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July 8, 2022

Mr. Payson Long
Project Manager
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 1223-7011

Re: ServAll Laundry Site, # 1-52-077
Soil Vapor Intrusion Sampling Results

Dear Mr. Long:

This letter report presents the results of the recent soil vapor sampling performed at the ServAll Laundry Site. The Site is located at 8 Drayton Avenue in Bay Shore, Suffolk County, New York (Figure 1) in a mixed use industrial/residential area. The ServAll Laundry facility was located on a 20,000 square foot property. The ServAll Uniform Rental, Inc. operated as a commercial laundry from 1969 to 1972, and as dry cleaner/laundry from 1972 to 1984. During this time, unknown quantities of wash water overflow containing tetrachloroethene (PCE) and heavy metals were pumped to, and occasionally overflowed from, on-Site cesspools.

In 1978, the Suffolk County Department of Health Services (SCDHS) conducted an on-Site sampling of cesspools and storm drains. Results from some of the samples showed detections of PCE, trichloroethene (TCE), vinyl chloride, chloroform, methylbenzenes, and a number of Target Analyte List (TAL) metals. ServAll Uniform cleaned the on-Site storm drains and an unknown number of cesspools in 1981 removing sludge and contaminated water.

In 1983, SCDHS performed a groundwater investigation and identified a volatile organics plume southeast of the Site. The plume was found to extend 0.3 miles upgradient from the Suffolk County Water Authority (SCWA) Thomas Avenue Wellfield (located 1 mile south of the Site). The Thomas Avenue Wellfield is located off Thomas Avenue, near the Bay Shore Middle School and northwest of MW-11 as shown on Figure 2).

A State-funded remedial investigation/feasibility study (RI/FS) was completed at the Site, in which field work was completed from November 1990 through December 1991. The results of the investigation were documented in the final report dated January 1992 (E.C. Jordan Co.). The RI/ FS confirmed the presence of volatile organic compounds (VOCs) in groundwater, delineated the groundwater plume, and quantified on-Site contamination.

The plume is located in the Upper Glacial Aquifer, which consists of coarsely stratified, fine to medium sand with trace amounts of gravel, cobbles, coarse sand, and silt. The aquifer ranges in thickness from 120 feet

at the Site to 86 feet 1.5 miles downgradient of the Site. Groundwater flows to the southeast towards Penataquit Creek at about 910 feet per year (ft/year). The RI concluded that the plume appeared to be moving at approximately 443 to 484 ft/year from 1974 to 1988, and 355 ft/year since 1988 (E.C. Jordan, October 1991). Similar flow numbers were found during the long-term monitoring sampling events.

A Record of Decision (ROD) was issued by the NYSDEC for the Site on March 31, 1992. The remedy presented in the ROD was in-situ source soil treatment/source area groundwater extraction. The ROD stated that treatment of the entire plume emanating from the Site was not found to be practical, and therefore, the selected remedy would not satisfy the statutory preference for complete treatment as a principal element. Determination of the ultimate fate of the untreated portion of the plume was determined by the ROD directed discharge study (ABB Environmental Services, December 1995), which was conducted on the leading edge (hydraulically downgradient) of the plume.

The ROD specified source removal work consisting of a soil vapor extraction (SVE) system. The SVE system was in operation from the Spring of 1996 to the Spring of 1998. The groundwater pump and treat remedial system operated from March 1998 through November 2001. The operation of the remedial system was terminated in November 2001 when NYSDEC determined further operations were not necessary as stated in a letter dated October 18, 2001 from NYSDEC to Earth Tech. The groundwater treatment system inside the ServAll building was dismantled and disposed in April 2009. The extraction well and reinjection well were abandoned in August 2015.

The Site is currently in long term monitoring. Groundwater samples are collected from fifteen monitoring wells on a five-quarter basis. Samples are analyzed for VOCs. The results of the five-quarter sampling are summarized in a report after each sampling event. The last groundwater sampling event was conducted in May 2021. The next groundwater sampling event is scheduled for August 2022. The locations of the monitoring wells are shown on Figure 2.

Soil Vapor Intrusion Sampling

At the request of NYSDEC, soil vapor intrusion samples were collected on April 21 and 22, 2022. Sampling was conducted in accordance with the NYSDEC Guidance for Evaluating Soil Vapor Intrusion in the State of New York (October 2006 and updates). Canister sampling field test data sheets are included in Attachment A. The building was not secure at the time of sampling in April 2022. A large hole had been cut into the front rollup door. An attempt had been made to secure the rollup door with plywood but had been torn down at some point leaving the rollup door open. The field crew was able to temporarily put the plywood back in place overnight while the canisters were collecting air samples.

Two subslab sampling points (SV-1 and SV-2) were installed inside the building as shown on Figure 3. As the ServAll facility is currently unoccupied, a pre-sampling building survey was not conducted. Two subslab samples were installed through the concrete floor using a hammer drill. Samples were set up on April 21, 2022 with 24-hours flow regulators. A field duplicate sample (SV-2X) was collected at SV-2. An indoor air sample (ID-1) and outdoor air sample (OD-1) were also collected (Figure 3). All samples were retrieved on April 22, 2022 and delivered to Pace Analytical Laboratory, Knoxville, Tennessee. The

laboratory data was forwarded to Environmental Data Validation, Inc. (EDV) for validation. A Data Usability Summary Report (DUSR) was prepared and is included as Attachment B.

Sample results are shown in Table 1. Results were compared to the Soil Vapor Indoor Air Matrix Tables in the May 2017 updates to the NYSDEC Guidance document (Attachment C).

Several compounds were detected in the indoor air, outdoor air and subslab samples that do not have guidance values on the Matrix tables.

Matrix Table A has guidance values for TCE, cis-1,2-dichloroethene (cis-1,2-DCE), 1,1-dichloroethene (1,1-DCE), and carbon tetrachloride. 1,1-DCE and carbon tetrachloride were not detected in the indoor air or either subslab sample (or the duplicate at SV-2); Matrix A recommends no further action for both compounds. Cis-1,2-DCE (0.84 µg/m^3) and TCE (3.8 µg/m^3) were detected in subslab sample SV-1 but were not detected in the indoor air sample (ID-1); Matrix Table A recommends no further action for SV-1. Cis-1,2-DCE was not detected in subslab sample SV-2 or the duplicate. TCE (630 µg/m^3) was detected in subslab sample SV-2 (310 µg/m^3 in the duplicate); Indoor Matrix A recommends mitigation for TCE at SV-2.

Matrix Table B has guidance values for PCE, 1,1,1-trichloroethane (1,1,1-TCA), and methylene chloride. 1,1,1-TCA and methylene chloride were not detected in the indoor air sample, either subslab sample or the duplicate at SV-2; methylene chloride was detected in the outdoor sample at a concentration of 13 µg/m^3. PCE was detected in the indoor air sample at a concentration of 2.0 µg/m^3 and the outdoor air sample at 8.4 µg/m^3. PCE was detected in subslab sample SV-1 at a concentration of 9,900 µg/m^3; Matrix B recommends mitigation. PCE was detected in subslab sample SV-2 at a concentration of 240,000 µg/m^3 (Duplicate sample-SV-2X 130,000 µg/m^3). Matrix Table B recommends mitigation.

Matrix Table C has a guidance value for vinyl chloride. Vinyl chloride was not detected in the indoor air sample, outdoor air sample, both subslab samples, or the duplicate.

Previous SVI Investigations

Subslab and indoor air samples were last collected at the Site in March 2021. These results were documented in a letter report dated August 4, 2021. Matrix Table A has guidance values for TCE, cis-1,2-DCE, 1,1-DCE, and carbon tetrachloride. 1,1-DCE and carbon tetrachloride were not detected in the indoor air or either subslab sample; Matrix A recommends no further action for both compounds. Cis-1,2-DCE and TCE were not detected in the indoor air sample or subslab sample SV1-1. Cis-1,2-DCE (640 µg/m^3) and TCE (990 µg/m^3) were detected in subslab sample SV1-2; Indoor Matrix A recommends mitigation for both compounds.

Matrix Table B has guidance values for PCE, 1,1,1-TCA, and methylene chloride. 1,1,1-TCA and methylene chloride were not detected in the indoor air sample or either subslab sample; methylene chloride was detected in the outdoor sample at a concentration of 3.2 µg/m^3. PCE was detected in the indoor air sample at a concentration of 64 µg/m^3 and the outdoor air sample at 69 µg/m^3. PCE was detected in subslab sample SV1-1 at a concentration of 90 µg/m^3; Matrix B recommends identifying the

source and resampling or mitigation. PCE was detected in subslab sample SV1-2 at a concentration of 46,000 µg/m^3; Matrix B recommends mitigation.

Matrix Table C has a guidance value for vinyl chloride. Vinyl chloride was not detected in the indoor air sample or either subslab sample.

Subslab and indoor air samples were also collected at the Site in March 2009. The results were documented in the Final Soil Vapor Intrusion Sampling Report (AECOM, August 6, 2010). The PCE concentration in the ServAll building subslab sample was 66,138 µg/m^3 with the recommendation to mitigate the contamination. Subslab and indoor air samples collected from private residences along Frederick Avenue Walbridge Avenue indicated that no further action was warranted.

Conclusions and Recommendations

Groundwater samples were last collected in May 2021 (the results are presented in a separate report). These results found PCE groundwater contamination immediately downgradient of the Site at shallow monitoring well MW-6B. Depth to groundwater in the vicinity of the Site is approximately 24 feet below ground surface. The PCE plume extends over 1 ½ miles south of the Site to monitoring wells MW-23S and MW-213D, near the Sunrise Highway.

It appears that a PCE source exists in the unsaturated soil under the south side of the ServAll building. Based on these soil vapor samples, mitigation is recommended for the Site building. The PCE concentrations in the two samples from SV1-1/SV-1 recommends “identify the source and resample or mitigate” for the 2021 sample and “mitigate” for the 2022 sample. In the two samples at SV-1-2/SV-2, concentrations of PCE, TCE and cis-1,2-DCE exceed the guidance values and mitigation is recommended.

A soil vapor extraction system should be installed at the ServAll facility to address soil vapor concentrations in the unsaturated soil zone.

If you have any questions on this submission, please call me at 973-883-8502.

Very truly yours,

AECOM Technical Services, Inc.

Paul Kareth

Paul Kareth, P.G.
Project Manager

Tables

TABLE 1
152077 SERVALL LAUNDRY
SUMMARY OF SOIL VAPOR INTRUSION SAMPLES

Location	Outdoor1	Outdoor1	Indoor1	Indoor1	subslab	subslab	subslab	duplicate	subslab	duplicate
Sample ID	OD-1	OD-1	ID-1	ID-1	SV1-1	SV-1	SV1-2	SV1-2X	SV-2	SV-2X
Lab Sample ID	140-22575-5	22D1784-05	140-22575-4	22D1784-04	140-22575-1	22D1784-01	140-22575-2	140-22575-3	22D1784-02	22D1784-03
Matrix	soil vapor	soil vapor	soil vapor	soil vapor	soil vapor	soil vapor	soil vapor	soil vapor	soil vapor	soil vapor
Sample Date	3/31/21	4/22/22	3/31/21	4/22/22	3/31/21	4/22/22	3/31/21	3/31/21	4/22/22	4/22/22
	Conc. Q	Conc. Q	Conc. Q	Conc. Q	Conc. Q	Conc. Q	Conc. Q	Conc. Q	Conc. Q	Conc. Q
1,1,1-Trichloroethane	0.44 U	1.1 U	1.1 U	1.1 U	2.2 U	1.1 U	500 U	560 U	160 U	160 U
1,1,2,2-Tetrachloroethane	0.55 U	1.4 U	1.4 U	1.4 U	2.7 U	1.4 U	620 U	710 U	210 U	210 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.61 U	6.1 U	1.5 U	6.1 U	3.1 U	6.1 U	700 U	790 U	920 U	920 U
1,1,2-Trichloroethane	0.44 U	1.1 U	1.1 U	1.1 U	2.2 U	1.1 U	500 U	560 U	160 U	160 U
1,1-Dichloroethane	0.32 U	0.81 U	0.81 U	0.81 U	1.6 U	0.81 U	370 U	420 U	120 U	120 U
1,1-Dichloroethene	0.16 U	0.79 U	0.4 U	0.79 U	0.79 U	0.79 U	180 U	200 U	120 U	120 U
1,2,4-Trichlorobenzene	0.59 U	1.5 U	1.5 U	1.5 U	3.0 U	1.5 U	670 U	770 U	220 U	220 U
1,2,4-Trimethylbenzene	**4.2**	0.98 U	**3.9**	0.98 U	**4.1**	0.98 U	450 U	510 U	150 U	150 U
1,2-Dibromoethane (EDB)	0.61 U	1.5 U	1.5 U	1.5 U	3.1 U	1.5 U	700 U	790 U	230 U	230 U
1,2-Dichloro-1,1,2,2-tetrafluoroethane	--	1.4 U	--	1.4 U	--	1.4 U	--	--	210 U	210 U
1,2-Dichlorobenzene	0.48 U	1.2 U	1.2 U	1.2 U	2.4 U	1.2 U	550 UJ	620 UJ	180 U	180 U
1,2-Dichloroethane	0.32 U	0.81 U	0.81 U	0.81 U	1.6 U	0.81 U	370 U	420 U	120 U	120 U
1,2-Dichloropropane	0.37 U	0.92 U	0.92 U	0.92 U	1.8 U	0.92 U	420 U	480 U	140 U	140 U
1,2-Dichlorotetrafluoroethane	0.56 U	--	1.4 U	--	2.8 U	--	630 UJ	720 UJ	--	--
1,3,5-Trimethylbenzene	**1.3**	0.98 U	**1.2**	0.98 U	2.0 U	0.98 U	450 U	510 U	150 U	150 U
1,3-Butadiene	--	0.44 U		0.44 U		0.44 U	--	--	66 U	66 U
1,3-Dichlorobenzene	0.48 U	1.2 U	1.2 U	1.2 U	2.4 U	1.2 U	550 UJ	620 UJ	180 U	180 U
1,4-Dichlorobenzene	0.48 U	1.2 U	1.2 U	1.2 U	2.4 U	1.2 U	550 UJ	620 UJ	180 U	180 U
1,4-Dioxane	0.72 U	7.2 U	1.8 U	7.2 U	3.6 U	7.2 U	820 U	930 U	1,100 U	1,100 U
2,2,4-Trimethylpentane	**17.0**	**--**	**16.0**	**--**	**13.0**	**--**	1,100 U	1,200 U	--	--
4-Ethyltoluene	--	0.98 U	--	0.98 U	--	0.98 U	--	--	150 U	150 U
4-Methyl-2-pentanone (MIBK)	--	0.82 U	--	0.82 U	--	0.82 U	--	--	120 U	120 U
Acetone		**1,100**	--	19.0 U	--	**110**	--	--	2,900 U	2,900 U
Benzene	**6.4**	0.64 U	**2.1**	0.64 U	**2.0**	**0.64**	290 U	330 U	96 U	96 U
Benzyl chloride	0.83 U	1.0 U	2.1 U	1.0 U	4.1 U	1.0 U	940 UJ	1,100 UJ	160 U	160 U
Bromodichloromethane	0.54 U	1.3 U	1.3 U	1.3 U	2.7 U	1.3 U	610 U	690 U	200 U	200 U
Bromoform	0.83 U	2.1 U	2.1 U	2.1 U	4.1 U	2.1 U	940 U	1,100 U	310 U	310 U
Bromomethane	0.31 U	0.78 U	0.78 U	0.78 U	1.6 U	0.78 U	350 U	400 U	120 U	120 U
Carbon Disulfide	--	6.2 U	--	6.2 U	--	6.2 U	--	--	930 U	930 U
Carbon tetrachloride	**0.42**	1.3 U	0.5 U	1.3 U	1.0 U	1.3 U	230 UJ	260 UJ	190 U	190 U
Chlorobenzene	0.37 U	0.92 U	0.92 U	0.92 U	1.8 U	0.92 U	420 U	480 U	140 U	140 U

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Lab Sample ID	140-22575-5	22D1784-05	140-22575-4	22D1784-04	140-22575-1	22D1784-01	140-22575-2	140-22575-3	22D1784-02	22D1784-03
Matrix	soil vapor	soil vapor	soil vapor	soil vapor	soil vapor	soil vapor	soil vapor	soil vapor	soil vapor	soil vapor
Sample Date	3/31/21	4/22/22	3/31/21	4/22/22	3/31/21	4/22/22	3/31/21	3/31/21	4/22/22	4/22/22
	Conc. Q	Conc. Q	Conc. Q	Conc. Q	Conc. Q	Conc. Q	Conc. Q	Conc. Q	Conc. Q	Conc. Q
Chloroethane	0.21 U	0.53 U	0.53 U	0.53 U	1.1 U	0.53 U	240 U	270 U	79 U	79 U
Chloroform	0.39 U	0.98 U	0.98 U	0.98 U	2.0 U	**1.2**	440 U	500 U	**340**	**180**
Chloromethane	**1.2**	**1.4**	**1.5**	**1.3 J**	2.1 U	0.83 U	470 U	530 U	120 U	120 U
cis-1,2-Dichloroethene	**0.16**	0.79 U	0.4 U	0.79 U	0.79 U	**0.84**	**640**	**650**	120 U	120 U
cis-1,3-Dichloropropene	0.36 U	0.91 U	0.91 U	0.91 U	1.8 U	0.91 U	410 U	470 U	140 U	140 U
Cyclohexane	**7.3**	0.69 U	**6.8**	0.69 U	**5.0**	0.69 U	780 U	890 U	100 U	100 U
Dibromochloromethane	0.68 U	1.7 U	1.7 U	1.7 U	0.34 U	1.7 U	770 UJ	880 UJ	260 U	260 U
Dichlorodifluoromethane (Freon 12)	**0.9**	**2.5**	**1.4**	**2.6 J**	**13.0**	**2.4**	450 UJ	510 UJ	150 U	150 U
Ethanol	**290 D**	**45.0**	**180**	**17.0 J**	**250**	15 U	4,300 U	4,900 U	2,300 U	2,300 U
Ethyl Acetate	--	7.2 U	--	7.2 U	--	7.2 U	--	--	1,100 U	1,100 U
Ethylbenzene	**2.6**	**23.0**	**2.4**	0.87 U	**2.0**	**2.6**	390 U	450 U	130 U	130 U
Heptane	--	**2.6**	--	0.82 U	--	**1.6**	--	--	120 U	120 U
Hexachlorobutadiene	0.85 UJ	2.1 U	2.1 UJ	2.1 U	4.3 UJ	2.1 U	970 UJ	1,100 UJ	320 U	320 U
Hexane	--	28 U	--	28 U	--	28 U	--	--	4,200 U	4,200 U
Isopropanol	--	20 U	--	20 U	--	20 U	--	--	2,900 U	2,900 U
M,P-Xylenes	**8.8**	**19.0**	**8.1**	1.7 U	**6.3**	**4.0**	390 U	450 U	260 U	260 U
Methyl Ethyl Ketone (2-butanone)	**3.0**	**150**	2.4 U	24 U	4.7 U	24 U	1,100 U	1,200 U	3,500 U	3,500 U
Methyl Butyl Ketone (2-hexanone)	--	**5.9**	--	0.82 U	--	0.82 U	--	--	120 U	120 U
Methyl Isobutyl Ketone	**1.7**	**--**	2.0 U	**--**	4.1 U	**--**	930 U	1,100 U	--	--
Methylene chloride	**3.2**	**13.0**	3.5 U	6.9 U	6.9 U	6.9 U	1,600 U	1,800 U	1,000 U	1,000 U
Naphthalene	1.0 U	1.0 U	2.6 U	1.0 U	5.2 U	1.0 U	1,200 U	1,400 U	160 U	160 U
n-Hexane	**9.5**	**--**	**8.2**	**--**	**5.7**	**--**	800 U	910 U	--	--
o-Xylene	**4.2**	**3.6**	**3.9**	0.87 U	**3.4**	**0.97**	390 U	450 U	130 U	130 U
Propene	--	14.0 U	--	14.0 U	--	14.0 U	--	--	2,100 U	2,100 U
Styrene	0.34 U	0.85 U	0.85 U	0.85 U	1.7 U	0.85 U	390 U	440 U	130 U	130 U
tert-Butyl Alcohol	**7.2**	**--**	**5.3**	**--**	4.9 U	**--**	1,100 U	1,300 U	--	--
Tert-Butyl Methyl Ether	0.58 U	0.72 U	1.4 U	0.72 U	2.9 U	0.72 U	650 U	740 U	110 U	110 U
Tetrachloroethene	**69.0**	**8.4**	**64.0**	**2.0 J**	**90.0**	**9,900**	**46,000**	**47,000**	**240,000**	**130,000**
Tetrahydrofuran	--	**58.0**	--	5.9 U	--	5.9 U	--	--	880 U	880 U
Toluene	**12.0**	**110**	**11.0**	**1.3 J**	**8.2**	**42**	510 U	580 U	110 U	110 U
trans-1,2-Dichloroethene	**1.3**	0.79 U	0.79 U	0.79 U	1.6 U	0.79 U	360 U	410 U	120 U	120 U

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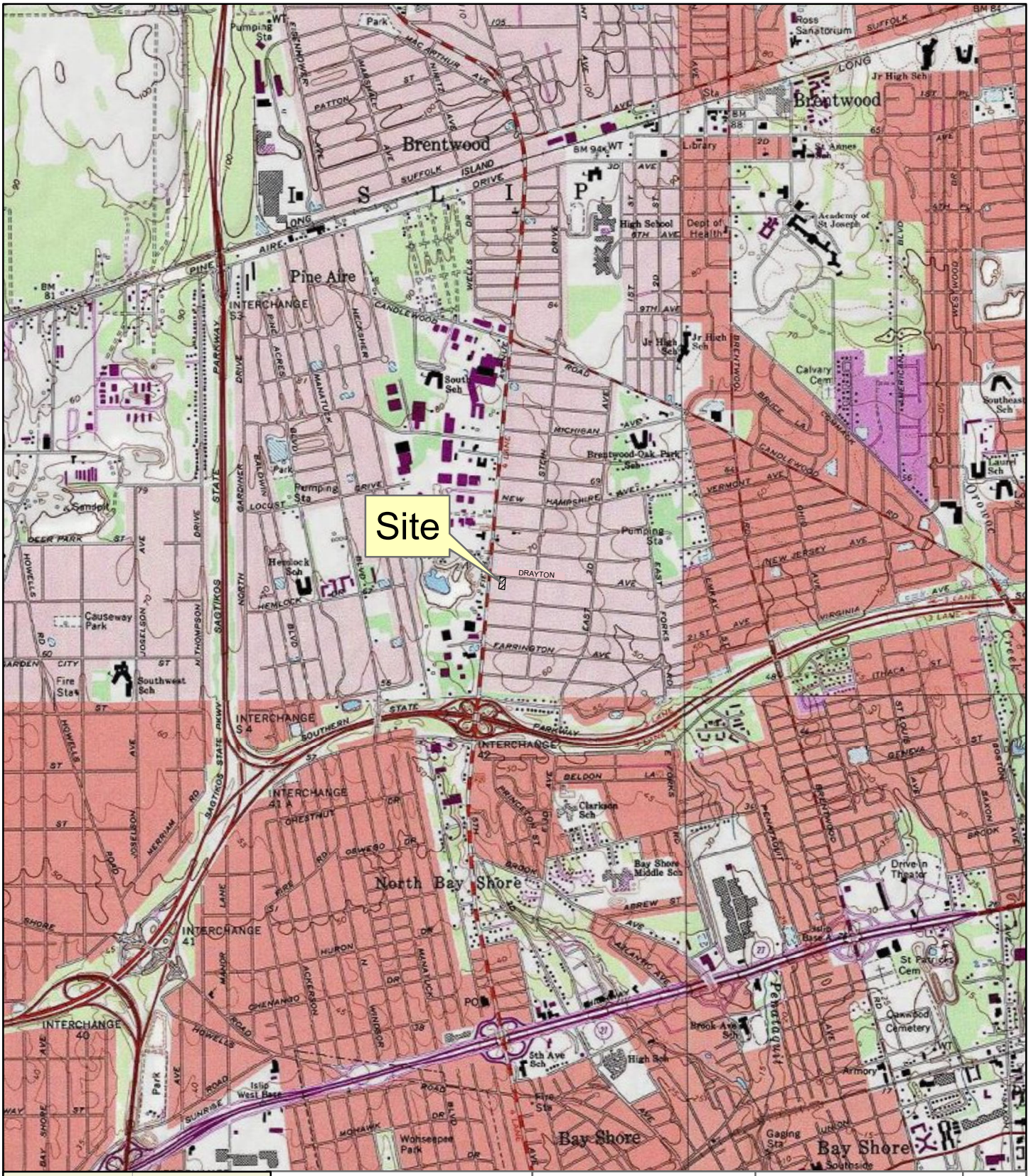
Matrix	soil vapor	soil vapor	soil vapor	soil vapor	soil vapor	soil vapor	soil vapor	soil vapor	soil vapor	soil vapor
Sample Date	3/31/21	4/22/22	3/31/21	4/22/22	3/31/21	4/22/22	3/31/21	3/31/21	4/22/22	4/22/22
	Conc. Q	Conc. Q	Conc. Q	Conc. Q	Conc. Q	Conc. Q	Conc. Q	Conc. Q	Conc. Q	Conc. Q
trans-1,3-Dichloropropene	0.36 U	0.91 U	0.91 U	0.91 U	1.8 U	0.91 U	410 U	470 U	140 U	140 U
Trichloroethene	**0.38**	1.1 U	0.48 U	1.1 U	0.97 U	**3.8**	**990**	**1,000**	**630**	**310**
Trichlorofluoromethane	**1.1**	4.5 U	**1.5**	4.5 U	2.2 U	4.5 U	510 U	580 U	670 U	670 U
Vinyl Acetate	--	14.0 U	--	14.0 U	--	14.0 U	--	--	2,100 U	2,100 U
Vinyl chloride	0.1 U	0.51 U	0.26 U	0.51 U	0.51 U	<0.51 U	120 U	130 U	77 U	77 U

Notes:
4/22/22 - current sampling round
All concentrations in µg/m^3
BOLD - detected concentration
U - Not Detected
J - Estimated value
T - LCS and/or LCSD is outside acceptable limits, high baised
D - Dilution
-- Compound not reported in the 2021 or 2022 sampling event (different call-out laboratories)

Soil Vapor / Indoor Air Matrix A
Soil Vapor / Indoor Air Matrix B
Soil Vapor / Indoor Air Matrix C

Figures



USGS NY Bay Shore West and Green Lawn Quadrangles

U.S.G.S. 1:24 000 SCALE TOPOGRAPHIC MAP

Prepared by: AECOM

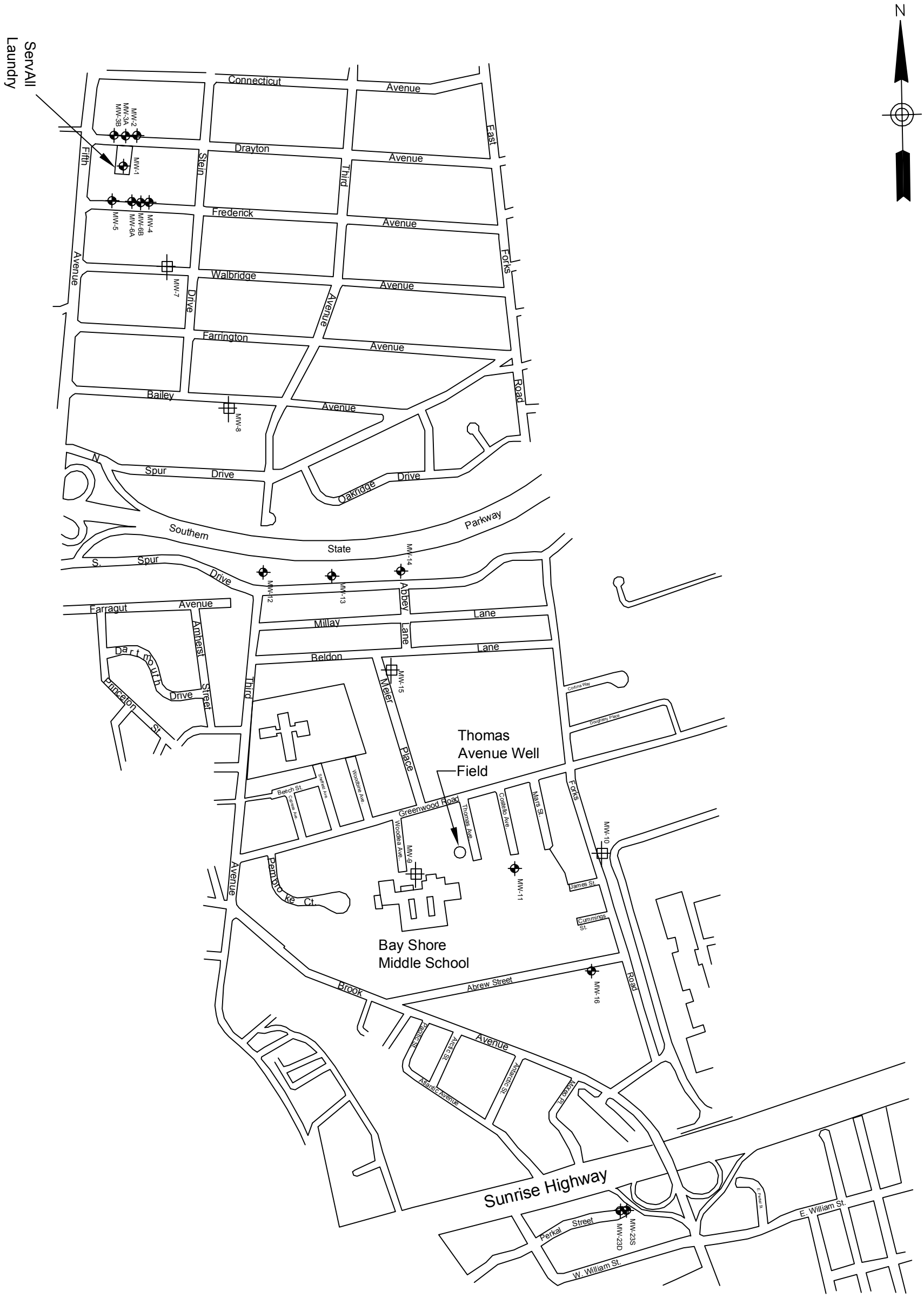
Prepared for: NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Multi Site G
Operation, Maintenance & Monitoring

Site Location
ServAll Laundry Site

Date:	Scale:	Figure No. :
January 2013	1 inch = 2,500 feet	1

L:\work\60277021_Multi_Site_G\01 - ServAll Laundry\7.0 Deliverables\7.2 CADD\LTM-Reports



LEGEND:

MW-16 EXISTING MONITORING WELLS

MW-10 DAMAGED OR MISSING MONITORING WELLS

GRAPHIC SCALE

0 350 700 1400

Scale in Feet

Prepared by : AECOM

SUBMITTED BY : PK/jk	MULTI SITE G - SERVALL LAUNDRY SITE SITE NO. 1-52-026
DRAWN BY : SC	**MONITORING WELL LOCATION MAP**
APPROVED BY : PK	DATE : AUGUST 2016 / SCALE : AS SHOWN / DRAWING NO. : **2**

Analyte (µg/m³)	SV1-1 3/31/21	SV-1 4/22/22
cis-1,2-Dichloroethene	0.8 U	0.8
Tetrachloroethene	90	9,900
Trichloroethene	1.0 U	3.8

Analyte (µg/m³)	ID-1 3/31/21	ID-1 4/22/22
cis-1,2-Dichloroethene	0.4 U	0.8 U
Tetrachloroethene	64	2.0 J
Trichloroethene	0.5 U	1.1 U

Analyte (µg/m³)	SV1-2 3/31/21	Duplicate 3/31/21	SV-2 4/22/22	Duplicate 4/22/22
cis-1,2-Dichloroethene	640	650	120 U	120 U
Tetrachloroethene	46,000	47,000	240,000	130,000
Trichloroethene	990	1,000	630	310

Analyte (µg/m³)	OD-1 3/31/21	OD-1 4/22/22
cis-1,2-Dichloroethene	0.2	0.8 U
Tetrachloroethene	69	8.4
Trichloroethene	0.4	1.1 U

Legend

- # Indoor Air Sample
- # Outdoor Air Sample
- # Sub-Slab Sample
- 8 Drayton Ave

Reference:
2020 Half Foot 4 Band Long Island Zone
New York Statewide Digital Orthoimagery Program

Prepared by: AECOM

Prepared for: NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Multi Site G
ServAll Laundry Site
Site # 1-52-077

Sub-Slab, Indoor Air and Outdoor Air Sampling Results

Date:	Scale:	Figure No. :
July 2022	1 inch = 42 feet	3

Attachment A

Canister Sampling Field Test Data Sheets

Summa Canister Sampling Field Data Sheet

Site: SERVALL, 5 DRAYTON AVE, ~~Babylon~~ BAYSHORE, NY
Samplers: JOHN CRISPO, ~~E WA~~ POWYLIUSZ
Date: 4/21/22

Sample #	SV-1	SV-2	DUP SV-2X	ID-1	OD-1
Location	NORTH END INSIDE, SUB-SLAB	MID BLDG SUB-SLAB	MID BLDG SUB-SLAB	INDOOR MID FLOOR	OUTSIDE SOUTH PKG. LOT
Summa Canister ID	1820	2133	1700	1004	2014
Flow Controller ID	3502	3712	3712	3711	3261
Additional Tubing Added	YES or NO 3'	YES or NO 3'	YES or NO 3'	YES or NO —	YES or NO 10'
Purge Time (Start)	10:40	11:05	11:05	—	—
Purge Time (Stop)	10:42	11:07	11:07	—	—
Total Purge Time (min)	2	2	2	—	—
Purge Volume	1 l	1 l	1 l	—	—
PID Test of Purge Air	—	—	—	—	—
Initial Tracer Gas Results	0.0	0.0	0.0	—	
Pressure Gauge - before sampling	-30	-30	-30	-30	-30
Sample Time (Start)	10:52	11:14	11:14	11:17	11:30
Sample Time (Stop)	10:52	11:14	11:14	11:17	11:30
Total Sample Time (min)	24 hrs	24 hrs	24 hrs	24 hrs	24 hrs
Pressure Gauge - after sampling	-8	-17	-17	0	-1
Sample Volume	6 Liter	6 Lit	6 Lit	6 Lit	6 Lit
Canister Pressure Went To Ambient Pressure?	YES or NO	YES or NO	YES or NO	YES or NO	YES or NO
Associated Ambient Air Sample Number	NA	NA	NA	NA	NA
General Comments:					

Attachment B

DUSR

DATA USABILITY SUMMARY REPORT

For

DRAYTON AVE., BAYSHORE, NY
AIR SAMPLES

VOA
SDG No. 70212006

Sampling Date: April 21, 2022

Submitted to:

AECOM
257 West Genesee Street
Suite 400
Buffalo, New York, USA
716-856-5636

Prepared by:

Environmental Occupational & Public Health Consultants Inc. (EOPHC)
Environmental Data Validation Inc. (EDV, Inc.)
1326 Orangewood Ave
Pittsburgh, PA 15216
(412) 341-5281

Site: 8 DRAYTON AVE 4/21 SDG #: 70212006
Client: AECOM Date: June 30, 2022

Laboratory: Eurofins TestAmerica Reviewer: D. McGuire

Sample Identification Table

Client Sample ID	Laboratory ID	Matrix	VOC
SV1-1	22D1784-01	Air	X
SV1-2	22D1784-02	Air	X
SV1-2X	22D1784-03	Air	X
ID-1	22D1784-04	Air	X
OD-1	22D1784-05	Air	X

The data package contained five (5) air samples. The samples were analyzed via Method TO-15. The adherence of laboratory analytical performance to this method's analytical specifications was evaluated during the data validation process. The data package was evaluated for its usability as defined by the Guidance for the Development of Data Usability Summary Reports (DER-10, 11/09). USEPA Region II standard operating procedures were used as guidance documents. According to the NYSDEC Guidance for the Development of Data Usability Summary Reports, the following QC data were evaluated: blanks, instrument tunings, calibration standards, calibration verifications, laboratory controls, surrogate recoveries, spike recoveries, and sample data.

The following Attachments are a part of this report— all validated Form 1s are presented in Attachment A. All Case Narrative and Chain of Custody (COC) records are presented in Attachment B.

All QC data were within quality control limits, except the following issues:

Cover letter, Narrative and Data Reporting Forms (Form 1s): The deficiencies noted in the case narrative that affect data usability have been discussed in applicable sections. Data that have no impact on data usability are not discussed.

Chain of Custody (COC): All samples listed in the Sample Identification Table were present on the COC.

Preservation: Preservation was acceptable.

Holding Time: Holding times were within acceptable criterion for all samples.

Blanks Quality Control: There was no blank contamination present.

Calibration Quality Control: Calibration was acceptable.

Laboratory Control Sample (LCS): The recoveries were acceptable.

Surrogates: The recoveries were acceptable.

Internal Standards: All results were acceptable.

Matrix Spike (MS)/Matrix Spike Duplicate (MSD): MS/MSD samples were not analyzed.

Field Duplicate: RPDs are calculated when both parent and duplicate sample report detects. The following RPDs were calculated;

Compound	Original Sample (ug/m3)	Duplicate Sample (ug/m3)	RPD (%)
Chloroform	69	37	60%
Tetrachloroethylene	35000	19000	59%
Trichloroethylene	120	58	70%

Compound Quantitation: Quantitations were acceptable.

Tentatively Identified Compounds: Not Applicable.

Additional Comments:
The following compounds were qualified due RPD exceedance in the flow controllers;

Sample ID	Compound	Qualifier
22D1784-04	Chloromethane	J
	Dichlorodifluoromethane (Freon 12)	
	Ethanol	
	Tetrachloroethylene	
	Toluene	

Some Form 1s and case narratives are reporting criteria out of QC limits. If data were impacted due to the deficiency, it is discussed in the DUSR and appropriate qualifier(s) applied.
Therefore, all discussions in the DUSR relate to all conditions that affected data usability. When there are multiple analyses, the validator presents the best run (Attachment A).

Data usability: Data qualified with the "UJ" qualifier are to be used cautiously as they are estimated data with some quality control issues. Data qualified with the "J" qualifier are to be used cautiously as they are estimated data with some quality control issues. Data qualified with the "R" qualifier are not usable due to severe quality control issues. Data qualified with the "U" qualifier are usable at the reporting limit.

ATTACHMENT A

FORM 1s

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ANALYTICAL RESULTS

Project Location: 8 Drayton Ave., Bayshore, NY
Date Received: 4/23/2022
Field Sample #: SV-1
Sample ID: 22D1784-01
Sample Matrix: Air
Sampled: 4/22/2022 10:52

Sample Description/Location:
Sub Description/Location:
Canister ID: 1820
Canister Size: 6 liter
Flow Controller ID: 3502
Sample Type: 24 hr

Work Order: 22D1784
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -8
Receipt Vacuum(in Hg): -7.1
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

Analyte	ppbv Results	ppbv RL	Flag/Qual	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
Acetone	45	8.0		110	19	4	4/28/22 21:37	TPH
Benzene	0.20	0.20		0.64	0.64	4	4/28/22 21:37	TPH
Benzyl chloride	ND	0.20		ND	1.0	4	4/28/22 21:37	TPH
Bromodichloromethane	ND	0.20		ND	1.3	4	4/28/22 21:37	TPH
Bromoform	ND	0.20		ND	2.1	4	4/28/22 21:37	TPH
Bromomethane	ND	0.20		ND	0.78	4	4/28/22 21:37	TPH
1,3-Butadiene	ND	0.20		ND	0.44	4	4/28/22 21:37	TPH
2-Butanone (MEK)	ND	8.0		ND	24	4	4/28/22 21:37	TPH
Carbon Disulfide	ND	2.0		ND	6.2	4	4/28/22 21:37	TPH
Carbon Tetrachloride	ND	0.20		ND	1.3	4	4/28/22 21:37	TPH
Chlorobenzene	ND	0.20		ND	0.92	4	4/28/22 21:37	TPH
Chloroethane	ND	0.20		ND	0.53	4	4/28/22 21:37	TPH
Chloroform	0.25	0.20		1.2	0.98	4	4/28/22 21:37	TPH
Chloromethane	ND	0.40		ND	0.83	4	4/28/22 21:37	TPH
Cyclohexane	ND	0.20		ND	0.69	4	4/28/22 21:37	TPH
Dibromochloromethane	ND	0.20		ND	1.7	4	4/28/22 21:37	TPH
1,2-Dibromoethane (EDB)	ND	0.20		ND	1.5	4	4/28/22 21:37	TPH
1,2-Dichlorobenzene	ND	0.20		ND	1.2	4	4/28/22 21:37	TPH
1,3-Dichlorobenzene	ND	0.20		ND	1.2	4	4/28/22 21:37	TPH
1,4-Dichlorobenzene	ND	0.20		ND	1.2	4	4/28/22 21:37	TPH
Dichlorodifluoromethane (Freon 12)	0.49	0.20		2.4	0.99	4	4/28/22 21:37	TPH
1,1-Dichloroethane	ND	0.20		ND	0.81	4	4/28/22 21:37	TPH
1,2-Dichloroethane	ND	0.20		ND	0.81	4	4/28/22 21:37	TPH
1,1-Dichloroethylene	ND	0.20		ND	0.79	4	4/28/22 21:37	TPH
cis-1,2-Dichloroethylene	0.21	0.20		0.84	0.79	4	4/28/22 21:37	TPH
trans-1,2-Dichloroethylene	ND	0.20		ND	0.79	4	4/28/22 21:37	TPH
1,2-Dichloropropane	ND	0.20		ND	0.92	4	4/28/22 21:37	TPH
cis-1,3-Dichloropropene	ND	0.20		ND	0.91	4	4/28/22 21:37	TPH
trans-1,3-Dichloropropene	ND	0.20		ND	0.91	4	4/28/22 21:37	TPH
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.20		ND	1.4	4	4/28/22 21:37	TPH
1,4-Dioxane	ND	2.0		ND	7.2	4	4/28/22 21:37	TPH
Ethanol	ND	8.0		ND	15	4	4/28/22 21:37	TPH
Ethyl Acetate	ND	2.0		ND	7.2	4	4/28/22 21:37	TPH
Ethylbenzene	0.59	0.20		2.6	0.87	4	4/28/22 21:37	TPH
4-Ethyltoluene	ND	0.20		ND	0.98	4	4/28/22 21:37	TPH
Heptane	0.38	0.20		1.6	0.82	4	4/28/22 21:37	TPH
Hexachlorobutadiene	ND	0.20		ND	2.1	4	4/28/22 21:37	TPH

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ANALYTICAL RESULTS

Project Location: 8 Drayton Ave., Bayshore, NY
Date Received: 4/23/2022
Field Sample #: SV-1
Sample ID: 22D1784-01
Sample Matrix: Air
Sampled: 4/22/2022 10:52

Sample Description/Location:
Sub Description/Location:
Canister ID: 1820
Canister Size: 6 liter
Flow Controller ID: 3502
Sample Type: 24 hr

Work Order: 22D1784
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -8
Receipt Vacuum(in Hg): -7.1
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv			ug/m3			Date/Time	
Analyte	**Results**	**RL**	**Flag/Qual**	**Results**	**RL**	**Dilution**	**Analyzed**	**Analyst**
Hexane	ND	8.0		ND	28	4	4/28/22 21:37	TPH
2-Hexanone (MBK)	ND	0.20		ND	0.82	4	4/28/22 21:37	TPH
Isopropanol	ND	8.0		ND	20	4	4/28/22 21:37	TPH
Methyl tert-Butyl Ether (MTBE)	ND	0.20		ND	0.72	4	4/28/22 21:37	TPH
Methylene Chloride	ND	2.0		ND	6.9	4	4/28/22 21:37	TPH
4-Methyl-2-pentanone (MIBK)	ND	0.20		ND	0.82	4	4/28/22 21:37	TPH
Naphthalene	ND	0.20		ND	1.0	4	4/28/22 21:37	TPH
Propene	ND	8.0		ND	14	4	4/28/22 21:37	TPH
Styrene	ND	0.20		ND	0.85	4	4/28/22 21:37	TPH
1,1,2,2-Tetrachloroethane	ND	0.20		ND	1.4	4	4/28/22 21:37	TPH
Tetrachloroethylene	1500	2.0		9900	14	40	4/28/22 22:16	TPH
Tetrahydrofuran	ND	2.0		ND	5.9	4	4/28/22 21:37	TPH
Toluene	11	0.20		42	0.75	4	4/28/22 21:37	TPH
1,2,4-Trichlorobenzene	ND	0.20		ND	1.5	4	4/28/22 21:37	TPH
1,1,1-Trichloroethane	ND	0.20		ND	1.1	4	4/28/22 21:37	TPH
1,1,2-Trichloroethane	ND	0.20		ND	1.1	4	4/28/22 21:37	TPH
Trichloroethylene	0.70	0.20		3.8	1.1	4	4/28/22 21:37	TPH
Trichlorofluoromethane (Freon 11)	ND	0.80		ND	4.5	4	4/28/22 21:37	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.80		ND	6.1	4	4/28/22 21:37	TPH
1,2,4-Trimethylbenzene	ND	0.20		ND	0.98	4	4/28/22 21:37	TPH
1,3,5-Trimethylbenzene	ND	0.20		ND	0.98	4	4/28/22 21:37	TPH
Vinyl Acetate	ND	4.0		ND	14	4	4/28/22 21:37	TPH
Vinyl Chloride	ND	0.20		ND	0.51	4	4/28/22 21:37	TPH
m&p-Xylene	0.91	0.40		4.0	1.7	4	4/28/22 21:37	TPH
o-Xylene	0.22	0.20		0.97	0.87	4	4/28/22 21:37	TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	104	70-130	4/28/22 21:37
4-Bromofluorobenzene (1)	102	70-130	4/28/22 22:16

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ANALYTICAL RESULTS

Project Location: 8 Drayton Ave., Bayshore, NY
Date Received: 4/23/2022
Field Sample #: SV-2
Sample ID: 22D1784-02
Sample Matrix: Air
Sampled: 4/22/2022 11:14

Sample Description/Location:
Sub Description/Location:
Canister ID: 2133
Canister Size: 6 liter
Flow Controller ID: 3712
Sample Type: 24 hr

Work Order: 22D1784
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -17
Receipt Vacuum(in Hg): -15.9
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv			ug/m3			Date/Time	
Analyte	**Results**	**RL**	**Flag/Qual**	**Results**	**RL**	**Dilution**	**Analyzed**	**Analyst**
Acetone	ND	1200		ND	2900	600	4/29/22 1:00	TPH
Benzene	ND	30		ND	96	600	4/29/22 1:00	TPH
Benzyl chloride	ND	30		ND	160	600	4/29/22 1:00	TPH
Bromodichloromethane	ND	30		ND	200	600	4/29/22 1:00	TPH
Bromoform	ND	30		ND	310	600	4/29/22 1:00	TPH
Bromomethane	ND	30		ND	120	600	4/29/22 1:00	TPH
1,3-Butadiene	ND	30		ND	66	600	4/29/22 1:00	TPH
2-Butanone (MEK)	ND	1200		ND	3500	600	4/29/22 1:00	TPH
Carbon Disulfide	ND	300		ND	930	600	4/29/22 1:00	TPH
Carbon Tetrachloride	ND	30		ND	190	600	4/29/22 1:00	TPH
Chlorobenzene	ND	30		ND	140	600	4/29/22 1:00	TPH
Chloroethane	ND	30		ND	79	600	4/29/22 1:00	TPH
Chloroform	69	30		340	150	600	4/29/22 1:00	TPH
Chloromethane	ND	60		ND	120	600	4/29/22 1:00	TPH
Cyclohexane	ND	30		ND	100	600	4/29/22 1:00	TPH
Dibromochloromethane	ND	30		ND	260	600	4/29/22 1:00	TPH
1,2-Dibromoethane (EDB)	ND	30		ND	230	600	4/29/22 1:00	TPH
1,2-Dichlorobenzene	ND	30		ND	180	600	4/29/22 1:00	TPH
1,3-Dichlorobenzene	ND	30		ND	180	600	4/29/22 1:00	TPH
1,4-Dichlorobenzene	ND	30		ND	180	600	4/29/22 1:00	TPH
Dichlorodifluoromethane (Freon 12)	ND	30		ND	150	600	4/29/22 1:00	TPH
1,1-Dichloroethane	ND	30		ND	120	600	4/29/22 1:00	TPH
1,2-Dichloroethane	ND	30		ND	120	600	4/29/22 1:00	TPH
1,1-Dichloroethylene	ND	30		ND	120	600	4/29/22 1:00	TPH
cis-1,2-Dichloroethylene	ND	30		ND	120	600	4/29/22 1:00	TPH
trans-1,2-Dichloroethylene	ND	30		ND	120	600	4/29/22 1:00	TPH
1,2-Dichloropropane	ND	30		ND	140	600	4/29/22 1:00	TPH
cis-1,3-Dichloropropene	ND	30		ND	140	600	4/29/22 1:00	TPH
trans-1,3-Dichloropropene	ND	30		ND	140	600	4/29/22 1:00	TPH
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	30		ND	210	600	4/29/22 1:00	TPH
1,4-Dioxane	ND	300		ND	1100	600	4/29/22 1:00	TPH
Ethanol	ND	1200		ND	2300	600	4/29/22 1:00	TPH
Ethyl Acetate	ND	300		ND	1100	600	4/29/22 1:00	TPH
Ethylbenzene	ND	30		ND	130	600	4/29/22 1:00	TPH
4-Ethyltoluene	ND	30		ND	150	600	4/29/22 1:00	TPH
Heptane	ND	30		ND	120	600	4/29/22 1:00	TPH
Hexachlorobutadiene	ND	30		ND	320	600	4/29/22 1:00	TPH

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ANALYTICAL RESULTS

Project Location: 8 Drayton Ave., Bayshore, NY
Date Received: 4/23/2022
Field Sample #: SV-2
Sample ID: 22D1784-02
Sample Matrix: Air
Sampled: 4/22/2022 11:14

Sample Description/Location:
Sub Description/Location:
Canister ID: 2133
Canister Size: 6 liter
Flow Controller ID: 3712
Sample Type: 24 hr

Work Order: 22D1784
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -17
Receipt Vacuum(in Hg): -15.9
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv			ug/m3			Date/Time	
Analyte	**Results**	**RL**	**Flag/Qual**	**Results**	**RL**	**Dilution**	**Analyzed**	**Analyst**
Hexane	ND	1200		ND	4200	600	4/29/22 1:00	TPH
2-Hexanone (MBK)	ND	30		ND	120	600	4/29/22 1:00	TPH
Isopropanol	ND	1200		ND	2900	600	4/29/22 1:00	TPH
Methyl tert-Butyl Ether (MTBE)	ND	30		ND	110	600	4/29/22 1:00	TPH
Methylene Chloride	ND	300		ND	1000	600	4/29/22 1:00	TPH
4-Methyl-2-pentanone (MIBK)	ND	30		ND	120	600	4/29/22 1:00	TPH
Naphthalene	ND	30		ND	160	600	4/29/22 1:00	TPH
Propene	ND	1200		ND	2100	600	4/29/22 1:00	TPH
Styrene	ND	30		ND	130	600	4/29/22 1:00	TPH
1,1,2,2-Tetrachloroethane	ND	30		ND	210	600	4/29/22 1:00	TPH
Tetrachloroethylene	35000	60		240000	410	1200	4/30/22 0:36	BRF
Tetrahydrofuran	ND	300		ND	880	600	4/29/22 1:00	TPH
Toluene	ND	30		ND	110	600	4/29/22 1:00	TPH
1,2,4-Trichlorobenzene	ND	30		ND	220	600	4/29/22 1:00	TPH
1,1,1-Trichloroethane	ND	30		ND	160	600	4/29/22 1:00	TPH
1,1,2-Trichloroethane	ND	30		ND	160	600	4/29/22 1:00	TPH
Trichloroethylene	120	30		630	160	600	4/29/22 1:00	TPH
Trichlorofluoromethane (Freon 11)	ND	120		ND	670	600	4/29/22 1:00	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	120		ND	920	600	4/29/22 1:00	TPH
1,2,4-Trimethylbenzene	ND	30		ND	150	600	4/29/22 1:00	TPH
1,3,5-Trimethylbenzene	ND	30		ND	150	600	4/29/22 1:00	TPH
Vinyl Acetate	ND	600		ND	2100	600	4/29/22 1:00	TPH
Vinyl Chloride	ND	30		ND	77	600	4/29/22 1:00	TPH
m&p-Xylene	ND	60		ND	260	600	4/29/22 1:00	TPH
o-Xylene	ND	30		ND	130	600	4/29/22 1:00	TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	103	70-130	4/29/22 1:00
4-Bromofluorobenzene (1)	104	70-130	4/30/22 0:36

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ANALYTICAL RESULTS

Project Location: 8 Drayton Ave., Bayshore, NY
Date Received: 4/23/2022
Field Sample #: SV-2X
Sample ID: 22D1784-03
Sample Matrix: Air
Sampled: 4/22/2022 11:14

Sample Description/Location:
Sub Description/Location:
Canister ID: 1700
Canister Size: 6 liter
Flow Controller ID: 3712
Sample Type: 24 hr

Work Order: 22D1784
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -17
Receipt Vacuum(in Hg): -15.9
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv			ug/m3			Date/Time	
Analyte	**Results**	**RL**	**Flag/Qual**	**Results**	**RL**	**Dilution**	**Analyzed**	**Analyst**
Acetone	ND	1200		ND	2900	600	4/29/22 1:44	TPH
Benzene	ND	30		ND	96	600	4/29/22 1:44	TPH
Benzyl chloride	ND	30		ND	160	600	4/29/22 1:44	TPH
Bromodichloromethane	ND	30		ND	200	600	4/29/22 1:44	TPH
Bromoform	ND	30		ND	310	600	4/29/22 1:44	TPH
Bromomethane	ND	30		ND	120	600	4/29/22 1:44	TPH
1,3-Butadiene	ND	30		ND	66	600	4/29/22 1:44	TPH
2-Butanone (MEK)	ND	1200		ND	3500	600	4/29/22 1:44	TPH
Carbon Disulfide	ND	300		ND	930	600	4/29/22 1:44	TPH
Carbon Tetrachloride	ND	30		ND	190	600	4/29/22 1:44	TPH
Chlorobenzene	ND	30		ND	140	600	4/29/22 1:44	TPH
Chloroethane	ND	30		ND	79	600	4/29/22 1:44	TPH
Chloroform	37	30		180	150	600	4/29/22 1:44	TPH
Chloromethane	ND	60		ND	120	600	4/29/22 1:44	TPH
Cyclohexane	ND	30		ND	100	600	4/29/22 1:44	TPH
Dibromochloromethane	ND	30		ND	260	600	4/29/22 1:44	TPH
1,2-Dibromoethane (EDB)	ND	30		ND	230	600	4/29/22 1:44	TPH
1,2-Dichlorobenzene	ND	30		ND	180	600	4/29/22 1:44	TPH
1,3-Dichlorobenzene	ND	30		ND	180	600	4/29/22 1:44	TPH
1,4-Dichlorobenzene	ND	30		ND	180	600	4/29/22 1:44	TPH
Dichlorodifluoromethane (Freon 12)	ND	30		ND	150	600	4/29/22 1:44	TPH
1,1-Dichloroethane	ND	30		ND	120	600	4/29/22 1:44	TPH
1,2-Dichloroethane	ND	30		ND	120	600	4/29/22 1:44	TPH
1,1-Dichloroethylene	ND	30		ND	120	600	4/29/22 1:44	TPH
cis-1,2-Dichloroethylene	ND	30		ND	120	600	4/29/22 1:44	TPH
trans-1,2-Dichloroethylene	ND	30		ND	120	600	4/29/22 1:44	TPH
1,2-Dichloropropane	ND	30		ND	140	600	4/29/22 1:44	TPH
cis-1,3-Dichloropropene	ND	30		ND	140	600	4/29/22 1:44	TPH
trans-1,3-Dichloropropene	ND	30		ND	140	600	4/29/22 1:44	TPH
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	30		ND	210	600	4/29/22 1:44	TPH
1,4-Dioxane	ND	300		ND	1100	600	4/29/22 1:44	TPH
Ethanol	ND	1200		ND	2300	600	4/29/22 1:44	TPH
Ethyl Acetate	ND	300		ND	1100	600	4/29/22 1:44	TPH
Ethylbenzene	ND	30		ND	130	600	4/29/22 1:44	TPH
4-Ethyltoluene	ND	30		ND	150	600	4/29/22 1:44	TPH
Heptane	ND	30		ND	120	600	4/29/22 1:44	TPH
Hexachlorobutadiene	ND	30		ND	320	600	4/29/22 1:44	TPH

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ANALYTICAL RESULTS

Project Location: 8 Drayton Ave., Bayshore, NY
Date Received: 4/23/2022
Field Sample #: SV-2X
Sample ID: 22D1784-03
Sample Matrix: Air
Sampled: 4/22/2022 11:14

Sample Description/Location:
Sub Description/Location:
Canister ID: 1700
Canister Size: 6 liter
Flow Controller ID: 3712
Sample Type: 24 hr

Work Order: 22D1784
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -17
Receipt Vacuum(in Hg): -15.9
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling:

EPA TO-15

	ppbv			ug/m3			Date/Time	
Analyte	**Results**	**RL**	**Flag/Qual**	**Results**	**RL**	**Dilution**	**Analyzed**	**Analyst**
Hexane	ND	1200		ND	4200	600	4/29/22 1:44	TPH
2-Hexanone (MBK)	ND	30		ND	120	600	4/29/22 1:44	TPH
Isopropanol	ND	1200		ND	2900	600	4/29/22 1:44	TPH
Methyl tert-Butyl Ether (MTBE)	ND	30		ND	110	600	4/29/22 1:44	TPH
Methylene Chloride	ND	300		ND	1000	600	4/29/22 1:44	TPH
4-Methyl-2-pentanone (MIBK)	ND	30		ND	120	600	4/29/22 1:44	TPH
Naphthalene	ND	30		ND	160	600	4/29/22 1:44	TPH
Propene	ND	1200		ND	2100	600	4/29/22 1:44	TPH
Styrene	ND	30		ND	130	600	4/29/22 1:44	TPH
1,1,2,2-Tetrachloroethane	ND	30		ND	210	600	4/29/22 1:44	TPH
Tetrachloroethylene	19000	30		130000	200	600	4/29/22 1:44	TPH
Tetrahydrofuran	ND	300		ND	880	600	4/29/22 1:44	TPH
Toluene	ND	30		ND	110	600	4/29/22 1:44	TPH
1,2,4-Trichlorobenzene	ND	30		ND	220	600	4/29/22 1:44	TPH
1,1,1-Trichloroethane	ND	30		ND	160	600	4/29/22 1:44	TPH
1,1,2-Trichloroethane	ND	30		ND	160	600	4/29/22 1:44	TPH
Trichloroethylene	58	30		310	160	600	4/29/22 1:44	TPH
Trichlorofluoromethane (Freon 11)	ND	120		ND	670	600	4/29/22 1:44	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	120		ND	920	600	4/29/22 1:44	TPH
1,2,4-Trimethylbenzene	ND	30		ND	150	600	4/29/22 1:44	TPH
1,3,5-Trimethylbenzene	ND	30		ND	150	600	4/29/22 1:44	TPH
Vinyl Acetate	ND	600		ND	2100	600	4/29/22 1:44	TPH
Vinyl Chloride	ND	30		ND	77	600	4/29/22 1:44	TPH
m&p-Xylene	ND	60		ND	260	600	4/29/22 1:44	TPH
o-Xylene	ND	30		ND	130	600	4/29/22 1:44	TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	104	70-130	4/29/22 1:44

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ANALYTICAL RESULTS

Project Location: 8 Drayton Ave., Bayshore, NY
Date Received: 4/23/2022
Field Sample #: ID-1
Sample ID: 22D1784-04
Sample Matrix: Air
Sampled: 4/22/2022 11:17

Sample Description/Location:
Sub Description/Location:
Canister ID: 1104
Canister Size: 6 liter
Flow Controller ID: 3711
Sample Type: 24 hr

Work Order: 22D1784
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): 0
Receipt Vacuum(in Hg): 1.3
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: >20%

EPA TO-15

Sample Flags: Z-01a

Analyte	ppbv Results	ppbv RL	Flag/Qual	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
Acetone	ND	8.0		ND	19	4	4/28/22 22:57	TPH
Benzene	ND	0.20		ND	0.64	4	4/28/22 22:57	TPH
Benzyl chloride	ND	0.20		ND	1.0	4	4/28/22 22:57	TPH
Bromodichloromethane	ND	0.20		ND	1.3	4	4/28/22 22:57	TPH
Bromoform	ND	0.20		ND	2.1	4	4/28/22 22:57	TPH
Bromomethane	ND	0.20		ND	0.78	4	4/28/22 22:57	TPH
1,3-Butadiene	ND	0.20		ND	0.44	4	4/28/22 22:57	TPH
2-Butanone (MEK)	ND	8.0		ND	24	4	4/28/22 22:57	TPH
Carbon Disulfide	ND	2.0		ND	6.2	4	4/28/22 22:57	TPH
Carbon Tetrachloride	ND	0.20		ND	1.3	4	4/28/22 22:57	TPH
Chlorobenzene	ND	0.20		ND	0.92	4	4/28/22 22:57	TPH
Chloroethane	ND	0.20		ND	0.53	4	4/28/22 22:57	TPH
Chloroform	ND	0.20		ND	0.98	4	4/28/22 22:57	TPH
Chloromethane	0.64	0.40		1.3	0.83	4	4/28/22 22:57	TPH
Cyclohexane	ND	0.20		ND	0.69	4	4/28/22 22:57	TPH
Dibromochloromethane	ND	0.20		ND	1.7	4	4/28/22 22:57	TPH
1,2-Dibromoethane (EDB)	ND	0.20		ND	1.5	4	4/28/22 22:57	TPH
1,2-Dichlorobenzene	ND	0.20		ND	1.2	4	4/28/22 22:57	TPH
1,3-Dichlorobenzene	ND	0.20		ND	1.2	4	4/28/22 22:57	TPH
1,4-Dichlorobenzene	ND	0.20		ND	1.2	4	4/28/22 22:57	TPH
Dichlorodifluoromethane (Freon 12)	0.53	0.20		2.6	0.99	4	4/28/22 22:57	TPH
1,1-Dichloroethane	ND	0.20		ND	0.81	4	4/28/22 22:57	TPH
1,2-Dichloroethane	ND	0.20		ND	0.81	4	4/28/22 22:57	TPH
1,1-Dichloroethylene	ND	0.20		ND	0.79	4	4/28/22 22:57	TPH
cis-1,2-Dichloroethylene	ND	0.20		ND	0.79	4	4/28/22 22:57	TPH
trans-1,2-Dichloroethylene	ND	0.20		ND	0.79	4	4/28/22 22:57	TPH
1,2-Dichloropropane	ND	0.20		ND	0.92	4	4/28/22 22:57	TPH
cis-1,3-Dichloropropene	ND	0.20		ND	0.91	4	4/28/22 22:57	TPH
trans-1,3-Dichloropropene	ND	0.20		ND	0.91	4	4/28/22 22:57	TPH
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.20		ND	1.4	4	4/28/22 22:57	TPH
1,4-Dioxane	ND	2.0		ND	7.2	4	4/28/22 22:57	TPH
Ethanol	9.1	8.0		17	15	4	4/28/22 22:57	TPH
Ethyl Acetate	ND	2.0		ND	7.2	4	4/28/22 22:57	TPH
Ethylbenzene	ND	0.20		ND	0.87	4	4/28/22 22:57	TPH
4-Ethyltoluene	ND	0.20		ND	0.98	4	4/28/22 22:57	TPH
Heptane	ND	0.20		ND	0.82	4	4/28/22 22:57	TPH
Hexachlorobutadiene	ND	0.20		ND	2.1	4	4/28/22 22:57	TPH

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ANALYTICAL RESULTS

Project Location: 8 Drayton Ave., Bayshore, NY
Date Received: 4/23/2022
Field Sample #: ID-1
Sample ID: 22D1784-04
Sample Matrix: Air
Sampled: 4/22/2022 11:17

Sample Description/Location:
Sub Description/Location:
Canister ID: 1104
Canister Size: 6 liter
Flow Controller ID: 3711
Sample Type: 24 hr

Work Order: 22D1784
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): 0
Receipt Vacuum(in Hg): 1.3
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: >20%

EPA TO-15

Sample Flags: Z-01a

Analyte	ppbv Results	ppbv RL	Flag/Qual	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
Hexane	ND	8.0		ND	28	4	4/28/22 22:57	TPH
2-Hexanone (MBK)	ND	0.20		ND	0.82	4	4/28/22 22:57	TPH
Isopropanol	ND	8.0		ND	20	4	4/28/22 22:57	TPH
Methyl tert-Butyl Ether (MTBE)	ND	0.20		ND	0.72	4	4/28/22 22:57	TPH
Methylene Chloride	ND	2.0		ND	6.9	4	4/28/22 22:57	TPH
4-Methyl-2-pentanone (MIBK)	ND	0.20		ND	0.82	4	4/28/22 22:57	TPH
Naphthalene	ND	0.20		ND	1.0	4	4/28/22 22:57	TPH
Propene	ND	8.0		ND	14	4	4/28/22 22:57	TPH
Styrene	ND	0.20		ND	0.85	4	4/28/22 22:57	TPH
1,1,2,2-Tetrachloroethane	ND	0.20		ND	1.4	4	4/28/22 22:57	TPH
Tetrachloroethylene	0.29	0.20	J	2.0	1.4	4	4/28/22 22:57	TPH
Tetrahydrofuran	ND	2.0		ND	5.9	4	4/28/22 22:57	TPH
Toluene	0.33	0.20	J	1.3	0.75	4	4/28/22 22:57	TPH
1,2,4-Trichlorobenzene	ND	0.20		ND	1.5	4	4/28/22 22:57	TPH
1,1,1-Trichloroethane	ND	0.20		ND	1.1	4	4/28/22 22:57	TPH
1,1,2-Trichloroethane	ND	0.20		ND	1.1	4	4/28/22 22:57	TPH
Trichloroethylene	ND	0.20		ND	1.1	4	4/28/22 22:57	TPH
Trichlorofluoromethane (Freon 11)	ND	0.80		ND	4.5	4	4/28/22 22:57	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.80		ND	6.1	4	4/28/22 22:57	TPH
1,2,4-Trimethylbenzene	ND	0.20		ND	0.98	4	4/28/22 22:57	TPH
1,3,5-Trimethylbenzene	ND	0.20		ND	0.98	4	4/28/22 22:57	TPH
Vinyl Acetate	ND	4.0		ND	14	4	4/28/22 22:57	TPH
Vinyl Chloride	ND	0.20		ND	0.51	4	4/28/22 22:57	TPH
m&p-Xylene	ND	0.40		ND	1.7	4	4/28/22 22:57	TPH
o-Xylene	ND	0.20		ND	0.87	4	4/28/22 22:57	TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	104	70-130	4/28/22 22:57

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ANALYTICAL RESULTS

Project Location: 8 Drayton Ave., Bayshore, NY
Date Received: 4/23/2022
Field Sample #: OD-1
Sample ID: 22D1784-05
Sample Matrix: Air
Sampled: 4/22/2022 11:30

Sample Description/Location:
Sub Description/Location:
Canister ID: 2014
Canister Size: 6 liter
Flow Controller ID: 3261
Sample Type: 24 hr

Work Order: 22D1784
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -1
Receipt Vacuum(in Hg): 1.1
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

	ppbv			ug/m3			Date/Time	
Analyte	**Results**	**RL**	**Flag/Qual**	**Results**	**RL**	**Dilution**	**Analyzed**	**Analyst**
Acetone	480	80		1100	190	40	4/29/22 0:17	TPH
Benzene	ND	0.20		ND	0.64	4	4/28/22 23:37	TPH
Benzyl chloride	ND	0.20		ND	1.0	4	4/28/22 23:37	TPH
Bromodichloromethane	ND	0.20		ND	1.3	4	4/28/22 23:37	TPH
Bromoform	ND	0.20		ND	2.1	4	4/28/22 23:37	TPH
Bromomethane	ND	0.20		ND	0.78	4	4/28/22 23:37	TPH
1,3-Butadiene	ND	0.20		ND	0.44	4	4/28/22 23:37	TPH
2-Butanone (MEK)	50	8.0		150	24	4	4/28/22 23:37	TPH
Carbon Disulfide	ND	2.0		ND	6.2	4	4/28/22 23:37	TPH
Carbon Tetrachloride	ND	0.20		ND	1.3	4	4/28/22 23:37	TPH
Chlorobenzene	ND	0.20		ND	0.92	4	4/28/22 23:37	TPH
Chloroethane	ND	0.20		ND	0.53	4	4/28/22 23:37	TPH
Chloroform	ND	0.20		ND	0.98	4	4/28/22 23:37	TPH
Chloromethane	0.68	0.40		1.4	0.83	4	4/28/22 23:37	TPH
Cyclohexane	ND	0.20		ND	0.69	4	4/28/22 23:37	TPH
Dibromochloromethane	ND	0.20		ND	1.7	4	4/28/22 23:37	TPH
1,2-Dibromoethane (EDB)	ND	0.20		ND	1.5	4	4/28/22 23:37	TPH
1,2-Dichlorobenzene	ND	0.20		ND	1.2	4	4/28/22 23:37	TPH
1,3-Dichlorobenzene	ND	0.20		ND	1.2	4	4/28/22 23:37	TPH
1,4-Dichlorobenzene	ND	0.20		ND	1.2	4	4/28/22 23:37	TPH
Dichlorodifluoromethane (Freon 12)	0.50	0.20		2.5	0.99	4	4/28/22 23:37	TPH
1,1-Dichloroethane	ND	0.20		ND	0.81	4	4/28/22 23:37	TPH
1,2-Dichloroethane	ND	0.20		ND	0.81	4	4/28/22 23:37	TPH
1,1-Dichloroethylene	ND	0.20		ND	0.79	4	4/28/22 23:37	TPH
cis-1,2-Dichloroethylene	ND	0.20		ND	0.79	4	4/28/22 23:37	TPH
trans-1,2-Dichloroethylene	ND	0.20		ND	0.79	4	4/28/22 23:37	TPH
1,2-Dichloropropane	ND	0.20		ND	0.92	4	4/28/22 23:37	TPH
cis-1,3-Dichloropropene	ND	0.20		ND	0.91	4	4/28/22 23:37	TPH
trans-1,3-Dichloropropene	ND	0.20		ND	0.91	4	4/28/22 23:37	TPH
1,2-Dichloro-1,1,2,2-tetrafluoroethane (Freon 114)	ND	0.20		ND	1.4	4	4/28/22 23:37	TPH
1,4-Dioxane	ND	2.0		ND	7.2	4	4/28/22 23:37	TPH
Ethanol	24	8.0		45	15	4	4/28/22 23:37	TPH
Ethyl Acetate	ND	2.0		ND	7.2	4	4/28/22 23:37	TPH
Ethylbenzene	5.2	0.20		23	0.87	4	4/28/22 23:37	TPH
4-Ethyltoluene	ND	0.20		ND	0.98	4	4/28/22 23:37	TPH
Heptane	0.64	0.20		2.6	0.82	4	4/28/22 23:37	TPH
Hexachlorobutadiene	ND	0.20		ND	2.1	4	4/28/22 23:37	TPH

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ANALYTICAL RESULTS

Project Location: 8 Drayton Ave., Bayshore, NY
Date Received: 4/23/2022
Field Sample #: OD-1
Sample ID: 22D1784-05
Sample Matrix: Air
Sampled: 4/22/2022 11:30

Sample Description/Location:
Sub Description/Location:
Canister ID: 2014
Canister Size: 6 liter
Flow Controller ID: 3261
Sample Type: 24 hr

Work Order: 22D1784
Initial Vacuum(in Hg): -30
Final Vacuum(in Hg): -1
Receipt Vacuum(in Hg): 1.1
Flow Controller Type: Fixed-Orifice
Flow Controller Calibration
RPD Pre and Post-Sampling: <20%

EPA TO-15

Sample Flags: Z-01

Analyte	ppbv Results	ppbv RL	Flag/Qual	ug/m3 Results	ug/m3 RL	Dilution	Date/Time Analyzed	Analyst
Hexane	ND	8.0		ND	28	4	4/28/22 23:37	TPH
2-Hexanone (MBK)	1.4	0.20		5.9	0.82	4	4/28/22 23:37	TPH
Isopropanol	ND	8.0		ND	20	4	4/28/22 23:37	TPH
Methyl tert-Butyl Ether (MTBE)	ND	0.20		ND	0.72	4	4/28/22 23:37	TPH
Methylene Chloride	3.8	2.0		13	6.9	4	4/28/22 23:37	TPH
4-Methyl-2-pentanone (MIBK)	ND	0.20		ND	0.82	4	4/28/22 23:37	TPH
Naphthalene	ND	0.20		ND	1.0	4	4/28/22 23:37	TPH
Propene	ND	8.0		ND	14	4	4/28/22 23:37	TPH
Styrene	ND	0.20		ND	0.85	4	4/28/22 23:37	TPH
1,1,2,2-Tetrachloroethane	ND	0.20		ND	1.4	4	4/28/22 23:37	TPH
Tetrachloroethylene	1.2	0.20		8.4	1.4	4	4/28/22 23:37	TPH
Tetrahydrofuran	20	2.0		58	5.9	4	4/28/22 23:37	TPH
Toluene	29	0.20		110	0.75	4	4/28/22 23:37	TPH
1,2,4-Trichlorobenzene	ND	0.20		ND	1.5	4	4/28/22 23:37	TPH
1,1,1-Trichloroethane	ND	0.20		ND	1.1	4	4/28/22 23:37	TPH
1,1,2-Trichloroethane	ND	0.20		ND	1.1	4	4/28/22 23:37	TPH
Trichloroethylene	ND	0.20		ND	1.1	4	4/28/22 23:37	TPH
Trichlorofluoromethane (Freon 11)	ND	0.80		ND	4.5	4	4/28/22 23:37	TPH
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.80		ND	6.1	4	4/28/22 23:37	TPH
1,2,4-Trimethylbenzene	ND	0.20		ND	0.98	4	4/28/22 23:37	TPH
1,3,5-Trimethylbenzene	ND	0.20		ND	0.98	4	4/28/22 23:37	TPH
Vinyl Acetate	ND	4.0		ND	14	4	4/28/22 23:37	TPH
Vinyl Chloride	ND	0.20		ND	0.51	4	4/28/22 23:37	TPH
m&p-Xylene	4.5	0.40		19	1.7	4	4/28/22 23:37	TPH
o-Xylene	0.84	0.20		3.6	0.87	4	4/28/22 23:37	TPH

Surrogates	% Recovery	% REC Limits	
4-Bromofluorobenzene (1)	105	70-130	4/29/22 0:17
4-Bromofluorobenzene (1)	109	70-130	4/28/22 23:37

ATTACHMENT B

CASE NARRATIVE & COC

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

PROJECT NARRATIVE

Project:
Pace Project No.:

Method:
Description:
Client:
Date:

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical

Phone: 413-525-2332
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www.pacelabs.com

http://www.pacelabs.com

DOC #378 REV3_11232021

CHAIN OF CUSTODY RECORD (AIR)

39 Spruce Street
East Longmeadow, MA 01028

Page 1 of 1

227 W

Company Name:	
Address:	AECOM, 1255 Broad St, Suite 201
Phone:	Clifton, NJ 07013 973-883-8500
Project Name:	
Project Location:	8 DRAYTON AVE, BAYSHORE, NY
Project Number:	60631073
Project Manager:	PAUL KARETH
Pace Quote Name/Number:	
Invoice Recipient:	PAUL.KARETH@AECOM.COM
Sampled By:	CRESPO JOHN, EWA PONCYLUSZ

Requested Turnaround Time
7-Day ☑ 10-Day ☐
Due Date:

Rush-Approval Required
1-Day ☐ 3-Day ☐
2-Day ☐ 4-Day ☐

Data Delivery
Format: PDF ☐ EXCEL ☐
Other:
CLP Like Data Pkg Required: ☐
Email To:
Fax To #:

ANALYSIS REQUESTED

Lab Use	Client Use	Collection Data		Duration	Flow Rate	Matrix	Volume	ANALYSIS REQUESTED				" Hg			Please fill out completely, sign, date and retain the yellow copy for your records	
Pace Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Total Minutes Sampled	m³/min L/min	Code	Liters m³	TO-15				Initial Pressure	Final Pressure	Lab Receipt Pressure	Summa Can ID	Flow Controller ID
	SV-1	4/21/22 10:52	4/22/22 10:52					V				-30	-8		1820	3502
	SV-2	11:14	4/22/22 11:14					V				-30	-17		2133	3712
	SV-2X	11:14	4/22/22 11:14					V				-30	-17		1700	3712
	ID-1	11:17	4/22/22 11:17					V				-30	0		1004	3711
	OD-1	11:30	4/22/22 11:30					V				-30	-7		2014	3261

Summa canisters and flow controllers must be returned within 15 days of receipt or rental fees will apply

For summa canister and flow controller information please refer to Con-Test's Air Media Agreement

WO#: 70212006

70212006

Comments:

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Matrix Codes:

SG = SOIL GAS
IA = INDOOR AIR
AMB = AMBIENT
SS = SUB SLAB
D = DUP
BL = BLANK
O = Other_____

Relinquished by: (signature)	Date/Time: 4/22/22	Detection Limit Requirements	Special Requirements
Received by: (signature)	Date/Time: 4/22 12:15	MA	☐ MA MCP Required
Relinquished by: (signature)	Date/Time:		MCP Certification Form Required
Received by: (signature)	Date/Time:		☐ CT RCP Required
Relinquished by: (signature)	Date/Time:	CT	RCP Certification Form Required
Received by: (signature)	Date/Time:		☐ Other
		Other:	

Pace Analytical

NELAC and AIHA-LAP, LLC Accredited

Project Entity
☐ Government ☐ Municipality ☐ MWRA ☐ WRTA
☐ Federal ☐ 21 J ☐ School
☐ City ☐ Brownfield ☐ MBTA

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

PCB ONLY
☐ Soxhlet
☐ Non Soxhlet

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Pace Analytical Services - Long Island, NY
575 Broad Hollow Road
Melville, NY 11747
ATTN: Sophia Sparkes

REPORT DATE: 5/2/2022

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 70212006

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 22D1784

The results of analyses performed on the following samples submitted to CON-TEST, a Pace Analytical Laboratory, are found in this report.

PROJECT LOCATION: 8 Drayton Ave., Bayshore, NY

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
SV-1	22D1784-01	Air		EPA TO-15	
SV-2	22D1784-02	Air		EPA TO-15	
SV-2X	22D1784-03	Air		EPA TO-15	
ID-1	22D1784-04	Air		EPA TO-15	
OD-1	22D1784-05	Air		EPA TO-15	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

EPA TO-15

Qualifications:

L-01

Laboratory fortified blank/laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.

Analyte & Samples(s) Qualified:

Bromoform
B307212-BS1

Bromomethane
B307212-BS1

L-05

Laboratory fortified blank/laboratory control sample recovery is outside of control limits. Reported value for this compound is likely to be biased on the high side.

Analyte & Samples(s) Qualified:

1,2-Dichloro-1,1,2,2-tetrafluoroeth:
B307212-BS1

Bromomethane
B307334-BS1

Trichlorofluoromethane (Freon 11)
B307212-BS1, B307334-BS1

V-05

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

Analyte & Samples(s) Qualified:

1,2-Dichloropropane
B307334-BLK1, B307334-BS1, S071037-CCV1

4-Methyl-2-pentanone (MIBK)
B307334-BLK1, B307334-BS1, S071037-CCV1

cis-1,3-Dichloropropene
B307334-BLK1, B307334-BS1, S071037-CCV1

Heptane
B307334-BLK1, B307334-BS1, S071037-CCV1

V-06

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.

Analyte & Samples(s) Qualified:

Bromomethane
B307334-BS1, S071037-CCV1

V-20

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:

Bromomethane
B307212-BS1, S070970-CCV1

Z-01

Sample had a final vacuum of zero. Flow controllers have been verified to be okay, RPD was <20%

Analyte & Samples(s) Qualified:

22D1784-05[OD-1]

Z-01a

Sample had a final vacuum of zero. Flow controllers was checked and the RPD was >20%

Analyte & Samples(s) Qualified:

22D1784-04[ID-1]

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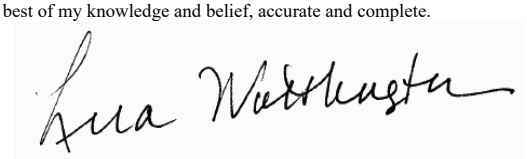
The results of analyses reported only relate to samples submitted to Con-Test, a Pace Analytical Laboratory, for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Lisa A. Worthington
Technical Representative

Attachment C

NYSDEC Soil Vapor/Indoor Air Matrices

Soil Vapor/Indoor Air Matrix A

May 2017

Analytes Assigned:
Trichloroethene (TCE), *cis*-1,2-Dichloroethene (*c*12-DCE), 1,1-Dichloroethene (11-DCE), Carbon Tetrachloride

	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m^3)		
SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m^3)	< 0.2	0.2 to < 1	1 and above
< 6	1. No further action	2. No Further Action	3. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
6 to < 60	4. No further action	5. MONITOR	6. MITIGATE
60 and above	7. MITIGATE	8. MITIGATE	9. MITIGATE

No further action: No additional actions are recommended to address human exposures.

Identify Source(s) and Resample or Mitigate: We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

Monitor: We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

Mitigate: We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

These general recommendations are made with consideration being given to the additional notes on page 2.

ADDITIONAL NOTES FOR MATRIX A

This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

[1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).

[2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.

[3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 0.20 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.

[4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.

[5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.

[6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.

Soil Vapor/Indoor Air Matrix B

May 2017

Analytes Assigned:
Tetrachloroethene (PCE), 1,1,1-Trichloroethane (111-TCA), Methylene Chloride

	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m^3)		
SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m^3)	< 3	3 to < 10	10 and above
< 100	1. No further action	2. No Further Action	3. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
100 to < 1,000	4. No further action	5. MONITOR	6. MITIGATE
1,000 and above	7. MITIGATE	8. MITIGATE	9. MITIGATE

No further action: No additional actions are recommended to address human exposures.

Identify Source(s) and Resample or Mitigate: We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

Monitor: We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

Mitigate: We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

These general recommendations are made with consideration being given to the additional notes on page 2.

ADDITIONAL NOTES FOR MATRIX B

This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

[1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).

[2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.

[3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 1 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.

[4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.

[5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.

[6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.

Soil Vapor/Indoor Air Matrix C

May 2017

Analytes Assigned:
Vinyl Chloride

	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m³)	
SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m³)	< 0.2	0.2 and above
< 6	1. No further action	2. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
6 to < 60	3. MONITOR	4. MITIGATE
60 and above	5. MITIGATE	6. MITIGATE

No further action: No additional actions are recommended to address human exposures.

Identify Source(s) and Resample or Mitigate: We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

Monitor: We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

Mitigate: We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

These general recommendations are made with consideration being given to the additional notes on page 2.

ADDITIONAL NOTES FOR MATRIX C

This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

[1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).

[2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.

[3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 0.20 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.

[4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.

[5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.

[6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.