/m3			04/12/21 22:24	1
1,1,2-Trichlorotrifluoroethane	**0.62**		0.61		ug/m3			04/12/21 22:24	1
1,1-Dichloroethane	ND		0.32		ug/m3			04/12/21 22:24	1
1,1-Dichloroethene	ND		0.16		ug/m3			04/12/21 22:24	1
1,2,4-Trichlorobenzene	ND		0.59		ug/m3			04/12/21 22:24	1
1,2,4-Trimethylbenzene	**0.46**		0.39		ug/m3			04/12/21 22:24	1
1,2-Dibromoethane	ND		0.61		ug/m3			04/12/21 22:24	1
1,2-Dichlorobenzene	ND		0.48		ug/m3			04/12/21 22:24	1

Client Sample ID: AA-02
Lab Sample ID: 140-22612-9

Date Collected: 03/31/21 12:55
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		0.32		ug/m3			04/12/21 22:24	1
1,2-Dichloropropane	ND		0.37		ug/m3			04/12/21 22:24	1
1,2-Dichlorotetrafluoroethane	ND		0.56		ug/m3			04/12/21 22:24	1
1,3,5-Trimethylbenzene	ND		0.39		ug/m3			04/12/21 22:24	1
1,3-Dichlorobenzene	ND		0.48		ug/m3			04/12/21 22:24	1
1,4-Dichlorobenzene	ND		0.48		ug/m3			04/12/21 22:24	1
1,4-Dioxane	ND		0.72		ug/m3			04/12/21 22:24	1
2,2,4-Trimethylpentane	**0.96**		0.93		ug/m3			04/12/21 22:24	1
2-Butanone	**1.4**		0.94		ug/m3			04/12/21 22:24	1
4-Methyl-2-pentanone (MIBK)	ND		0.82		ug/m3			04/12/21 22:24	1
Benzene	**0.79**		0.26		ug/m3			04/12/21 22:24	1
Benzyl chloride	ND		0.83		ug/m3			04/12/21 22:24	1
Bromodichloromethane	ND		0.54		ug/m3			04/12/21 22:24	1
Bromoform	ND		0.83		ug/m3			04/12/21 22:24	1
Bromomethane	ND		0.31		ug/m3			04/12/21 22:24	1
Carbon tetrachloride	**0.52**		0.20		ug/m3			04/12/21 22:24	1
Chlorobenzene	ND		0.37		ug/m3			04/12/21 22:24	1
Chloroethane	ND		0.21		ug/m3			04/12/21 22:24	1
Chloroform	ND		0.39		ug/m3			04/12/21 22:24	1
Chloromethane	**1.2**		0.41		ug/m3			04/12/21 22:24	1
cis-1,2-Dichloroethene	**0.16**		0.16		ug/m3			04/12/21 22:24	1
cis-1,3-Dichloropropene	ND		0.36		ug/m3			04/12/21 22:24	1
Cyclohexane	ND		0.69		ug/m3			04/12/21 22:24	1
Dibromochloromethane	ND		0.68		ug/m3			04/12/21 22:24	1
Dichlorodifluoromethane	**0.96**	J	0.40		ug/m3			04/12/21 22:24	1
Ethanol	**42**		3.8		ug/m3			04/12/21 22:24	1
Ethylbenzene	**0.42**		0.35		ug/m3			04/12/21 22:24	1
Hexachlorobutadiene	ND		0.85		ug/m3			04/12/21 22:24	1
Hexane	**1.1**		0.70		ug/m3			04/12/21 22:24	1
Methyl tert-butyl ether	ND		0.58		ug/m3			04/12/21 22:24	1
Methylene Chloride	**2.8**		1.4		ug/m3			04/12/21 22:24	1
m-Xylene & p-Xylene	**1.5**		0.35		ug/m3			04/12/21 22:24	1
Naphthalene	ND		1.0		ug/m3			04/12/21 22:24	1
o-Xylene	**0.62**		0.35		ug/m3			04/12/21 22:24	1
Styrene	ND		0.34		ug/m3			04/12/21 22:24	1
t-Butyl alcohol	ND		0.97		ug/m3			04/12/21 22:24	1
Tetrachloroethene	**1.1**		0.54		ug/m3			04/12/21 22:24	1
Toluene	**2.4**		0.45		ug/m3			04/12/21 22:24	1
trans-1,2-Dichloroethene	ND		0.32		ug/m3			04/12/21 22:24	1
trans-1,3-Dichloropropene	ND		0.36		ug/m3			04/12/21 22:24	1
Trichloroethene	ND		0.19		ug/m3			04/12/21 22:24	1
Trichlorofluoromethane	**1.3**		0.45		ug/m3			04/12/21 22:24	1
Vinyl chloride	ND		0.10		ug/m3			04/12/21 22:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*60 - 140*		*04/12/21 22:24*	*1*

Client Sample ID: DUP
Lab Sample ID: 140-22612-10

Date Collected: 03/31/21 00:00
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**25**		0.34		ppb v/v			04/13/21 23:52	2.12
1,1,2,2-Tetrachloroethane	ND		0.34		ppb v/v			04/13/21 23:52	2.12
1,1,2-Trichloroethane	ND		0.34		ppb v/v			04/13/21 23:52	2.12
1,1,2-Trichlorotrifluoroethane	ND		0.34		ppb v/v			04/13/21 23:52	2.12
1,1-Dichloroethane	ND		0.34		ppb v/v			04/13/21 23:52	2.12
1,1-Dichloroethene	ND		0.17		ppb v/v			04/13/21 23:52	2.12
1,2,4-Trichlorobenzene	ND		0.34		ppb v/v			04/13/21 23:52	2.12
1,2,4-Trimethylbenzene	**0.39**	**J**	0.34		ppb v/v			04/13/21 23:52	2.12
1,2-Dibromoethane	ND		0.34		ppb v/v			04/13/21 23:52	2.12
1,2-Dichlorobenzene	ND		0.34		ppb v/v			04/13/21 23:52	2.12
1,2-Dichloroethane	ND		0.34		ppb v/v			04/13/21 23:52	2.12
1,2-Dichloropropane	ND		0.34		ppb v/v			04/13/21 23:52	2.12
1,2-Dichlorotetrafluoroethane	ND		0.34		ppb v/v			04/13/21 23:52	2.12
1,3,5-Trimethylbenzene	ND		0.34		ppb v/v			04/13/21 23:52	2.12
1,3-Dichlorobenzene	ND		0.34		ppb v/v			04/13/21 23:52	2.12
1,4-Dichlorobenzene	ND		0.34		ppb v/v			04/13/21 23:52	2.12
1,4-Dioxane	**2.2**	**J**	0.85		ppb v/v			04/13/21 23:52	2.12
2,2,4-Trimethylpentane	ND		0.85		ppb v/v			04/13/21 23:52	2.12
2-Butanone	ND		1.4		ppb v/v			04/13/21 23:52	2.12
4-Methyl-2-pentanone (MIBK)	ND		0.85		ppb v/v			04/13/21 23:52	2.12
Benzene	**1.0**	**J**	0.34		ppb v/v			04/13/21 23:52	2.12
Benzyl chloride	ND		0.68		ppb v/v			04/13/21 23:52	2.12
Bromodichloromethane	ND		0.34		ppb v/v			04/13/21 23:52	2.12
Bromoform	ND		0.34		ppb v/v			04/13/21 23:52	2.12
Bromomethane	ND		0.34		ppb v/v			04/13/21 23:52	2.12
Carbon tetrachloride	ND		0.14		ppb v/v			04/13/21 23:52	2.12
Chlorobenzene	ND		0.34		ppb v/v			04/13/21 23:52	2.12
Chloroethane	**0.81**	**J**	0.34		ppb v/v			04/13/21 23:52	2.12
Chloroform	**0.81**		0.34		ppb v/v			04/13/21 23:52	2.12
Chloromethane	**1.4**		0.85		ppb v/v			04/13/21 23:52	2.12
cis-1,2-Dichloroethene	ND		0.17		ppb v/v			04/13/21 23:52	2.12
cis-1,3-Dichloropropene	ND		0.34		ppb v/v			04/13/21 23:52	2.12
Cyclohexane	ND		0.85		ppb v/v			04/13/21 23:52	2.12
Dibromochloromethane	ND		0.34		ppb v/v			04/13/21 23:52	2.12
Dichlorodifluoromethane	ND		0.34		ppb v/v			04/13/21 23:52	2.12
Ethanol	ND		8.5		ppb v/v			04/13/21 23:52	2.12
Ethylbenzene	**15**	**J**	0.34		ppb v/v			04/13/21 23:52	2.12
Hexachlorobutadiene	ND		0.34		ppb v/v			04/13/21 23:52	2.12
Hexane	**1.2**		0.85		ppb v/v			04/13/21 23:52	2.12
Methyl tert-butyl ether	ND		0.68		ppb v/v			04/13/21 23:52	2.12
Methylene Chloride	ND		1.7		ppb v/v			04/13/21 23:52	2.12
m-Xylene & p-Xylene	**40**	**J**	0.34		ppb v/v			04/13/21 23:52	2.12
Naphthalene	ND		0.85		ppb v/v			04/13/21 23:52	2.12
o-Xylene	**13**	**J**	0.34		ppb v/v			04/13/21 23:52	2.12
Styrene	ND		0.34		ppb v/v			04/13/21 23:52	2.12
t-Butyl alcohol	**7.3**		1.4		ppb v/v			04/13/21 23:52	2.12
Tetrachloroethene	**1.5**		0.34		ppb v/v			04/13/21 23:52	2.12
Toluene	**3.2**	**J**	0.51		ppb v/v			04/13/21 23:52	2.12

Client Sample ID: DUP
Lab Sample ID: 140-22612-10

Date Collected: 03/31/21 00:00
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		0.34		ppb v/v			04/13/21 23:52	2.12
trans-1,3-Dichloropropene	ND		0.34		ppb v/v			04/13/21 23:52	2.12
Trichloroethene	**2.2**		0.15		ppb v/v			04/13/21 23:52	2.12
Trichlorofluoromethane	ND		0.34		ppb v/v			04/13/21 23:52	2.12
Vinyl chloride	ND		0.17		ppb v/v			04/13/21 23:52	2.12

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**130**		1.9		ug/m3			04/13/21 23:52	2.12
1,1,2,2-Tetrachloroethane	ND		2.3		ug/m3			04/13/21 23:52	2.12
1,1,2-Trichloroethane	ND		1.9		ug/m3			04/13/21 23:52	2.12
1,1,2-Trichlorotrifluoroethane	ND		2.6		ug/m3			04/13/21 23:52	2.12
1,1-Dichloroethane	ND		1.4		ug/m3			04/13/21 23:52	2.12
1,1-Dichloroethene	ND		0.67		ug/m3			04/13/21 23:52	2.12
1,2,4-Trichlorobenzene	ND		2.5		ug/m3			04/13/21 23:52	2.12
1,2,4-Trimethylbenzene	**1.9**	J	1.7		ug/m3			04/13/21 23:52	2.12
1,2-Dibromoethane	ND		2.6		ug/m3			04/13/21 23:52	2.12
1,2-Dichlorobenzene	ND		2.0		ug/m3			04/13/21 23:52	2.12
1,2-Dichloroethane	ND		1.4		ug/m3			04/13/21 23:52	2.12
1,2-Dichloropropane	ND		1.6		ug/m3			04/13/21 23:52	2.12
1,2-Dichlorotetrafluoroethane	ND		2.4		ug/m3			04/13/21 23:52	2.12
1,3,5-Trimethylbenzene	ND		1.7		ug/m3			04/13/21 23:52	2.12
1,3-Dichlorobenzene	ND		2.0		ug/m3			04/13/21 23:52	2.12
1,4-Dichlorobenzene	ND		2.0		ug/m3			04/13/21 23:52	2.12
1,4-Dioxane	**7.8**	J	3.1		ug/m3			04/13/21 23:52	2.12
2,2,4-Trimethylpentane	ND		4.0		ug/m3			04/13/21 23:52	2.12
2-Butanone	ND		4.0		ug/m3			04/13/21 23:52	2.12
4-Methyl-2-pentanone (MIBK)	ND		3.5		ug/m3			04/13/21 23:52	2.12
Benzene	**3.3**	J	1.1		ug/m3			04/13/21 23:52	2.12
Benzyl chloride	ND		3.5		ug/m3			04/13/21 23:52	2.12
Bromodichloromethane	ND		2.3		ug/m3			04/13/21 23:52	2.12
Bromoform	ND		3.5		ug/m3			04/13/21 23:52	2.12
Bromomethane	ND		1.3		ug/m3			04/13/21 23:52	2.12
Carbon tetrachloride	ND		0.85		ug/m3			04/13/21 23:52	2.12
Chlorobenzene	ND		1.6		ug/m3			04/13/21 23:52	2.12
Chloroethane	**2.1**	J	0.90		ug/m3			04/13/21 23:52	2.12
Chloroform	**4.0**		1.7		ug/m3			04/13/21 23:52	2.12
Chloromethane	**3.0**		1.8		ug/m3			04/13/21 23:52	2.12
cis-1,2-Dichloroethene	ND		0.67		ug/m3			04/13/21 23:52	2.12
cis-1,3-Dichloropropene	ND		1.5		ug/m3			04/13/21 23:52	2.12
Cyclohexane	ND		2.9		ug/m3			04/13/21 23:52	2.12
Dibromochloromethane	ND		2.9		ug/m3			04/13/21 23:52	2.12
Dichlorodifluoromethane	ND		1.7		ug/m3			04/13/21 23:52	2.12
Ethanol	ND		16		ug/m3			04/13/21 23:52	2.12
Ethylbenzene	**65**	J	1.5		ug/m3			04/13/21 23:52	2.12
Hexachlorobutadiene	ND		3.6		ug/m3			04/13/21 23:52	2.12
Hexane	**4.2**		3.0		ug/m3			04/13/21 23:52	2.12
Methyl tert-butyl ether	ND		2.4		ug/m3			04/13/21 23:52	2.12
Methylene Chloride	ND		5.9		ug/m3			04/13/21 23:52	2.12
m-Xylene & p-Xylene	**180**	J	1.5		ug/m3			04/13/21 23:52	2.12

Client Sample ID: DUP
Lab Sample ID: 140-22612-10

Date Collected: 03/31/21 00:00
Matrix: Air
Date Received: 04/05/21 10:30
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		4.4		ug/m3			04/13/21 23:52	2.12
o-Xylene	**55**	**J**	1.5		ug/m3			04/13/21 23:52	2.12
Styrene	ND		1.4		ug/m3			04/13/21 23:52	2.12
t-Butyl alcohol	**22**		4.1		ug/m3			04/13/21 23:52	2.12
Tetrachloroethene	**10**		2.3		ug/m3			04/13/21 23:52	2.12
Toluene	**12**	**J**	1.9		ug/m3			04/13/21 23:52	2.12
trans-1,2-Dichloroethene	ND		1.3		ug/m3			04/13/21 23:52	2.12
trans-1,3-Dichloropropene	ND		1.5		ug/m3			04/13/21 23:52	2.12
Trichloroethene	**12**		0.82		ug/m3			04/13/21 23:52	2.12
Trichlorofluoromethane	ND		1.9		ug/m3			04/13/21 23:52	2.12
Vinyl chloride	ND		0.43		ug/m3			04/13/21 23:52	2.12

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*60 - 140*		*04/13/21 23:52*	*2.12*

TO-15

Data Section

ALPHA GEOSCIENCE

Geology
Hydrology
Remediation
Water Supply

QA/QC Review of Method TO-15 Volatiles Data for
Eurofins TestAmerica Knoxville, Job No: 140-22612-1

9 Soil Vapor/Air Samples and 1 Field Duplicate
Collected March 31, 2021

Prepared by: Donald Anné
April 25, 2021

Holding Times: Samples were analyzed within the EPA recommended holding times.

Canister Pressure: The laboratory reported "received" pressures for soil vapor/air gas samples were below zero (residual vacuum), as required.

GC/MS Tuning and Mass Calibration: The BFB tuning criteria were within control limits.

Initial Calibration: The average RRFs for associated target compounds were above the allowable minimum (0.050) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The RRFs for associated target compounds were above the allowable minimum (0.050), as required.

The %D for dichlorodifluoromethane was above the allowable maximum (30%) on 04-12-21 (RCCVD12B.D). The %Ds for dichlorodifluoromethane and trichlorofluoromethane were above the allowable maximum (30%) on 04-13-21 (RCCVD13A.D). Positive results for these compounds should be considered estimated (J) in associated samples.

Blanks: The analysis of intra-lab blank reported target compounds as not detected. The analyses of the cleaned canisters reported target compounds as not detected.

Internal Standard Area Summary: The applicable associated internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogate recoveries were within control limits for the soil vapor/air samples.

Laboratory Control Sample: The surrogate recoveries for target compounds were within QC limits for the air/vapor samples LCS 140-48706/1002, LCS 140-48724/1002, and LCS 140-48793/1002.

679 Plank Road ● Clifton Park, New York 12065 ● (518) 348-6995 ● Fax (518) 348-6966
www.alphageoscience.com

Field Duplicates: The relative percent differences for 8 compounds were above the allowable maximum (25%) for soil vapor/air field duplicate pair SS-SV-05/DUP (attached table). Positive results for these 8 compounds should be considered estimated (J) in samples SS-SV-05 and DUP.

Compound ID: Checked compounds were within GC quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

The result for ethanol in sample IA-07 was quantitated by extrapolating data above the highest calibration standard and marked 'E' by the laboratory. The sample was diluted by the laboratory and re-analyzed; therefore, the result that is flagged as 'E' in the undiluted samples should be considered estimated (J). The use of the diluted result for ethanol is recommended for the samples. It is recommended that the undiluted results be used for all other compounds.

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-22612-1

SDG No.:

Lab Sample ID: CCVIS 140-48706/2 Calibration Date: 04/12/2021 11:11

Instrument ID: MR Calib Start Date: 02/17/2021 11:25

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/17/2021 20:59

Lab File ID: RCCVD12B.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	3.380	3.736		2.21	2.00	10.5	30.0
Propene	Ave	1.581	1.762		2.23	2.00	11.4	30.0
Dichlorodifluoromethane	Ave	2.234	3.002		2.69	2.00	34.3*	30.0
Chloromethane	Ave	0.5842	0.6329		2.17	2.00	8.3	30.0
1,2-Dichlorotetrafluoroethane	Ave	2.249	2.587		2.30	2.00	15.0	30.0
Acetaldehyde	Ave	0.6384	0.7145		11.2	10.0	11.9	30.0
Vinyl chloride	Ave	1.777	1.920		2.16	2.00	8.0	30.0
1,3-Butadiene	Ave	1.396	1.569		2.25	2.00	12.4	30.0
Butane	Ave	2.522	2.860		2.27	2.00	13.4	30.0
Bromomethane	Ave	1.439	1.550		2.15	2.00	7.7	30.0
Chloroethane	Ave	0.7111	0.7918		2.23	2.00	11.3	30.0
Ethanol	Ave	0.5416	0.6396		11.8	10.0	18.1	30.0
Vinyl bromide	Ave	1.290	1.428		2.21	2.00	10.7	30.0
2-Methylbutane	Ave	1.707	1.980		2.32	2.00	16.0	30.0
Trichlorofluoromethane	Ave	3.807	4.932		2.59	2.00	29.6	30.0
Acrolein	Ave	0.4600	0.5179		2.25	2.00	12.6	30.0
Acetonitrile	Ave	0.5056	0.6074		2.40	2.00	20.1	30.0
Acetone	Ave	0.8268	0.9241		6.71	6.00	11.8	30.0
Pentane	Ave	0.1953	0.2461		2.52	2.00	26.0	30.0
Isopropyl alcohol	Ave	2.285	2.655		6.97	6.00	16.2	30.0
Ethyl ether	Ave	1.707	2.054		2.41	2.00	20.3	30.0
1,1-Dichloroethene	Ave	1.598	1.697		2.12	2.00	6.2	30.0
Acrylonitrile	Ave	1.051	1.140		2.17	2.00	8.4	30.0
t-Butyl alcohol	Ave	3.053	3.650		2.39	2.00	19.6	30.0
1,1,2-Trichlorotrifluoroethane	Ave	3.283	3.712		2.26	2.00	13.1	30.0
Methylene Chloride	Ave	1.330	1.543		2.32	2.00	16.0	30.0
3-Chloropropene	Ave	1.436	1.327		1.85	2.00	-7.6	30.0
Carbon disulfide	Ave	4.388	5.077		2.31	2.00	15.7	30.0
trans-1,2-Dichloroethene	Ave	1.392	1.581		2.27	2.00	13.5	30.0
2-Methylpentane	Ave	4.259	4.762		2.24	2.00	11.8	30.0
Methyl tert-butyl ether	Ave	4.087	4.780		2.34	2.00	17.0	30.0
1,1-Dichloroethane	Ave	3.405	3.692		2.17	2.00	8.4	30.0
Vinyl acetate	Ave	4.009	4.537		2.26	2.00	13.2	30.0
2-Butanone	Ave	0.7408	0.8140		2.20	2.00	9.9	30.0
Hexane	Ave	1.475	1.607		2.18	2.00	9.0	30.0
Isopropyl ether	Ave	6.268	7.014		2.24	2.00	11.9	30.0
cis-1,2-Dichloroethene	Ave	1.615	1.704		2.11	2.00	5.5	30.0
Ethyl acetate	Ave	3.958	4.482		2.26	2.00	13.2	30.0
Chloroform	Ave	3.275	3.884		2.37	2.00	18.6	30.0
Tert-butyl ethyl ether	Ave	5.486	6.154		2.24	2.00	12.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-22612-1

SDG No.:

Lab Sample ID: CCVIS 140-48706/2 Calibration Date: 04/12/2021 11:11

Instrument ID: MR Calib Start Date: 02/17/2021 11:25

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/17/2021 20:59

Lab File ID: RCCVD12B.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	2.156	2.273		2.11	2.00	5.4	30.0
1,1,1-Trichloroethane	Ave	3.331	3.722		2.23	2.00	11.7	30.0
1,2-Dichloroethane	Ave	0.4573	0.5125		2.24	2.00	12.1	30.0
1-Butanol	Ave	0.1311	0.1318		2.01	2.00	0.6	30.0
Benzene	Ave	0.9044	1.021		2.26	2.00	12.9	30.0
Cyclohexane	Ave	0.1410	0.1570		2.23	2.00	11.3	30.0
Carbon tetrachloride	Ave	0.5832	0.6026		2.07	2.00	3.3	30.0
2,3-Dimethylpentane	Ave	0.2109	0.2257		2.14	2.00	7.0	30.0
Thiophene	Ave	0.5400	0.5591		2.07	2.00	3.5	30.0
2,2,4-Trimethylpentane	Ave	1.797	1.896		2.11	2.00	5.5	30.0
Heptane	Ave	0.3250	0.3442		2.12	2.00	5.9	30.0
1,2-Dichloropropane	Ave	0.4440	0.4566		2.06	2.00	2.8	30.0
Trichloroethene	Ave	0.3980	0.3701		1.86	2.00	-7.0	30.0
Dibromomethane	Ave	0.3579	0.4006		2.24	2.00	11.9	30.0
Bromodichloromethane	Ave	0.6346	0.7188		2.27	2.00	13.3	30.0
1,4-Dioxane	Ave	0.1378	0.1408		2.04	2.00	2.2	30.0
Methyl methacrylate	Ave	0.4446	0.4652		2.09	2.00	4.6	30.0
Methylcyclohexane	Ave	0.5907	0.5931		2.01	2.00	0.4	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.8452	0.9074		2.15	2.00	7.4	30.0
cis-1,3-Dichloropropene	Ave	0.4992	0.5392		2.16	2.00	8.0	30.0
trans-1,3-Dichloropropene	Ave	0.4819	0.5163		2.14	2.00	7.1	30.0
Toluene	Ave	1.315	1.344		2.04	2.00	2.2	30.0
1,1,2-Trichloroethane	Ave	0.4173	0.4545		2.18	2.00	8.9	30.0
2-Hexanone	Ave	0.4708	0.5167		2.19	2.00	9.7	30.0
Octane	Ave	0.3891	0.3847		1.98	2.00	-1.1	30.0
Dibromochloromethane	Ave	0.7007	0.6852		1.96	2.00	-2.2	30.0
1,2-Dibromoethane	Ave	0.6636	0.6988		2.11	2.00	5.3	30.0
Tetrachloroethene	Ave	0.4659	0.4454		1.91	2.00	-4.4	30.0
Chlorobenzene	Ave	0.9742	0.9444		1.94	2.00	-3.1	30.0
2,3-Dimethylheptane	Ave	1.447	1.530		2.12	2.00	5.8	30.0
Ethylbenzene	Ave	1.659	1.685		2.03	2.00	1.6	30.0
m-Xylene & p-Xylene	Ave	1.281	1.291		4.03	4.00	0.8	30.0
Bromoform	Ave	0.6816	0.5804		1.70	2.00	-14.8	30.0
Nonane	Ave	0.8993	0.996		2.21	2.00	10.7	30.0
Styrene	Ave	0.8407	0.8964		2.13	2.00	6.6	30.0
o-Xylene	Ave	1.286	1.322		2.06	2.00	2.8	30.0
1,1,2,2-Tetrachloroethane	Ave	0.9810	1.070		2.18	2.00	9.0	30.0
1,2,3-Trichloropropane	Ave	0.2395	0.2478		2.07	2.00	3.5	30.0
Isopropylbenzene	Ave	1.721	1.744		2.03	2.00	1.3	30.0
Propylbenzene	Ave	0.4825	0.4745		1.97	2.00	-1.7	30.0
2-Chlorotoluene	Ave	0.4217	0.4288		2.03	2.00	1.7	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-22612-1

SDG No.:

Lab Sample ID: CCVIS 140-48706/2 Calibration Date: 04/12/2021 11:11

Instrument ID: MR Calib Start Date: 02/17/2021 11:25

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/17/2021 20:59

Lab File ID: RCCVD12B.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.717	1.740		2.03	2.00	1.4	30.0
1,3,5-Trimethylbenzene	Ave	0.7181	0.6731		1.87	2.00	-6.3	30.0
Alpha Methyl Styrene	Ave	0.6730	0.6671		1.98	2.00	-0.9	30.0
Decane	Ave	1.182	1.259		2.13	2.00	6.5	30.0
tert-Butylbenzene	Ave	1.440	1.423		1.98	2.00	-1.2	30.0
1,2,4-Trimethylbenzene	Ave	1.448	1.436		1.98	2.00	-0.9	30.0
sec-Butylbenzene	Ave	2.025	2.076		2.05	2.00	2.5	30.0
1,3-Dichlorobenzene	Ave	0.8874	0.8879		2.00	2.00	0.0	30.0
Benzyl chloride	Ave	0.9490	1.044		2.20	2.00	10.0	30.0
1,4-Dichlorobenzene	Ave	0.8727	0.8626		1.98	2.00	-1.2	30.0
4-Isopropyltoluene	Ave	1.664	1.606		1.93	2.00	-3.5	30.0
1,2,3-Trimethylbenzene	Ave	1.530	1.410		1.84	2.00	-7.9	30.0
Butylcyclohexane	Ave	1.243	1.233		1.98	2.00	-0.8	30.0
1,2-Dichlorobenzene	Ave	0.8868	0.8480		1.91	2.00	-4.4	30.0
Indane	Ave	1.238	1.208		1.95	2.00	-2.4	30.0
Indene	Ave	1.004	1.011		2.01	2.00	0.7	30.0
Butylbenzene	Ave	1.616	1.779		2.20	2.00	10.1	30.0
Undecane	Ave	1.353	1.491		2.20	2.00	10.2	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.4184	0.4086		1.95	2.00	-2.4	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.577	1.632		2.07	2.00	3.5	30.0
Dodecane	Ave	1.383	1.481		2.14	2.00	7.1	30.0
1,2,4-Trichlorobenzene	Lin2		0.7396		2.03	2.00	1.3	30.0
Naphthalene	QuaF		1.651		2.10	2.00	5.2	30.0
Hexachlorobutadiene	Ave	0.8699	0.8196		1.88	2.00	-5.8	30.0
1,2,3-Trichlorobenzene	Ave	0.7324	0.7442		2.03	2.00	1.6	30.0
2-Methylnaphthalene	Ave	0.4154	0.1856			2.00	-55.3*	50.0
1-Methylnaphthalene	Ave	0.4843	0.3884		1.60	2.00	-19.8	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7003	0.7133		4.73	4.64	1.8	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-22612-1

SDG No.:

Lab Sample ID: CCVIS 140-48724/2 Calibration Date: 04/13/2021 10:55

Instrument ID: MR Calib Start Date: 02/17/2021 11:25

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/17/2021 20:59

Lab File ID: RCCVD13A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	3.380	3.372		2.00	2.00	-0.2	30.0
Propene	Ave	1.581	1.489		1.88	2.00	-5.8	30.0
Dichlorodifluoromethane	Ave	2.234	3.065		2.74	2.00	37.2*	30.0
Chloromethane	Ave	0.5842	0.6426		2.20	2.00	10.0	30.0
1,2-Dichlorotetrafluoroethane	Ave	2.249	2.850		2.53	2.00	26.7	30.0
Acetaldehyde	Ave	0.6384	0.6360		9.96	10.0	-0.4	30.0
Vinyl chloride	Ave	1.777	2.091		2.35	2.00	17.7	30.0
1,3-Butadiene	Ave	1.396	1.585		2.27	2.00	13.6	30.0
Butane	Ave	2.522	2.515		1.99	2.00	-0.3	30.0
Bromomethane	Ave	1.439	1.710		2.38	2.00	18.9	30.0
Chloroethane	Ave	0.7111	0.8458		2.38	2.00	18.9	30.0
Ethanol	Ave	0.5416	0.5012		9.25	10.0	-7.5	30.0
Vinyl bromide	Ave	1.290	1.564		2.43	2.00	21.3	30.0
2-Methylbutane	Ave	1.707	1.761		2.06	2.00	3.2	30.0
Trichlorofluoromethane	Ave	3.807	5.144		2.70	2.00	35.1*	30.0
Acrolein	Ave	0.4600	0.5302		2.31	2.00	15.3	30.0
Acetonitrile	Ave	0.5056	0.5101		2.02	2.00	0.9	30.0
Acetone	Ave	0.8268	0.9360		6.79	6.00	13.2	30.0
Pentane	Ave	0.1953	0.2709		2.77	2.00	38.7*	30.0
Isopropyl alcohol	Ave	2.285	2.375		6.24	6.00	3.9	30.0
Ethyl ether	Ave	1.707	1.545		1.81	2.00	-9.5	30.0
1,1-Dichloroethene	Ave	1.598	1.809		2.26	2.00	13.2	30.0
Acrylonitrile	Ave	1.051	1.059		2.01	2.00	0.7	30.0
t-Butyl alcohol	Ave	3.053	3.767		2.47	2.00	23.4	30.0
1,1,2-Trichlorotrifluoroethane	Ave	3.283	3.871		2.36	2.00	17.9	30.0
Methylene Chloride	Ave	1.330	1.654		2.49	2.00	24.3	30.0
3-Chloropropene	Ave	1.436	1.111		1.55	2.00	-22.6	30.0
Carbon disulfide	Ave	4.388	5.238		2.39	2.00	19.4	30.0
trans-1,2-Dichloroethene	Ave	1.392	1.657		2.38	2.00	19.0	30.0
2-Methylpentane	Ave	4.259	4.121		1.94	2.00	-3.2	30.0
Methyl tert-butyl ether	Ave	4.087	5.078		2.48	2.00	24.2	30.0
1,1-Dichloroethane	Ave	3.405	3.833		2.25	2.00	12.6	30.0
Vinyl acetate	Ave	4.009	4.001		2.00	2.00	-0.2	30.0
2-Butanone	Ave	0.7408	0.8705		2.35	2.00	17.5	30.0
Hexane	Ave	1.475	1.578		2.14	2.00	7.0	30.0
Isopropyl ether	Ave	6.268	6.179		1.97	2.00	-1.4	30.0
cis-1,2-Dichloroethene	Ave	1.615	1.766		2.19	2.00	9.4	30.0
Ethyl acetate	Ave	3.958	3.874		1.96	2.00	-2.1	30.0
Chloroform	Ave	3.275	3.963		2.42	2.00	21.0	30.0
Tert-butyl ethyl ether	Ave	5.486	6.306		2.30	2.00	15.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-22612-1

SDG No.:

Lab Sample ID: CCVIS 140-48724/2 Calibration Date: 04/13/2021 10:55

Instrument ID: MR Calib Start Date: 02/17/2021 11:25

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/17/2021 20:59

Lab File ID: RCCVD13A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	2.156	1.947		1.81	2.00	-9.7	30.0
1,1,1-Trichloroethane	Ave	3.331	3.742		2.25	2.00	12.3	30.0
1,2-Dichloroethane	Ave	0.4573	0.5047		2.21	2.00	10.4	30.0
1-Butanol	Ave	0.1311	0.1090		1.66	2.00	-16.9	30.0
Benzene	Ave	0.9044	1.056		2.34	2.00	16.8	30.0
Cyclohexane	Ave	0.1410	0.1640		2.33	2.00	16.3	30.0
Carbon tetrachloride	Ave	0.5832	0.5847		2.01	2.00	0.3	30.0
2,3-Dimethylpentane	Ave	0.2109	0.2348		2.23	2.00	11.3	30.0
Thiophene	Ave	0.5400	0.5793		2.15	2.00	7.3	30.0
2,2,4-Trimethylpentane	Ave	1.797	1.886		2.10	2.00	4.9	30.0
Heptane	Ave	0.3250	0.3589		2.21	2.00	10.4	30.0
1,2-Dichloropropane	Ave	0.4440	0.4602		2.07	2.00	3.6	30.0
Trichloroethene	Ave	0.3980	0.3674		1.85	2.00	-7.7	30.0
Dibromomethane	Ave	0.3579	0.4102		2.29	2.00	14.6	30.0
Bromodichloromethane	Ave	0.6346	0.7291		2.30	2.00	14.9	30.0
1,4-Dioxane	Ave	0.1378	0.1440		2.09	2.00	4.5	30.0
Methyl methacrylate	Ave	0.4446	0.4063		1.83	2.00	-8.6	30.0
Methylcyclohexane	Ave	0.5907	0.6145		2.08	2.00	4.0	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.8452	0.7873		1.86	2.00	-6.8	30.0
cis-1,3-Dichloropropene	Ave	0.4992	0.5591		2.24	2.00	12.0	30.0
trans-1,3-Dichloropropene	Ave	0.4819	0.5380		2.23	2.00	11.6	30.0
Toluene	Ave	1.315	1.375		2.09	2.00	4.6	30.0
1,1,2-Trichloroethane	Ave	0.4173	0.4640		2.22	2.00	11.2	30.0
2-Hexanone	Ave	0.4708	0.5087		2.16	2.00	8.0	30.0
Octane	Ave	0.3891	0.3998		2.06	2.00	2.8	30.0
Dibromochloromethane	Ave	0.7007	0.6842		1.95	2.00	-2.4	30.0
1,2-Dibromoethane	Ave	0.6636	0.7079		2.13	2.00	6.7	30.0
Tetrachloroethene	Ave	0.4659	0.4480		1.92	2.00	-3.8	30.0
Chlorobenzene	Ave	0.9742	0.9456		1.94	2.00	-2.9	30.0
2,3-Dimethylheptane	Ave	1.447	1.295		1.79	2.00	-10.5	30.0
Ethylbenzene	Ave	1.659	1.707		2.06	2.00	2.9	30.0
m-Xylene & p-Xylene	Ave	1.281	1.317		4.11	4.00	2.8	30.0
Bromoform	Ave	0.6816	0.5647		1.66	2.00	-17.2	30.0
Nonane	Ave	0.8993	0.9869		2.19	2.00	9.7	30.0
Styrene	Ave	0.8407	0.9251		2.20	2.00	10.0	30.0
o-Xylene	Ave	1.286	1.341		2.08	2.00	4.2	30.0
1,1,2,2-Tetrachloroethane	Ave	0.9810	1.112		2.27	2.00	13.4	30.0
1,2,3-Trichloropropane	Ave	0.2395	0.2442		2.04	2.00	2.0	30.0
Isopropylbenzene	Ave	1.721	1.775		2.06	2.00	3.1	30.0
Propylbenzene	Ave	0.4825	0.4787		1.98	2.00	-0.8	30.0
2-Chlorotoluene	Ave	0.4217	0.4251		2.02	2.00	0.8	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-22612-1

SDG No.:

Lab Sample ID: CCVIS 140-48724/2 Calibration Date: 04/13/2021 10:55

Instrument ID: MR Calib Start Date: 02/17/2021 11:25

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 02/17/2021 20:59

Lab File ID: RCCVD13A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
4-Ethyltoluene	Ave	1.717	1.760		2.05	2.00	2.5	30.0
1,3,5-Trimethylbenzene	Ave	0.7181	0.6916		1.93	2.00	-3.7	30.0
Alpha Methyl Styrene	Ave	0.6730	0.6762		2.01	2.00	0.5	30.0
Decane	Ave	1.182	1.247		2.11	2.00	5.6	30.0
tert-Butylbenzene	Ave	1.440	1.440		2.00	2.00	0.0	30.0
1,2,4-Trimethylbenzene	Ave	1.448	1.456		2.01	2.00	0.5	30.0
sec-Butylbenzene	Ave	2.025	2.141		2.11	2.00	5.7	30.0
1,3-Dichlorobenzene	Ave	0.8874	0.9203		2.07	2.00	3.7	30.0
Benzyl chloride	Ave	0.9490	1.090		2.30	2.00	14.8	30.0
1,4-Dichlorobenzene	Ave	0.8727	0.8787		2.01	2.00	0.7	30.0
4-Isopropyltoluene	Ave	1.664	1.655		1.99	2.00	-0.6	30.0
1,2,3-Trimethylbenzene	Ave	1.530	1.417		1.85	2.00	-7.4	30.0
Butylcyclohexane	Ave	1.243	1.275		2.05	2.00	2.6	30.0
1,2-Dichlorobenzene	Ave	0.8868	0.8754		1.97	2.00	-1.3	30.0
Indane	Ave	1.238	1.242		2.01	2.00	0.3	30.0
Indene	Ave	1.004	1.046		2.08	2.00	4.2	30.0
Butylbenzene	Ave	1.616	1.824		2.26	2.00	12.9	30.0
Undecane	Ave	1.353	1.478		2.18	2.00	9.2	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.4184	0.4131		1.97	2.00	-1.3	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.577	1.668		2.12	2.00	5.8	30.0
Dodecane	Ave	1.383	1.474		2.13	2.00	6.6	30.0
1,2,4-Trichlorobenzene	Lin2		0.7485		2.05	2.00	2.5	30.0
Naphthalene	QuaF		1.744		2.23	2.00	11.7	30.0
Hexachlorobutadiene	Ave	0.8699	0.7877		1.81	2.00	-9.4	30.0
1,2,3-Trichlorobenzene	Ave	0.7324	0.7682		2.10	2.00	4.9	30.0
2-Methylnaphthalene	Ave	0.4154	0.2501		1.20	2.00	-39.8	50.0
1-Methylnaphthalene	Ave	0.4843	0.3592		1.48	2.00	-25.8	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7003	0.7223		4.79	4.64	3.1	30.0

Field Duplicate Calculation Section

Volatiles TO-15

Calculations for Field Duplicate Relative Percent Difference (RPD)
SDG No. 140-22612-1

S1= SS-SV-05 **S2=** DUP

Analyte	S1	S2	RPD (%)	
1,1,1-Trichloroethane	20	25	22%	
1,2,4-Trimethylbenzene	5.3	0.39	173%	*
1,3,5-Trimethylbenzene	2.0	ND	NC	
1,4-Dioxane	2.9	2.2	27%	*
Benzene	1.3	1.0	26%	*
Chloroethane	1.1	0.81	30%	*
Chloroform	ND	0.81	NC	
Chloromethane	ND	1.4	NC	
Ethylbenzene	29	15	64%	*
Hexane	ND	1.2	NC	
m-Xylene & p-Xylene	140	40	111%	*
Naphthalene	11	ND	NC	
o-Xylene	69	13	137%	*
t-Butyl alcohol	9.3	7.3	24%	
Tetrachloroethene	1.3	1.5	14%	
Toluene	4.2	3.2	27%	*
Trichloroethene	2.3	2.2	4%	

* RPD is above the allowable maximum (25%).

All results are in ppb v/v.

Bold numbers were values that are below the CRQL or above the high standard.
ND - Not detected.
NC - Not calculated, both results must be within the linear range for valid RPDs to be calculated.

Alpha Geoscience: Acronyms and Definitions

Data Validation Acronyms

AA	Atomic absorption, flame technique
BHC	Hexachlorocyclohexane
BFB	Bromofluorobenzene
CCB	Continuing calibration blank
CCC	Calibration check compound
CCV	Continuing calibration verification
CN	Cyanide
CRDL	Contract required detection limit
CRQL	Contract required quantitation limit
CVAA	Atomic adsorption, cold vapor technique
DCAA	2,4-Dichlophenylacetic acid
DCB	Decachlorobiphenyl
DFTPP	Decafluorotriphenyl phosphine
ECD	Electron capture detector
FAA	Atomic absorption, furnace technique
FID	Flame ionization detector
FNP	1-Fluoronaphthalene
GC	Gas chromatography
GC/MS	Gas chromatography/mass spectrometry
GPC	Gel permeation chromatography
ICB	Initial calibration blank
ICP	Inductively coupled plasma-atomic emission spectrometer
ICV	Initial calibration verification
IDL	Instrument detection limit
IS	Internal standard
LCS	Laboratory control sample
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate
MSA	Method of standard additions
MS/MSD	Matrix spike/matrix spike duplicate
PID	Photo ionization detector
PCB	Polychlorinated biphenyl
PCDD	Polychlorinated dibenzodioxins
PCDF	Polychlorinated dibenzofurans
QA	Quality assurance
QC	Quality control
RF	Response factor
RPD	Relative percent difference
RRF	Relative response factor
RRF(number)	Relative response factor at concentration of the number following
RT	Retention time
RRT	Relative retention time
SDG	Sample delivery group
SPCC	System performance check compound
TCX	Tetrachloro-m-xylene
%D	Percent difference
%R	Percent recovery
%RSD	Percent relative standard deviation

Data Validation Qualifiers Used in the QA/QC Reviews for USEPA Region II

U	=	Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.
R	=	Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information is necessary to confirm the result.
N	=	Tentative identification. Analyte is considered present. Special methods may be needed to confirm its presence or absence during future sampling efforts.
J	=	Analyte is present. Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method.
J-	=	Analyte is present. Reported value may be biased low and associated with a higher level of uncertainty than is normally expected with the analytical method.
J+	=	Analyte is present. Reported value may be biased high andassociated with a higher level of uncertainty than is normally expected with the analytical method.
UJ	=	Not detected, quantitation limit may be inaccurate or imprecise.

Note: These qualifiers are used for data validation purposes. The data validation qualifiers may differ from the qualifiers that the laboratory assigns to the data. Refer to the laboratory analytical report for the definitions of the laboratory qualifiers.

Attachment C – SVI Questionnaire & Photographs

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Brian Neumann & Pat Sokolowski Date/Time Prepared 3/25/21 + 3/30/21

Preparer's Affiliation Precision Enviro Services Phone No. 518-885-4399

Purpose of Investigation SVI Investigation

1. OCCUPANT:

Interviewed: Y (N)

Last Name: Rob Dunn & Betsy Nuez ~~First Name:~~ escorted B Neumann and Paras Amin (DEC) around showing SVI locations on 3/25/21

Address: 79 Industrial Place, Middletown

County: Orange

Home Phone: _____ Office Phone: _____

Number of Occupants/persons at this location _____ Age of Occupants _____

2. OWNER OR LANDLORD: (Check if same as occupant ___)

Interviewed: Y (N)

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential	School	(Commercial/Multi-use)
Industrial	Church	Other: _____

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other:_____

If multiple units, how many? _____

If the property is commercial, type?

Business Type(s) Frito Lay NA

Does it include residences (i.e., multi-use)? Y / (N) If yes, how many? _____

Other characteristics:

Number of floors 1 Building age unknown

Is the building insulated? (Y) / N How air tight? Tight / (Average) / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

N/A

Airflow near source

Outdoor air infiltration

Infiltration into air ducts

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction:	wood frame	concrete	stone	brick
b. Basement type:	full	crawlspace	slab	other _____
c. Basement floor:	concrete	dirt	stone	other _____
d. Basement floor:	uncovered	covered	covered with _____	
e. Concrete floor:	unsealed	sealed	sealed with _____	
f. Foundation walls:	poured	block	stone	other _____
g. Foundation walls:	unsealed	sealed	sealed with _____	
h. The basement is:	wet	damp	dry	moldy
i. The basement is:	finished	unfinished	partially finished	
j. Sump present?	Y / N			
k. Water in sump?	Y / N / not applicable			

Basement/Lowest level depth below grade: 0 (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

Minor cracks in slab in warehouse

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation	Heat pump	Hot water baseboard	
Space Heaters	Stream radiation	Radiant floor	
Electric baseboard	Wood stove	Outdoor wood boiler	Other _____

The primary type of fuel used is:

Natural Gas	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: Natural Gas

Boiler/furnace located in:	Basement	Outdoors	Main Floor	Other _____
Air conditioning:	Central Air	Window units	Open Windows	None

Are there air distribution ducts present? Y / N CHECK CONFERENCE ITM LOCATION

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

7. OCCUPANCY

Is basement/lowest level occupied? Full-time Occasionally Seldom Almost Never N/A NO BASEMENT

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	N/A
1st Floor	office space, shop, warehouse, storage
2nd Floor	
3rd Floor	
4th Floor	

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? (Y) N DID NOT ENTER

b. Does the garage have a separate heating unit? Y / N / NA

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) Y / N / NA Please specify

d. Has the building ever had a fire? Y / N When? U/K

e. Is a kerosene or unvented gas space heater present? Y / N Where? U/K

f. Is there a workshop or ~~hobby/craft area~~? (Y) / N Where & Type? East side of ~~building~~ workshop

g. Is there smoking in the building? Y (N) How frequently?

h. Have cleaning products been used recently? Y / N When & Type? Everyday / Sanitizers

i. Have cosmetic products been used recently? Y (N) When & Type?

j. Has painting/staining been done in the last 6 months? Y / N Where & When? Unkown

k. Is there new carpet, drapes or other textiles? Y / N Where & When? _____

l. Have air fresheners been used recently? Y / N When & Type? Everyday

m. Is there a kitchen exhaust fan? Y / N If yes, where vented? _____

n. Is there a bathroom exhaust fan? Y / N If yes, where vented? Outside

o. Is there a clothes dryer? Y / N If yes, is it vented outside? Y / N

p. Has there been a pesticide application? Y / N When & Type? _____

Are there odors in the building? Y / N
If yes, please describe: food/snack/chip manufacturing odor

Do any of the building occupants use solvents at work? Y / N
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work? Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly)
Yes, use dry-cleaning infrequently (monthly or less)
Yes, work at a dry-cleaning service
No
Unknown

Is there a radon mitigation system for the building/structure? Y / N Date of Installation: _____
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply: Public Water Drilled Well Driven Well Dug Well Other: _____

Sewage Disposal: Public Sewer Septic Tank Leach Field Dry Well Other: _____

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: N/A

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

c. Responsibility for costs associated with reimbursement explained? Y / N

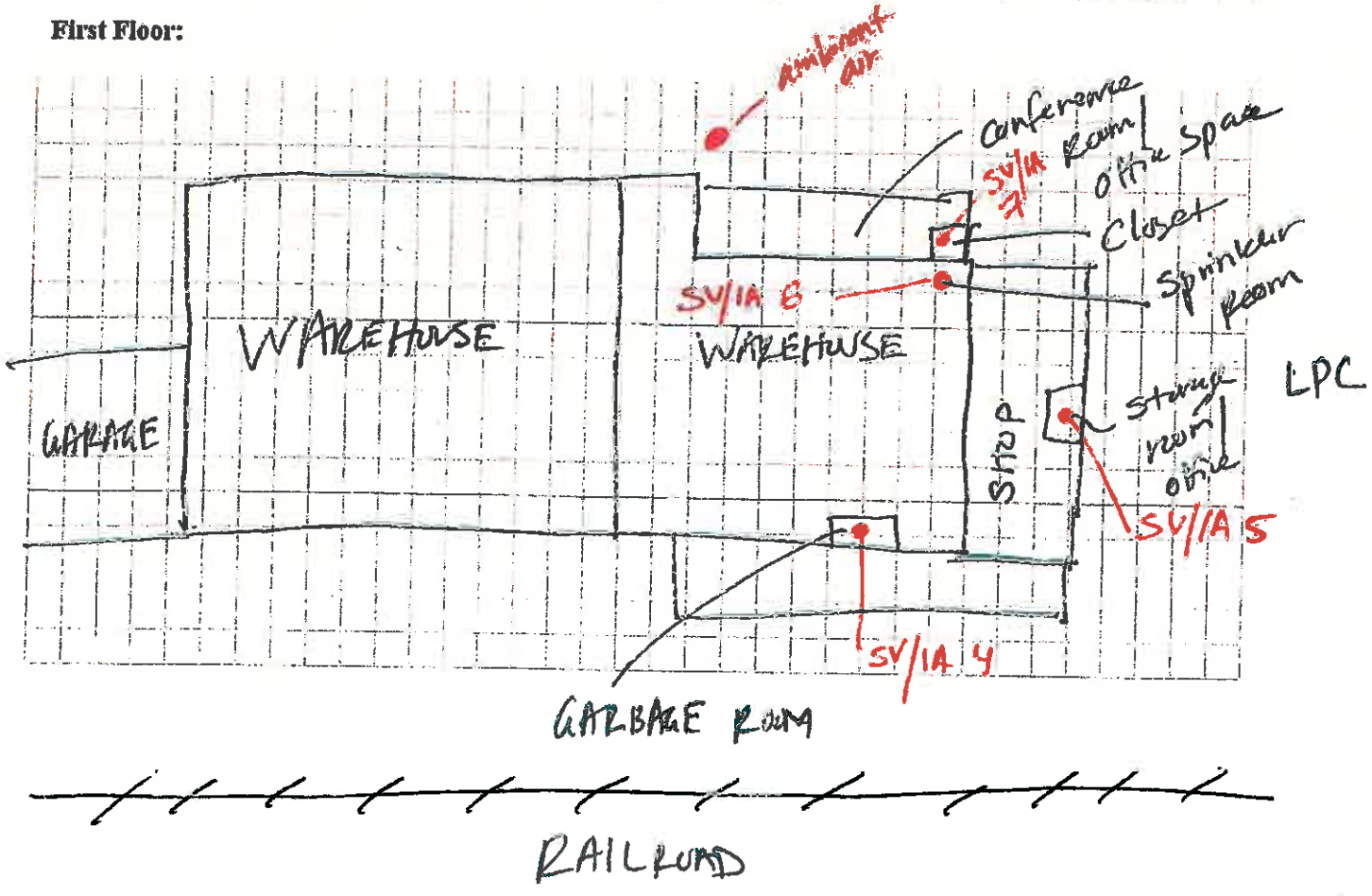
d. Relocation package provided and explained to residents? Y / N

11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:

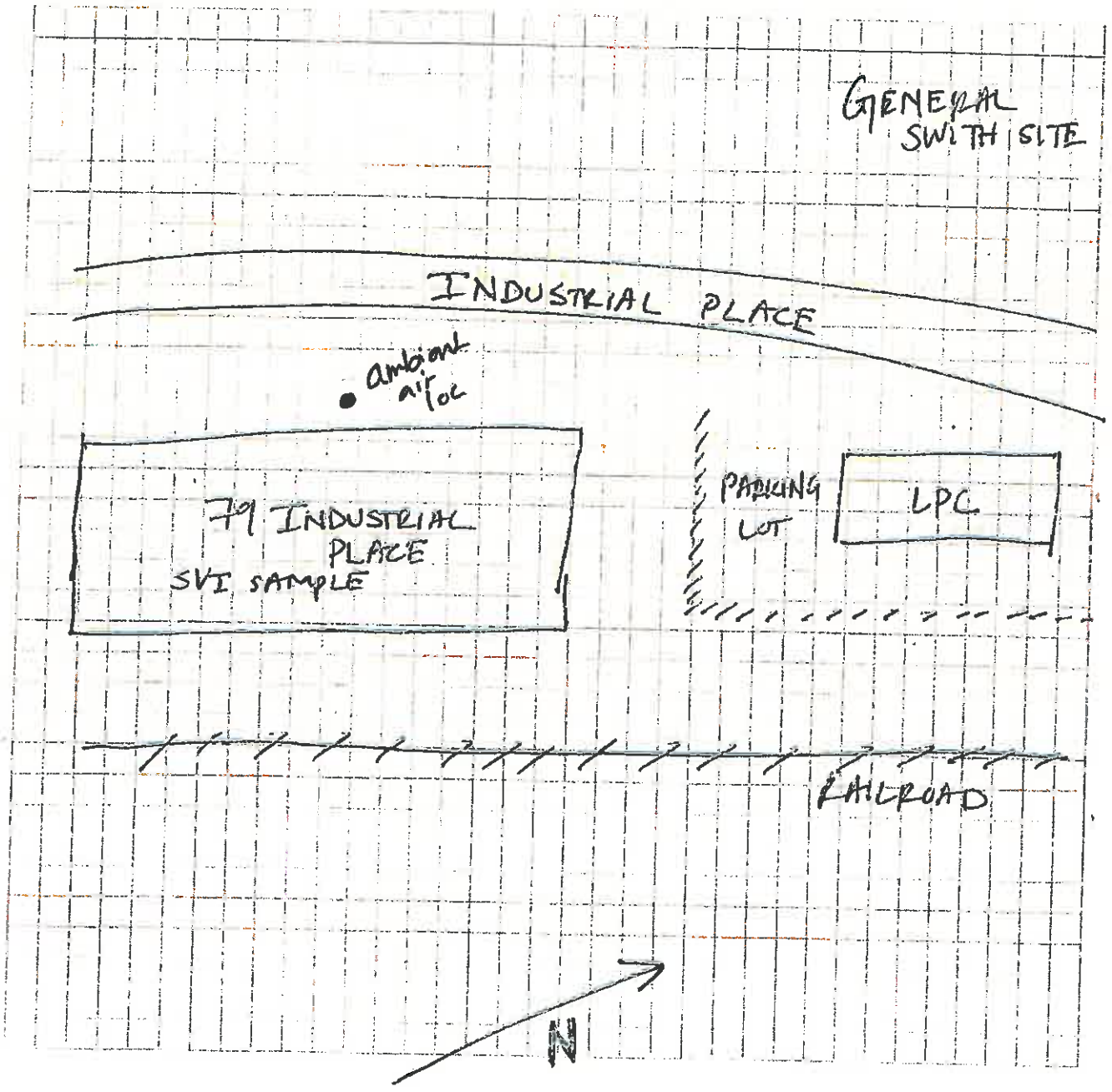
First Floor:



12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



13. PRODUCT INVENTORY FORM

SEE ATTACHED FROM LAST TIME.

Make & Model of field instrument used: _____

List specific products found in the residence that have the potential to affect indoor air quality.

Started @ 1030 3/31/21

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N
Maintance Room	Dap Caulk	10 oz	open	took psc	85 ppb	Y
	GE Silicone	10 oz	open		200 ppb	
	Behr Paint	1 gallon	open		130 ppb	
	Safety Cabinet		(outside closed)		198 ppb	
	Starting Fluid	11 oz				
	PB Blaster	11 oz				
	Isopropanol					
	Geraglyn Air Lube	1 gallon				
	Pegua Drain opener					
	Rustoleum Safety Paint	12 oz		Inside Cabinet	2785 ppb	
	Bonda putty	7 lbs				
	Acetone	1 gallon				
	Great Stuff	16 oz				
	Propane	14.1 oz				
	Battery Cleaner	14 oz				
	Spray Adhesive	19 oz				
	WD-40	12 oz				

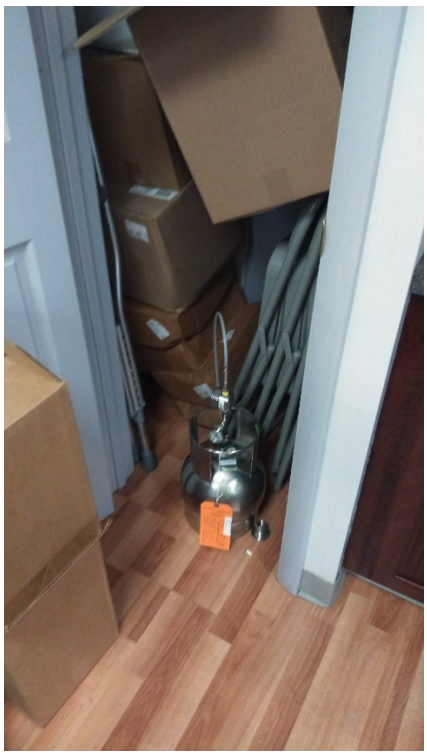
* Describe the condition of the product containers as **Unopened (UO)**, **Used (U)**, or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

Photograph 1: SS-SV-04/IA-04

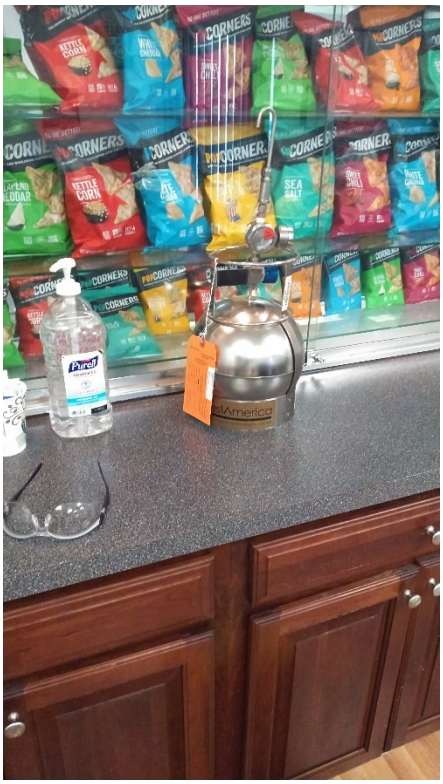
Photograph 2: SS-SV-05 & Duplicate in storage room. IA-05 in close proximity out of view.

Photograph 3: Chemical storage in room with SS-SV-05/IA-05

Photograph 4: Sprinkler room, SS-SV-06/IA-06



Photograph 5: Conference room closet SS-SV-07



Photograph 6: Conference room counter IA-07

Photograph 7: Ambient air outdoor (west side entry area), labelled AA-02