MACTEC

engineering and constructing a better tomorrow

March 31, 2023

Division of Environmental Remediation
Remedial Bureau E, 12th Floor
New York State Department of
Environmental Conservation
625 Broadway
Albany, New York 12233-7016

Attention: Mr. James Kruegler, Project Manager

Subject: **Supplemental Pre-design Investigation Report**
Former Elite Vogue Dry Cleaners Site; Site Number 828164
MACTEC Engineering and Geology, P.C. Project No. 3617217532

Dear Mr. Kruegler:

MACTEC Engineering and Geology, P.C. (MACTEC), under contract to the New York State Department of Environmental Conservation (NYSDEC) is submitting this Supplemental Pre-design Investigation Report summarizing the results of field investigations completed at the Former Elite Vogue Dry Cleaners site (Site) in December 2022. The Site is listed as Class 2 hazardous waste Site No. 828164 in the Registry of Hazardous Waste Sites in New York State. This Report has been prepared in accordance with the NYSDEC requirements in Work Assignment (WA) No. D009809-27 (NYSDEC, 2021).

OBJECTIVES

The objective of the field work was to refine the understanding of the soil and groundwater contamination and soil characteristics to provide site specific information in support of the remedial design for the Site. The investigation tasks completed included field work to support an In-situ

MACTEC Engineering and Geology, P.C.
511 Congress Street • Portland, Maine 04101 • Phone: 207-775-5401 • Fax: 207-772-4762

Chemical Oxidation (ISCO). Field activities for the ISCO design included direct push soil sampling and groundwater monitoring well sampling to evaluate the total oxidant demand in overburden at the site, as well as existing soil and groundwater contaminant concentrations in the vicinity of the oxidant testing.

BACKGROUND

The Site is located at 527-533 East Main Street, in the downtown area of the City of Rochester, Monroe County, New York (Figure 1). The Site was occupied by a dry cleaner from 1936 through 2003 (NYSDEC, 2019a). The dry cleaner historically reportedly used both Stoddard solvent and tetrachloroethene (PCE) as cleaning solvents.

The Site is comprised of approximately 0.126 acres which is currently entirely covered by a single-story multi-use commercial building. It is bordered to the north by East Main Street, to the east by a paved parking lot, to the west by a commercial building and to the south by Haags Alley and a new apartment complex south of Haags Alley. The Site is currently occupied by a multi-occupant structure and is zoned City Center District, which allows for residential and commercial use.

Groundwater flow is generally to the east. Groundwater has historically been encountered at an average depth of approximately eight feet below ground surface (bgs). Soils consist of fill material, silty sand, with lesser amounts of gravel and clay. Bedrock was encountered at approximately 7 to 12 feet bgs (NYSDEC, 2019a).

The remedial investigation (RI) identified contaminants of concern: trichloroethene (TCE), PCE, 1,2,4-trimethylbenzene, cis-1,2-dichloroethene, and vinyl chloride. The media affected includes groundwater, soil, and soil vapor (NYSEC, 2019a). In addition, a petroleum light non-aqueous phase liquid (LNAPL) has historically been measured at monitoring well MW-12, located on the south side of the Site property.

An Interim Remedial Measure (IRM) was completed in 2013 to remove three underground storage tanks (USTs) within the building. Two of the tanks measured 3-ft by 6-ft each and were used to store Stoddard solvent and/or PCE; these were located adjacent to each other in the approximate location

of soil vapor extraction point SVE-1, shown on Figure 2. These USTs were observed to be in poor condition with holes and significant corrosion; approximately 8-cubic yards of contaminated soil was removed with the USTS. A soil sample collected from the bottom of the tank grave contained a concentration of PCE of 1,400 mg/Kg (Shaw, 2014). Before this UST pit was backfilled a passive soil vapor extraction system was installed, consisting of a 5-ft long 0.010-inch screen set to 7.5 ft below grade connected to a solid pipe that extends to a wind activated extraction fan on the roof of the building.

The third UST contained fuel oil and was located in the southwestern corner of the building; this tank was observed to be in "acceptable" condition, with no obvious holes or penetrations (Shaw, 2014).

A Record of Decision (ROD) issued in March 2019 outlined the approved remedial approach for the Site (NYSDEC, 2019b). The approved remedy includes the following remedial actions:

- Installation of a soil vapor extraction system in conjunction with existing site cover (pavement and concrete) to control soil vapors
- In-situ chemical oxidation to treat groundwater
- Institutional Controls in the form of an environmental easement for the controlled property
- Site Management Plan.

A WA Issuance / Notice to Proceed for the remedial design (D007619-49) was issued on April 19, 2019 (NYSDEC, 1999a). A WA Issuance / Notice to Proceed for the remedial design (D009809-27) was issued on March 16, 2021 to complete the scope of work previously started under contract D007619 (NYSDEC, 2021).

A Pre-Design Investigation (PDI) was completed as part of the WA in 2020 (MACTEC, 2020). The 2020 PDI consisted of ISCO Pre-Design Investigation, SVE Pilot Study, and Indoor Air Sampling. The 2020 PDI was conducted to collect data to support the remedial design at the site. The ISCO Pre-Design Investigation included a site survey to obtain a certified boundary survey, utility locate for new borings, direct push soil sampling combined with rock coring to further delineate the limits of soil and bedrock contamination, soil sample collection to evaluate permanganate natural oxygen demand (PNOD), rock chip sample collection to evaluate bedrock contamination, installation of eight, 4-inch inside diameter (ID) injection wells across the soil bedrock interface for the ISCO

saturated soil and groundwater treatment, installation of three, 2-inch ID downgradient monitoring wells across the soil bedrock interface to evaluate the downgradient groundwater plume and allow for future monitoring, hydraulic conductivity testing on four of the new injection wells, and groundwater sampling to evaluate the current extent of volatile organic compound (VOC) contamination.

The results of the 2020 PDI confirmed the primary VOCs at concentrations above New York State (NYS) groundwater standards (NYS, 1999) and soil cleanup objectives (NYS, 2006) included 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, PCE, cis-1,2-DCE, ethylbenzene and total xylene and identified contaminant concentrations in the proposed remediation area. The contaminant concentrations detected, combined with an evaluation of historic contaminant data, was used to estimate the contaminant mass in soil to be treated in the basis of design.

Although groundwater samples collected from 19 monitoring wells during the 2020 PDI showed that VOCs were detected above the class GA groundwater standards at each location sampled except for one well, results refined the understanding of the core of the groundwater plume to be treated. The 2020 PDI also confirmed groundwater flow direction was eastward in the vicinity of the site. In addition, the investigation found that the soil demand for permanganate was favorable for in-situ chemical oxidation with permanganate.

Based on discussions with the NYSDEC after the 2020 PDI and the desire to treat the petroleum contamination at the site, specifically the trimethylbenzenes, it was determined that a chemical oxidant other than permanganate should be used to treat remaining contamination. The objectives for the 2022 supplemental PDI was to evaluate the total oxidant demand at the site using persulfate, specifically Provect-Ox®, which is capable of oxidizing both the chlorinated VOCs and the trimethylbenzenes.

SCOPE OF WORK

The supplemental PDI was conducted in 2022 to collect data to support the remedial design. Sampling and monitoring locations are shown on Figure 2. The 2022 PDI included the following components:

- Two direct push soil borings to collect soil samples at two locations i.e., inside the building and outside the building.
    - At each boring location one composite soil sample was collected from 5-feet bgs to 10 feet bgs for total oxidant demand (TOD) testing and one discrete sample was collected for volatile organic compounds (VOCs) analysis.
- Two groundwater samples were collected from IW-3 and MW-03 to support evaluation for oxidant demand testing. The groundwater samples were submitted for laboratory analysis for select VOCs.

Field Operations

Field work was conducted as per the MACTEC work plan (MACTEC, 2022).

Access and Clearance. The Site was accessed from Richmond Street and Haags Alley. The exterior boring is located in paved parking areas that was accessed from Richmond Street. The interior boring was accessed from an overhead door that opens to Haags Alley. The NYSDEC secured access with owners of the Site and adjoining properties.

Dig-Safely New York (NY) was contacted by the drilling firm to mark underground utilities at the site.

Health and Safety. The fieldwork was conducted in Level D personal protection in accordance with the approved Site-specific Health and Safety Plan.

Decontamination. Disposable sampling equipment was used as much as practical to minimize decontamination time and water disposal. Non-disposable sampling equipment was decontaminated by:

- Washing the sample collection equipment with potable water and Alquinox, rinsing with potable water, rinsing with deionized water, and then allowing the equipment to air dry, or
- Steam cleaning the equipment and then allowing the equipment to air dry.

Investigation Derived Waste. Purge water generated during the investigation was treated in a granulated activated carbon tank and then allowed to infiltrate into the ground in the adjacent parking area.

Sample Collection

Soil Sampling. Soil sampling was completed using direct push drilling methods, and saturated soil samples were collected for TOD tests that will be used to calculate oxidant dosage for the remedial design. Soil samples were also analyzed for VOCs, which included the primary site related contaminants of concern (COCs) (i.e., 1,2,4-trimethylbenzene,1,3-5 trimethylbenzene, PCE, TCE, DCE, and VC.

A total of two borings were completed to bedrock/refusal, one outside the building in the adjacent parking lot of 15 Richmond Street (T-1), and one inside the building (T-2), anticipated to indicate areas of proposed oxidant injection with potential higher and lower contaminant concentrations, respectively. The locations of the borings are presented on Figure 2, and the field data records (FDRs) for the soil borings, including geological characterization are included in Attachment 1. One soil sample was collected from each boring for analysis of VOCs based on highest photo ionization detector (PID) readings and visual evidence of contamination. The VOC samples were submitted to Pace Analytical for analysis by Method 8260 standard list plus New York State CP-51 compounds. Additionally, one composite soil sample from five to approximately 10 feet bgs was collected in a 12-oz jar from each boring for TOD testing. TOD testing was conducted by ReSolution Partners, LLC in Madison Wisconsin, in partnership with Provectus Environmental Products. The TOD testing was conducted using Provect-Ox (iron activated persulfate powder) as the oxidizing agent.

Groundwater Sampling. Groundwater samples were collected following low flow sampling procedures from two of the existing injection/monitoring wells, IW-3 and MW-3, and sampled for VOCs, the primary site related COCs (i.e., 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, PCE,

TCE, DCE, and VC). The locations of the monitoring wells are shown on Figure 2. Groundwater sampling FDRs are presented in Attachment 1.

RESULTS

Analytical results were evaluated by a chemist following the guidelines for completing a Data Usability Summary Report (DUSR) (NYSDEC, 2010). The data was determined to meet the data quality objectives of the PDI and the data was considered usable as presented in this report. The DUSR is included in Attachment 2. The following sections discuss the analytical results of the soil and groundwater samples collected during the investigations.

Soil Results

Soils samples were submitted to Resolution Partners, LLC for TOD analysis using Provect-OX. The seven-day TOD for the samples ranged between 1.4 and 1.6 g/kg of soil. The TOD report is included in Attachment 3. VOC analytical results of the soil samples are presented in Table 1 and are consistent with previously collected soil samples from the Site.

Groundwater Results

Analytical results of the groundwater samples are presented in Table 2. Field measurements for pH, temperature, specific conductivity, oxidation reduction potential, dissolved oxygen, and turbidity were collected during sampling and are summarized in Table 3. Groundwater results are consistent with previously collected groundwater samples from these wells, with chlorinated and petroleum related compounds exceeding groundwater criteria and higher concentrations detected outside the footprint of the building and downgradient of the identified source area.

CONCLUSIONS AND RECOMMENDATIONS

Based on the information in this PDI, as well as previous data, a chemical oxidant injected into the groundwater should be able to target a majority of the contamination that is resulting in groundwater contamination. The TOD results indicate that the persulfate oxidant demand in site soils is relatively

low, which would result in a minimal amount of the oxidant being used up at the Site, however, contaminant rebound may happen if a lower dose is applied in heterogeneous subsurface. Typically, TOD result would be used in oxidant dosage design, but in this case it is recommended that oxidant dosage used in the basis of design be based on average stoichiometric demand of VOCs in groundwater and saturated soil matrix rather than TOD results, which appear to be lower than expected.

Sincerely,

MACTEC Engineering and Geology, P.C.

Charles Staples, PG
Technical Project Lead

Richard Egan, PE
Project Manager

Enclosures

Figure 1	Site Location
Figure 2	Investigation Locations
Table 1	Soil Analytical Results
Table 2	Groundwater Analytical Results
Table 3	Groundwater Field Parameters
Attachment 1	Field Data Records
Attachment 2	Data Usability Summary Report
Attachment 3	TOD Results

REFERENCES

MACTEC Engineering and Geology (MACTEC), 2022. Pre-Design Field Activities Plan, Former Elite Vogue Dry Cleaners Site. August 12, 2022.

MACTEC, 2020. Pre-design Investigation Report. Former Elite Vogue Dry Cleaners Site: 828164. Prepared for New York State Department of Environmental Conservation, Albany, New York. August 2020.

New York State (NYS), 2006. New York Codes, Rules, and Regulations, Title 6, Part 375 Environmental Remediation Programs. December 2006.

NYS, 1999. New York Codes, Rules, and Regulations, Title 6, Part 700-705 Water Quality Regulations Surface Water and Groundwater Classifications and Standards. Amended August 1999.

New York State Department of Environmental Conservation (NYSDEC), 2021. WA Issuance/Notice to Proceed to MACTEC/Engineering and Consulting. Dated March 16, 2021.

NYSDEC 2019a. WA Issuance/Notice to Proceed to MACTEC Engineering and Consulting. Dated April 19, 2019.

NYSDEC, 2019b. Record of Decision. Former Elite Vogue Dry Cleaners State Superfund Project, Rochester, Monroe County, Site No. 828164. March 2019.

NYSDEC, 2010. DER-10, Technical Guidance for Site Investigation and Remediation. May 3, 2010.

Shaw Environment & Infrastructure Engineering of New York, P.C., 2014. Draft Underground Storage Tank Removal Report, Former Elite Vogue Dry Cleaners. February 2014.

FIGURES

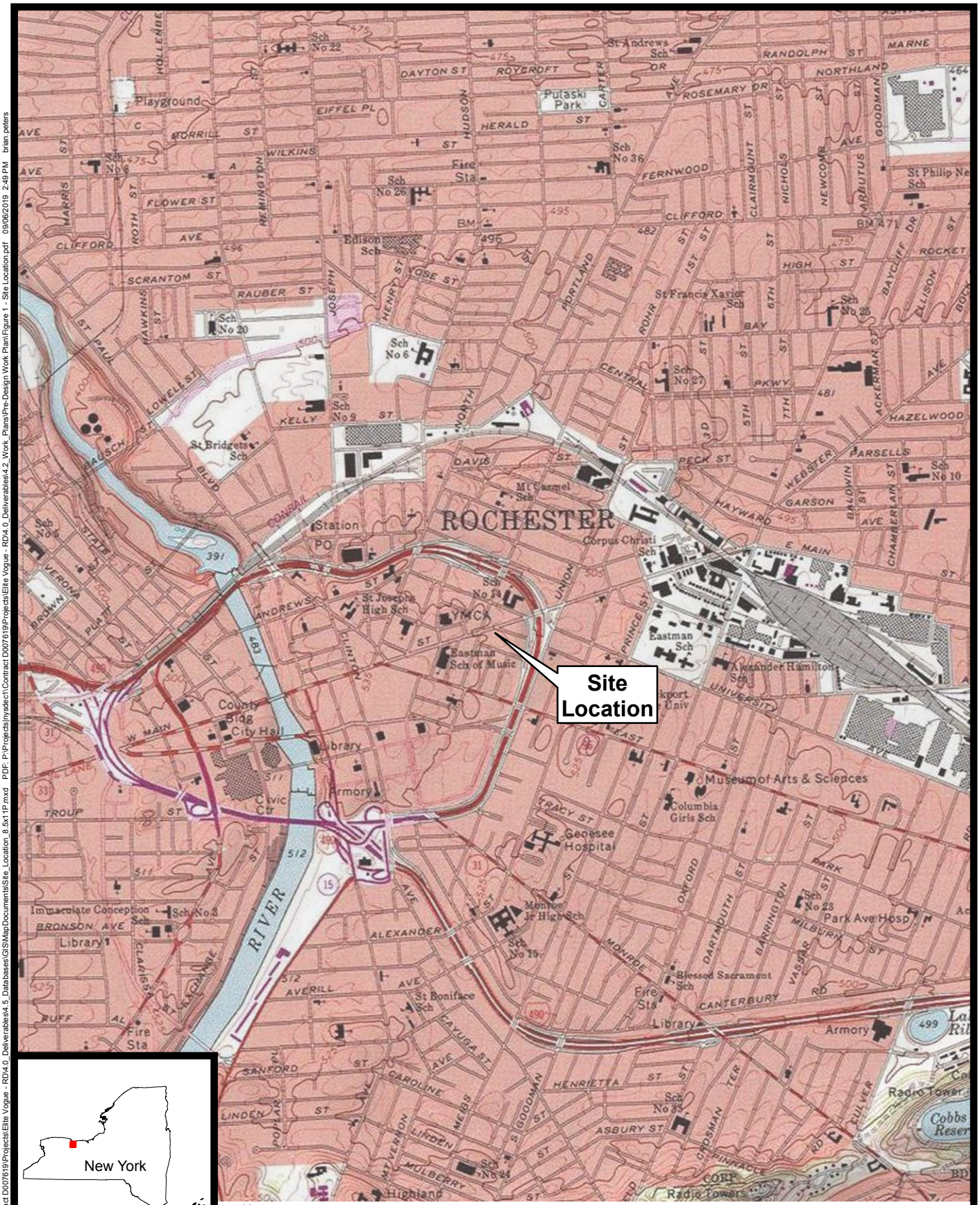


Image: Copyright:© 2013 National Geographic Society, i-cubed

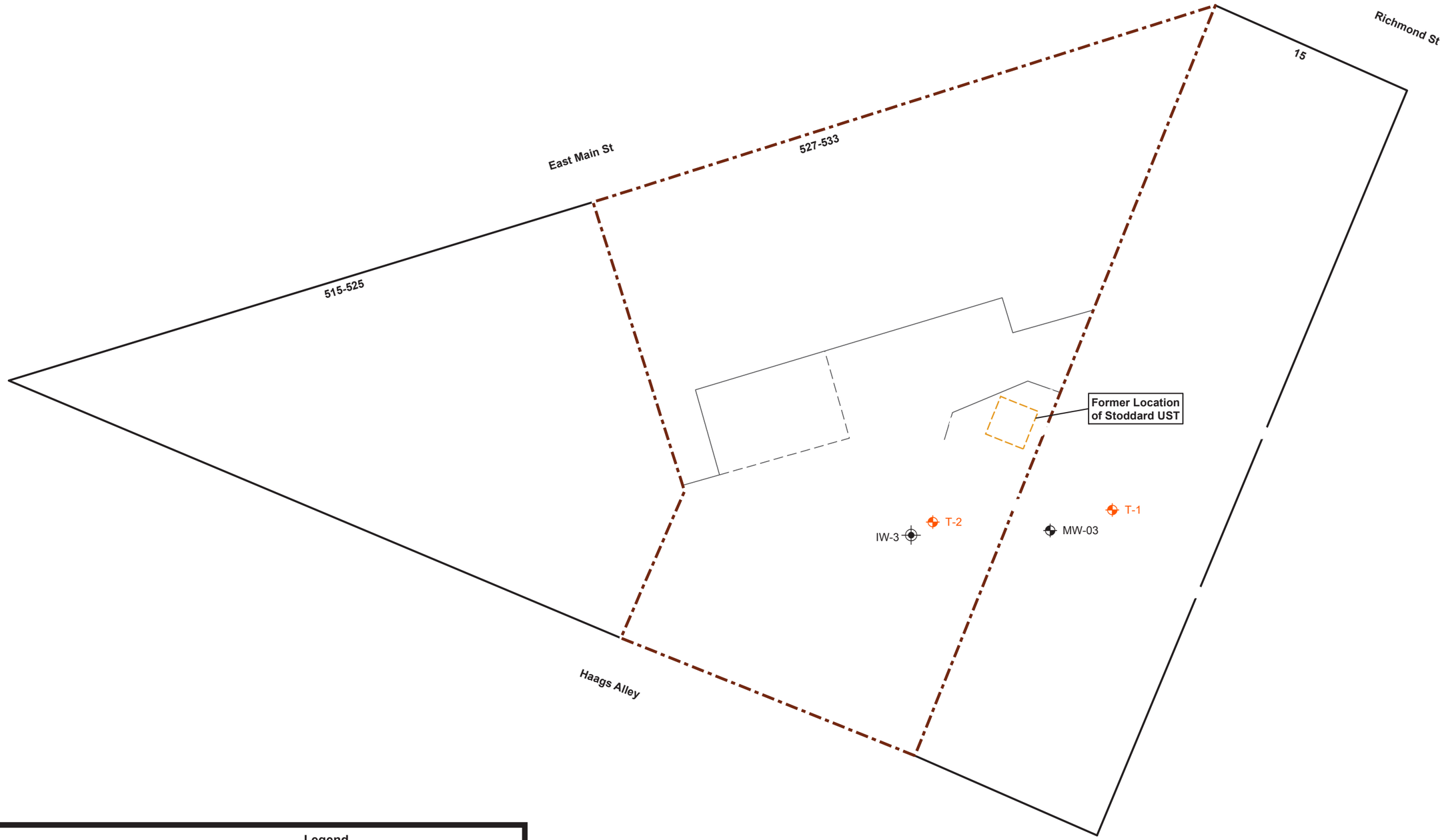
Prepared/Date: BRP 09/06/19
Checked/Date: JKR 09/06/19

NYSDEC Site # 828164
Former Elite Vogue Dry Cleaners
Rochester, New York

MACTEC

Site Location

Project 3617217532 Figure 1



Legend

- ISCO Injection Well
- Monitoring Well
- New Investigation
- Site Boundary
- Approximate Property Lines

Approximate Interior:

- Full Wall
- Partial Wall

N

0 5 10 15 Feet

NYSDEC Site # 828164
Former Elite Vogue Dry Cleaners
Rochester, New York

MACTEC

Investigation Locations

Project 3617217532 Figure 2

Prepared/Date: ADN 02-23-22
Checked/Date: CRS 03-26-20

TABLES

Table 1: Soil Sample Results

			Location	T-1		T-2	
			Depth (ft bgs)	8		9.8	
			Field Sample Date	12/8/2022		12/8/2022	
			Field Sample ID	828164-T1/ Outside		828164-T2/ Inside	
Parameter	**SCO for Protection of Groundwater**	**SCO for Commercial Use**		Result	Qualifier	Result	Qualifier
1,2,4-Trimethylbenzer	3.6	190		**550**		**8**	
1,3,5-Trimethylbenzer	8.4	190		**200**		**0.83**	
2-Butanone	0.12	500		230	U	**0.84**	J
4-iso-Propyltoluene	NS	NS		**39**		**0.46**	
Acetone	0.05	500		560	U	**1.1**	J+
Ethylbenzene	1	390		**6.2**	J	**0.071**	J
Isopropylbenzene	NS	NS		**13**		**0.25**	
Methyl cyclohexane	NS	NS		11	U	**0.066**	J
n-Butylbenzene	12	500		**34**		**0.7**	
Naphthalene	12	500		**16**	J	**0.12**	J
Propylbenzene	3.9	500		**41**		**0.76**	
sec-Butylbenzene	11	500		**32**		**0.57**	
tert-Butylbenzene	5.9	500		**5.6**	J	**0.088**	J
Tetrachloroethene	1.3	150		11	U	**0.093**	J
Xylene, o	1.6	500		**4.2**	J	0.24	U
Xylenes (m&p)	1.6	500		**33**		**0.13**	J
Percent Solids	NS	NS		**86.3**		**87.4**	

Notes:
Samples analyzed for volatile organic compounds by USEPA Method 8260
Only Detected Compounds shown; detections in bold.
Results in milligrams per liter
SCO is the NYS Part 375 Soil Cleanup Objectives
NS = no standard criteria
Gray highlighed results exceed SCO for protection of groundwater
Yellow highlighted results exceed SCO for commercial use
Qualifier:
J = analyte detected
J+ = analyte detected, value biased high
U = analyte not detected above reporting limit
ft bgs = feet below ground surface

Table 2: Groundwater Sample Results

		Location	IW-3		MW-03	
		Field Sample Date	12/7/2022		12/7/2022	
		Field Sample ID	828164-IW03012		828164-MW03014	
Parameter	**NYSDEC Class GA Groundwater Standards**	**NYSDEC Guidance Values**	Result	Qualifier	Result	Qualifier
1,1-Dichloroethene	5	NS	10	U	**10**	J
1,2,4-Trimethylbenzene	5	NS	**870**		**1900**	
1,3,5-Trimethylbenzene	5	NS	**99**		**150**	
4-iso-Propyltoluene	5	NS	**18**		**26**	J
Acetone	NS	50	**81**	J+	2500	U
Benzene	1	NS	**2.2**	J	50	U
Chloroform	7	NS	20	U	**42**	J
cis-1,2-Dichloroethene	5	NS	**190**		**18000**	J
Ethylbenzene	5	NS	**21**		**62**	
Isopropylbenzene	5	NS	**54**		**58**	
Methyl cyclohexane	NS	NS	**5**	J	50	U
n-Butylbenzene	5	NS	**25**		**25**	J
Naphthalene	NS	10	**41**	J+	**60**	J+
Propylbenzene	5	NS	**110**	J+	**110**	J+
sec-Butylbenzene	5	NS	**38**		**38**	J
tert-Butylbenzene	5	NS	**8.7**	J	**10**	J
Toluene	5	NS	**3.5**	J	**41**	J
trans-1,2-Dichloroethen	5	NS	**3.6**	J	**120**	
Vinyl chloride	2	NS	**150**	J+	**6400**	J+
Xylene, o	5	NS	**22**		**210**	
Xylenes (m&p)	5	NS	**47**		**230**	
Xylenes, Total	5	NS	**69**		**440**	

Notes:
Samples analyzed for volatile organic compounds by USEPA Method 8260
Only Detected Compounds shown; detections in bold.
Results in micrograms per liter
Standards and guidance values from NYSDEC Technical and Operational Guidance Series 1.1.1.
NS = no standard criteria
Highlighed results exceed standard
Yellow highlighted results exceed guidance value
Qualifier:
J = analyte detected
J+ = analyte detected, value biased high
U = analyte not detected above reporting limit

Table 3: Groundwater Purge Data

Well ID	Time	DTW (feet)	Purge Rate (mL/min)	Temperature; celcius	Specific Conductance (mS/cm)	pH (units)	Dissolved Oxygen (mg/L)	Turbidity (ntu)	REDOX (mv)
MW-03	11:46	8.56	100						
MW-03	11:51	8.65	100	12	1.36	6.7	0.9	19.4	-81.2
MW-03	11:56	8.70	100	12	1.37	6.7	0.5	16.5	-84.3
MW-03	12:01	8.82	100	12	1.36	6.7	0.4	12.5	-88.2
MW-03	12:06	8.91	100	12	1.36	6.7	0.4	12.0	-93.7
MW-03	12:11	8.95	100	12	1.35	6.7	0.3	10.0	-99.6
MW-03	12:16	8.97	100	12	1.34	6.7	0.3	9.6	-103
MW-03	12:21	8.99	100	12	1.35	6.7	0.2	8.6	-108
MW-03	12:26	9.00	100	12	1.35	6.7	0.2	8.3	-112
MW-03	**12:31**	**9.02**	**100**	**12**	**1.35**	**6.8**	**0.2**	**8.3**	**-114**
Sample Time: 12:31									

Well ID	Time	DTW (feet)	Purge Rate (mL/min)	Temperature; celcius	Specific Conductance (mS/cm)	pH (units)	Dissolved Oxygen (mg/L)	Turbidity (ntu)	REDOX (mv)
IW-3	14:25								
IW-3	14:30	10.76	100	16	1.05	6.6	0.2	1.9	-83.6
IW-3	14:35	10.85	100	17	1.07	6.6	0.1	2.3	-92.1
IW-3	14:40	10.88	100	17	1.06	6.6	0.1	1.8	-91.9
IW-3	14:45	10.88	100	17	1.07	6.6	0.1	1.8	-93.0
IW-3	14:50	10.89	100	17	1.07	6.6	0.1	2.1	-93.4
IW-3	14:55	10.91	100	17	1.07	6.6	0.1	2.1	-93.1
IW-3	15:00	10.92	100	17	1.07	6.6	0.1	1.9	-93.3
IW-3	**16:25**	**10.92**	**100**	**17**	**1.07**	**6.6**	**0.1**	**1.8**	**-93.5**
Sample Time: 16:25									

Notes:
Samples collected 12/7/22
DTW (FT) = Depth to water in feet below top of riser.
mL/min = milliliters per minute
mS/cm = milisemens per centimeter
mg/L = milligrams per liter
ntu = nephelometric units
REDOX = Reduction Oxidation Potential
mV = millivolts

ATTACHMENT 1

FIELD DATA RECORDS

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Elite Vogue			Boring ID: T-1 Outside
Project Location: Rochester NY			Page No. 1
Project No.:	Client: NYSDEC		of: 1
Boring Location: Parking lot	Refusal Depth: 10'	Total Depth: 10'	Bore Hole OD: 2"
Weather: Cloudy	Soil Drilled: 10'	Drilling Method: Direct Push	Casing Size: NA
Subcontractor: Wolhaupter	Rock Drilled: —	Protection Level: D	Sampler: 1.5"
Driller: Jeff Schweitzer	Date Started: 12/8/22	Date Completed: 12/8/22	Sampler ID/OD: —
Rig Type/Model: Geoprobe	Logged By: A. Nastas	Checked By: C. Stapler	
Reference Elevation: NA	Water Level: 6.5'	Time: NA	

Drilling Information					Sample Information					
Depth (feet bgs)	Sample Number	Penetration (ft) / Recovery (ft)	Blow Counts	N Value	PID Field Screening (ppm)	PID Head Space Reading (ppm)	Analytical Sample Depth (ft)	Sample Description and Classification	USCS Classification	Remarks
0'	1		✓	✓				0'-0.5': Asphalt 0.5-4: Brown to l. Brown, f-c sand w/ some silt, some gravel. Little Brick Debris (fill)	SP Fill	
4'	2		✓	✓		3500 @ 6'		4'-6': SAA, wet @ 6'5 6-8': Grey to brown, silt, some f-sand, tr. gravel.	ML / SM	
8'	3		✓	✓		1852K @ 8'	sample	8'-10': SAA	ML / SP	Sample ID 828164-T1/outside for VOCs
10'								Bottom of boring @ 10' Refusal		

NOTES: Sample collected for Total Oxidant Demand (TOC) from 5' to 10'. Composite.

SOIL BORING LOG

MACTEC
511 Congress Street, Portland Maine 04101

Project Name: Elite Vogue			Boring ID: T-2 inside
Project Location: Rochester NY			Page No. 1
Project No.:	Client: NYSDEC		of: 1
Boring Location: inside	Refusal Depth: 10'	Total Depth: 10'	Bore Hole OD: 2"
Weather: Cloudy	Soil Drilled: 10'	Drilling Method: Direct Push	Casing Size: NA
Subcontractor: ~~Geologic~~ Nathan 6	Rock Drilled: —	Protection Level: D	Sampler: 1.5"
Driller: Jeff Schweitzer	Date Started: 12/8/22	Date Completed: 12/8/22	Sampler ID/OD: —
Rig Type/Model: Geoprobe.	Logged By: A. Nailing	Checked By: C. Stryker	
Reference Elevation: NA	Water Level: —	Time: —	

Drilling Information					Sample Information					
Depth (feet bgs)	Sample Number	Penetration (ft) / Recovery (ft)	Blow Counts	N Value	PID Field Screening (ppm)	PID Head Space Reading (ppm)	Analytical Sample Depth (ft)	Sample Description and Classification	USCS Classification	Remarks
0	1		—			2564 @ 3'		0-0.2': Concrete slab 0.2-4ft: Brown, Silty ~~Sand~~ f-m Sand, some gravel, some brick debris (FILL)	SM Fill	
4'	2		—			42.9 @ 6'		4'-7': Brown, f-m sand, some silt, little gravel. Petroleum odor.	SP/SM	
8'	3		—			47.8 @ 9'8"	sample 1	7'-10': grey, Silt w/clay, some f-sand, tr. gravel Bottom of boring @ 10 feet. Refusal	ML/SM	Sample ID 828164-T2/~~out~~side for VOCs only
10'										

NOTES: Sample collected for Total Oxidant Demand from 5' to 10'. Composit sample

LOW FLOW GROUNDWATER SAMPLING RECORD

MACTEC

511 Congress Street
Suite 200
Portland, Maine 04101

PROJECT NAME: Elite Vogue	LOCATION ID: MW-03
PROJECT NUMBER:	DATE: 12/7/22
SAMPLE ID: 828164-MW03014	START TIME: 11:46
SAMPLE TIME: 12:37	END TIME: 12:37
SITE NAME/INSTALLATION: 828624	PAGE: 1 OF 1

WELL DIAMETER (IN.): ☐ 1 ☑ 2 ☐ 4 ☐ 6 ☐ 8 ☐ OTHER

TUBING ID (INCHES): ☒ 1/8 ☐ 1/4 ☐ 3/8 ☐ 1/2 ☐ 5/8 ☐ OTHER

MEASUREMENT POINT (MP): ☐ TOP OF RISER (TOR) ☒ TOP OF CASING (TOC) ☐ OTHER

WELL INTEGRITY	YES	NO	N/A
CAP			
CASING			
LOCKED			
COLLAR			

INITIAL DTW (BMP)	8.56 FT	FINAL DTW (BMP)	9.02 FT	PROT. CASING STICKUP (AGS)	0 FT	TOC/TOR DIFFERENCE	0.63 FT
WELL DEPTH (BMP)	18.7 FT	SCREEN INTERVAL	10 FT	PID AMBIENT AIR	NA PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	10.14 FT	DRAWDOWN VOLUME (final DTW- initial DTW X well diam. squared X 0.041)	0.07 GAL	PID WELL MOUTH	NA PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (water column X well diameter^2 X 0.041)	1.65 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	1.17 GAL	DRAWDOWN/ TOTAL PURGED	0.06	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C) ±3%	SP. CONDUCTANCE (mS/cm) ±3%	~~DISS. O_2 (mg/L)~~ pH ±10% or 3 values <0.5 mg/L	~~pH (units)~~ Diss O_2 ±0.1 (mg/L)	REDOX (mv) ±10 mv	TURBIDITY (ntu) ±10% or <10 ntu	PUMP INTAKE DEPTH (ft)	COMMENTS
11:46	BEGIN PURGING									
11:51	8.65	100	11.5	1.36	6.74	0.88	-81.2	19.4	13'	
11:56	8.70	100	11.6	1.37	6.70	0.46	-84.3	16.5		
12:01	8.82	100	11.7	1.36	6.69	0.37	-88.2	12.5		
12:06	8.91	100	11.7	1.36	6.70	0.36	-93.7	12.0		
12:11	8.95	↓	11.5	1.35	6.71	0.32	-99.6	10.0		
12:16	8.97		11.7	1.34	6.71	0.32	-103.3	9.63		
12:21	8.99		12.0	1.35	6.72	0.24	-107.8	8.60		
12:26	9.00		12.0	1.35	6.74	0.23	-112.4	8.34		
12:31	9.02	↓	10.8	1.35	6.76	0.21	-114.2	8.32	↓	

FINAL STABILIZED FIELD PARAMETERS (rounded to appropriate significant figures)

	12	1.35	6.8	0.2	-114	8.3

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 significant figure max (ex. 1.686 = 1.69)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- ☑ PERISTALTIC
- ☐ SUBMERSIBLE
- ☐ BLADDER
- ☐ WATTERA
- ☐ OTHER
- ☐ OTHER

DECON FLUIDS USED
- ☑ ALCONOX
- ☑ DEIONIZED WATER
- ☑ POTABLE WATER
- ☐ NITRIC ACID
- ☐ HEXANE
- ☐ METHANOL
- ☐ OTHER

TUBING/PUMP/BLADDER MATERIALS
- ☐ SILICON TUBING
- ☑ HDPE TUBING
- ☐ LDPE TUBING
- ☐ OTHER
- ☐ OTHER

- ☐ S. STEEL PUMP MATERIAL
- ☐ PVC PUMP MATERIAL
- ☐ GEOPROBE SCREEN
- ☐ OTHER
- ☐ OTHER
- ☐ OTHER

EQUIPMENT USED
- ☑ WL METER
- ☐ PID
- ☐ WQ METER
- ☑ TURB. METER
- ☑ PUMP
- ☐ OTHER
- ☐ FILTERS NO. ___ TYPE ___

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	ANALYTE LIST	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	QC COLLECTED
☑	VOC	8260		N			
☐							
☐							
☐							
☐							
☐							
☐							

PURGE OBSERVATIONS

PURGE WATER CONTAINERIZED: ☑ YES ☐ NO

NUMBER OF GALLONS GENERATED: 1.17

NO-PURGE METHOD UTILIZED: ☐ YES ☐ NO

NOTES

Sampler Signature: Anthony Nadas Print Name: Anthony Nadas

Checked By: C. Stapler Date: 2/24/23

DEVIATIONS FROM THE WORK PLAN

REV. 3/29/2019

LOW FLOW GROUNDWATER SAMPLING RECORD

MACTEC

511 Congress Street
Suite 200
Portland, Maine 04101

PROJECT NAME	Elite Vogue
PROJECT NUMBER	3617217532
SAMPLE ID	828164-IW03012
SAMPLE TIME	16:25
LOCATION ID	IW-3
DATE	12/7/22
START TIME	14:25
END TIME	16:25
SITE NAME/INSTALLATION	828164
PAGE	1 OF 1

WELL DIAMETER (IN.): ☐ 1 ☐ 2 ☑ 4 ☐ 6 ☐ 8 ☐ OTHER

TUBING ID (INCHES): ☑ 1/8 ☐ 1/4 ☐ 3/8 ☐ 1/2 ☐ 5/8 ☐ OTHER

MEASUREMENT POINT (MP): ☐ TOP OF RISER (TOR) ☐ TOP OF CASING (TOC) ☐ OTHER

WELL INTEGRITY

	YES	NO	N/A
CAP	✓		
CASING	✓		
LOCKED		✓	
COLLAR	✓		

INITIAL DTW (BMP)	10.65 FT	FINAL DTW (BMP)	10.92 FT	PROT. CASING STICKUP (AGS)	0 FT	TOC/TOR DIFFERENCE	0.28 FT
WELL DEPTH (BMP)	13.95 FT	SCREEN INTERVAL	10' FT	PID AMBIENT AIR	NA PPM	REFILL TIMER SETTING	NA SEC
WATER COLUMN	3.3 FT	DRAWDOWN VOLUME (final DTW- initial DTW X well diam. squared X 0.041)	0.18 GAL	PID WELL MOUTH	NA PPM	DISCHARGE TIMER SETTING	NA SEC
CALCULATED GAL/VOL (water column X well diameter² X 0.041)	2.15 GAL	TOTAL VOL. PURGED (mL per minute X total minutes X 0.00026 gal/mL)	3.12 GAL	DRAWDOWN/ TOTAL PURGED	0.06	PRESSURE TO PUMP	NA PSI

FIELD PARAMETERS WITH PROGRAM STABILIZATION CRITERIA

TIME	DTW (FT)	PURGE RATE (mL/min)	TEMP. (°C) ±3%	SP. CONDUCTANCE (mS/cm) ±3%	PH ~~DISS. O₂ (mg/L)~~ ±10% or 3 values <0.5 mg/L	D;5502 ~~pH (units)~~ ±0.1	REDOX (mv) ±10 mv	TURBIDITY (ntu) ±10% or <10 ntu	PUMP INTAKE DEPTH (ft)	COMMENTS
14:25	BEGIN PURGING									
14:30	10.76	100	16.2	1.05	6.61	0.24	-83.6	1.90	13'	
14:35	10.85		16.7	1.07	6.60	0.13	-92.1	2.29		
14:40	10.88		16.6	1.06	6.61	0.09	-91.9	1.79		
14:45	10.88		16.6	1.07	6.60	0.07	-93.0	1.79		
14:50	10.89		16.8	1.07	6.60	0.06	-93.4	2.10		
14:55	10.91		16.8	1.07	6.60	0.06	-93.1	2.06		
15:00	10.92		16.9	1.07	6.61	0.06	-93.3	1.86		
16:25	10.92		16.9	1.07	6.61	0.06	-93.5	1.82		
						0.1	-94			

FINAL STABILIZED FIELD PARAMETERS (rounded to appropriate significant figures)

17	1.07	6.6	0.1	-94	1.9	

TEMP.: nearest degree (ex. 10.1 = 10)
COND.: 3 significant figure max (ex. 1.686 = 1.69)
pH: nearest tenth (ex. 5.53 = 5.5)
DO: nearest tenth (ex. 3.51 = 3.5)
TURB: 3 SF max, nearest tenth (6.19 = 6.2, 101 = 101)
ORP: 2 SF (44.1 = 44, 191 = 190)

EQUIPMENT DOCUMENTATION

TYPE OF PUMP
- ☑ PERISTALTIC
- ☐ SUBMERSIBLE
- ☐ BLADDER
- ☐ WATTERA
- ☐ OTHER
- ☐ OTHER

~~DECON~~ FLUIDS USED
- ☑ ALCONOX
- ☑ DEIONIZED WATER
- ☑ POTABLE WATER
- ☐ NITRIC ACID
- ☐ HEXANE
- ☐ METHANOL
- ☐ OTHER

TUBING/PUMP/BLADDER MATERIALS
- ☐ SILICON TUBING
- ☑ HDPE TUBING
- ☐ LDPE TUBING
- ☐ OTHER
- ☐ OTHER

- ☐ S. STEEL PUMP MATERIAL
- ☐ PVC PUMP MATERIAL
- ☐ GEOPROBE SCREEN
- ☐ OTHER
- ☐ OTHER
- ☐ OTHER

EQUIPMENT USED
- ☑ WL METER
- ☑ PID
- ☐ WQ METER
- ☑ TURB. METER
- ☑ PUMP
- ☐ OTHER
- ☐ FILTERS NO. TYPE

ANALYTICAL PARAMETERS

	PARAMETER	METHOD NUMBER	ANALYTE LIST	FIELD FILTERED	PRESERVATION METHOD	VOLUME REQUIRED	QC COLLECTED
X	VOC	8260		N			

PURGE OBSERVATIONS

	YES	NO
PURGE WATER CONTAINERIZED	☑	☐
NO-PURGE METHOD UTILIZED	☐	☐

NUMBER OF GALLONS GENERATED: 3.12

NOTES

Sampler Signature: Anthony Nicolas Print Name: Anthony Nicolas

Checked By: C. Stapler Date: 2/24/23

DEVIATIONS FROM THE WORK PLAN

REV. 3/29/2019

ATTACHMENT 2

DATA USABILITY SUMMARY REPORT

DATA USABILITY SUMMARY REPORT
DECEMBER 2022 SAMPLING EVENT
ELITE VOGUE DRY CLEANERS
ROCHESTER, NEW YORK

1.0 INTRODUCTION

Groundwater and soil samples were collected at the Elite Vogue Site in December 2022 and submitted to Pace Con-Test located in Longmeadow, MA for analysis. Samples were analyzed by one or more of the following United States Environmental Protection Agency (USEPA) methods:

- Volatile Organic Compounds (VOCs) by Method 8260D

A Data Usability Summary Report (DUSR) review was completed based on the New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation guidance (NYSDEC, 2010). Sample event information included in this DUSR is presented in the following tables:

- Table 1 – Summary of Samples and Analytical Methods
- Table 2 – Summary of Analytical Results
- Table 3 – Qualification Action Summary

A summary of table notes applicable to Tables 1, 2, and 3 is presented just before Table 1.

Laboratory deliverables included:

- Category B deliverables as defined in the NYSDEC Analytical Services Protocols (NYSDEC, 2005).

The DUSR review included the following evaluations as applicable. A table of the project quality control limits is presented in Attachment A. DUSR review checklists and applicable laboratory QC summary forms are included in Attachment B to document QC outliers associated with qualification actions.

- Lab Report Narrative Review
- Data Package Completeness and COC records (Table 1 verification)
- Sample Preservation and Holding Times
- Instrument Calibration (report narrative/lab-qualifier evaluation)
- QC Blanks
- Laboratory Control Samples (LCS)
- Matrix Spike/Matrix Spike Duplicates (MS/MSD)
- Surrogate Spikes (if applicable)
- Internal Standards (if applicable)
- Field Duplicates
- Target Analyte Identification and Quantitation

- Raw Data (chromatograms), Calculation Checks and Transcription Verifications
- Reporting Limits
- Electronic Data Qualification and Verification

Data qualification actions were based on general procedures identified in the USEPA validation guidelines (USEPA, 2014).The following laboratory or data review qualifiers are used in the final data presentation:

U = target analyte is not detected above the reported detection limit
U = target analyte is not detected above the reported detection limit, detection limit is estimated
J+ = concentration is estimated, high bias
J = concentration is estimated

Results are interpreted to be usable as reported by the laboratory or as qualified in the following sections.

2.0 POTENTIAL DATA LIMITATIONS

Based on the DUSR review, the majority of data meet the quality objectives; however, the following potential limitations were identified:

VOCs by Method 8260D

The continuing calibration verification (CCV) associated with samples 828164-MW03014 and 828164-IW03012 had percent differences for naphthalene, acetone, and vinyl chloride that were greater than the method limit of 20 percent. Results for the affected analytes in the associated samples were qualified as estimated (J) and are listed in Table 3 with reason code CCV%D.

The continuing calibration verification (CCV) associated with samples 828164-MW03014 and 828164-IW03012 had percent differences for 1,1,2-trichloro-1,2,2-trifluoroethane, bromomethane, and methylene chloride that were greater than the method limit of 20 percent and were biased low. Non-detect results for the affected analytes in the associated samples were qualified as estimated (UJ) and are listed in Table 3 with reason code CCV%D.

The LCS and LCSD associated with samples 828164-MW03014 and 828164-IW03012 had percent recoveries for naphthalene, propylbenzene, vinyl chloride, and acetone that were greater than QC limits. Results for the affected analytes in the associated samples were qualified as estimated with high bias (J+) and are listed in Table 3 with reason code LCSH.

The lab case narrative noted that the concentrations of cis-1,2-dichloroethene and vinyl chloride in sample 828164-MW03014 were estimated results due to concentrations exceeding the calibration curve. Based on professional judgement, results for the affected samples were qualified as estimated (J) and are listed in Table 3 with reason code E.

The continuing calibration verification (CCV) associated with samples 828164-T1/ Outside and 828164-T2/ Inside had percent differences for acetone and 2-butanone that were greater than the method limit of 20 percent. Results for the affected analytes in the sample 828164-T2/ Inside were qualified as estimated (J) and are listed in Table 3 with reason code CCV%D.

The continuing calibration verification (CCV) associated with samples 828164-T1/ Outside and 828164-T2/ Inside had percent differences for 1,1-dichloroethene and methylene chloride that were greater than the method limit of 20 percent biased low. Non-detect results for the affected analytes in the associated samples were qualified as estimated (UJ) and are listed in Table 3 with reason code CCV%D.

The LCS and LCSD associated with samples 828164-T1/ Outside and 828164-T2/ Inside had a percent recovery for acetone that was greater than QC limits. Result for the acetone in sample 828164-T2/ Inside was qualified as estimated with high bias (J+) and are listed in Table 3 with reason code LCSH.

All samples were analyzed at various dilutions. Elevated reporting limits are reported in Table 2.

3.0 ADDITIONAL QC EXCEEDANCES AND OBSERVATIONS

There were no additional observations or quality control exceedances not specifically addressed above (Section 2.0).

Reference:

New York State Department of Environmental Conservation (NYSDEC), 2005. "Analytical Services Protocols"; June 2005.

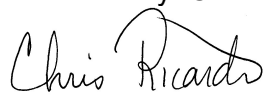
NYSDEC, 2010. "Technical Guidance for Site Investigation and Remediation-Appendix 2B"; DER-10; Division of Environmental Remediation; May 2010.

USEPA, 2014. "Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B"; USEPA Region II; HW-24; Revision 4; September 2014.

Data Validator: Casey Cormier

March 23, 2023

Reviewed by: Chris Ricardi, NRCC-EAC



March 28, 2023

Standard Table Notes:

Sample Type (QC Code)

FS – field sample

FD – field duplicate

TB – trip blank

EB – equipment blank

FB – field blank

Matrix

GW – ground water

BW – blank water

TW – tap water

SV – soil vapor

SED - sediment

Units

mg/L – milligrams per liter

ng/L – nanograms per liter

µg/L – micrograms per liter

mg/kg – milligrams per kilogram

µg/kg – micrograms per kilogram

µg/m^3 – micrograms per cubic meter

Qualifiers

U – not detected above quantitation limit

J – estimated quantity

J+ - estimated quantity, biased high

J- - estimated quantity, biased low

R – data unusable

Fraction

T – total

D – dissolved

N – normal

Qualification Reason Codes

BL1 – method blank qualifier

BL2 – field or trip blank qualifier

CCV – continuing calibration verification recovery outside limits

CCV%D – continuing calibration verification percent difference exceeds goal

CCVRRF – continuing calibration relative response factor low

CI – chromatographic interference present

DCPD – dual column percent difference exceeds limit

E – result exceeds calibration range

FD – field duplicate precision goal exceeded

FP – false positive interference

HT – holding time for prep or analysis exceeded

HTG – holding time for prep or analysis grossly exceeded

ICV – initial calibration verification recovery outside limit

ICVRRF – initial calibration verification relative response factor low

ICVRSD – initial calibration verification % relative standard deviation exceeds goal

ISH – internal standard response greater than limit

ISL – internal standard response less than limit

LCSH – laboratory control sample recovery high

LCSL – laboratory control sample recovery low

LCSRPD – laboratory control sample/duplicate relative % difference precision goal exceeded

LD – lab duplicate precision goal exceeded

MSH – matrix spike and/or MS duplicate recovery high

MSL – matrix spike and/or MS duplicate recovery low

MSRPD – matrix spike/duplicate relative % difference precision goal exceeded

N – analyte identification is not certain

PEM – performance evaluation mixture exceeds limit

PM – sample percent moisture exceeds EPA guideline

SD – serial dilution result exceeds percent difference limit

SP – sample preservation/collection does not meet method requirement

SSH – surrogate recovery high

SSL – surrogate recovery low

TD – dissolved concentration exceeds total

Table 1 – Summary of Samples and Analytical Methods

DATA USABILITY SUMMARY REPORT
DECEMBER 2022 SAMPLING EVENT
ELITE VOGUE DRY CLEANERS
ROCHESTER, NEW YORK

					Lab Id	PACE
					Method Class	VOCs
					Analysis Method	SW8260
					Fraction	N
Lab SDG	**Media**	**Location**	**Field Sample ID**	**Sample Date**	**Qc Code**	Parameters
22L1356	GW	IW-3	828164-IW03012	12/7/2022	FS	61
22L1356	GW	MW-03	828164-MW03014	12/7/2022	FS	61
22L1356	BS	QC	Blank Soil	12/7/2022	TB	60
22L1356	BW	QC	Trip Blank/Water	12/7/2022	TB	61
22L1356	SOIL	T-1	828164-T1/ Outside	12/8/2022	FS	60
22L1356	SOIL	T-2	828164-T2/ Inside	12/8/2022	FS	60

Created by: KLD 3/23/23
Checked by: CLC 3/23/23

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
DECEMBER 2022 SAMPLING EVENT
ELITE VOGUE DRY CLEANERS
ROCHESTER, NEW YORK

			Location	IW-3		MW-03		QC	
			Lab Sample Delivery Group	22L1356		22L1356		22L1356	
			Field Sample Date	12/7/2022		12/7/2022		12/7/2022	
			Field Sample ID	828164-IW03012		828164-MW03014		Trip Blank/Water	
			Qc Code	FS		FS		TB	
Method Class	**Method**	**Fraction**	**Parameter**	**Units**	Result Qualifier		Result Qualifier		Result Qualifier
VOCs	SW8260	N	1,1,1-Trichloroethane	UG/L	10 U		50 U		1 U
VOCs	SW8260	N	1,1,2,2-Tetrachloroethane	UG/L	5 U		25 U		0.5 U
VOCs	SW8260	N	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	UG/L	20 UJ		100 UJ		2 U
VOCs	SW8260	N	1,1,2-Trichloroethane	UG/L	10 U		50 U		1 U
VOCs	SW8260	N	1,1-Dichloroethane	UG/L	10 U		50 U		1 U
VOCs	SW8260	N	1,1-Dichloroethene	UG/L	10 U		10 J		1 U
VOCs	SW8260	N	1,2,3-Trichlorobenzene	UG/L	50 U		250 U		5 U
VOCs	SW8260	N	1,2,4-Trichlorobenzene	UG/L	10 U		50 U		1 U
VOCs	SW8260	N	1,2,4-Trimethylbenzene	UG/L	870		1,900		1 U
VOCs	SW8260	N	1,2-Dibromo-3-chloropropane	UG/L	50 U		250 U		5 U
VOCs	SW8260	N	1,2-Dibromoethane	UG/L	5 U		25 U		0.5 U
VOCs	SW8260	N	1,2-Dichlorobenzene	UG/L	10 U		50 U		1 U
VOCs	SW8260	N	1,2-Dichloroethane	UG/L	10 U		50 U		1 U
VOCs	SW8260	N	1,2-Dichloropropane	UG/L	10 U		50 U		1 U
VOCs	SW8260	N	1,3,5-Trimethylbenzene	UG/L	99		150		1 U
VOCs	SW8260	N	1,3-Dichlorobenzene	UG/L	10 U		50 U		1 U
VOCs	SW8260	N	1,4-Dichlorobenzene	UG/L	10 U		50 U		1 U
VOCs	SW8260	N	1,4-Dioxane	UG/L	500 U		2,500 U		50 U
VOCs	SW8260	N	2-Butanone	UG/L	200 U		1,000 U		20 U
VOCs	SW8260	N	2-Hexanone	UG/L	100 U		500 U		10 U
VOCs	SW8260	N	4-iso-Propyltoluene	UG/L	18		26 J		1 U
VOCs	SW8260	N	4-Methyl-2-pentanone	UG/L	100 U		500 U		10 U
VOCs	SW8260	N	Acetic acid, methyl ester	UG/L	10 U		50 U		1 U
VOCs	SW8260	N	Acetone	UG/L	81 J+		2,500 U		50 U
VOCs	SW8260	N	Benzene	UG/L	2.2 J		50 U		1 U
VOCs	SW8260	N	Bromochloromethane	UG/L	10 U		50 U		1 U
VOCs	SW8260	N	Bromodichloromethane	UG/L	5 U		25 U		0.5 U
VOCs	SW8260	N	Bromoform	UG/L	20 U		100 U		2 U
VOCs	SW8260	N	Bromomethane	UG/L	20 UJ		100 UJ		2 U
VOCs	SW8260	N	Carbon disulfide	UG/L	50 U		250 U		5 U
VOCs	SW8260	N	Carbon tetrachloride	UG/L	50 U		250 U		5 U
VOCs	SW8260	N	Chlorobenzene	UG/L	10 U		50 U		1 U
VOCs	SW8260	N	Chloroethane	UG/L	20 U		100 U		2 U
VOCs	SW8260	N	Chloroform	UG/L	20 U		42 J		0.92 J
VOCs	SW8260	N	Chloromethane	UG/L	20 U		100 U		2 U
VOCs	SW8260	N	cis-1,2-Dichloroethene	UG/L	190		18,000 J		1 U
VOCs	SW8260	N	cis-1,3-Dichloropropene	UG/L	5 U		25 U		0.5 U
VOCs	SW8260	N	Cyclohexane	UG/L	50 U		250 U		5 U
VOCs	SW8260	N	Dibromochloromethane	UG/L	5 U		25 U		0.5 U
VOCs	SW8260	N	Dichlorodifluoromethane	UG/L	20 U		100 U		2 U
VOCs	SW8260	N	Ethylbenzene	UG/L	21		62		1 U
VOCs	SW8260	N	Isopropylbenzene	UG/L	54		58		1 U
VOCs	SW8260	N	Methyl cyclohexane	UG/L	5 J		50 U		1 U
VOCs	SW8260	N	Methyl Tertbutyl Ether	UG/L	10 U		50 U		1 U
VOCs	SW8260	N	Methylene chloride	UG/L	50 UJ		250 UJ		5 U
VOCs	SW8260	N	n-Butylbenzene	UG/L	25		25 J		1 U

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
DECEMBER 2022 SAMPLING EVENT
ELITE VOGUE DRY CLEANERS
ROCHESTER, NEW YORK

				Location	IW-3		MW-03		QC	
				Lab Sample Delivery Group	22L1356		22L1356		22L1356	
				Field Sample Date	12/7/2022		12/7/2022		12/7/2022	
				Field Sample ID	828164-IW03012		828164-MW03014		Trip Blank/Water	
				Qc Code	FS		FS		TB	
Method Class	Method	Fraction	Parameter	Units	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	SW8260	N	Naphthalene	UG/L	41	J+	60	J+	2	U
VOCs	SW8260	N	Propylbenzene	UG/L	110	J+	110	J+	1	U
VOCs	SW8260	N	sec-Butylbenzene	UG/L	38		38	J	1	U
VOCs	SW8260	N	Styrene	UG/L	10	U	50	U	1	U
VOCs	SW8260	N	tert-Butylbenzene	UG/L	8.7	J	10	J	1	U
VOCs	SW8260	N	Tetrachloroethene	UG/L	10	U	50	U	1	U
VOCs	SW8260	N	Toluene	UG/L	3.5	J	41	J	1	U
VOCs	SW8260	N	trans-1,2-Dichloroethene	UG/L	3.6	J	120		1	U
VOCs	SW8260	N	trans-1,3-Dichloropropene	UG/L	5	U	25	U	0.5	U
VOCs	SW8260	N	Trichloroethene	UG/L	10	U	50	U	1	U
VOCs	SW8260	N	Trichlorofluoromethane	UG/L	20	U	100	U	2	U
VOCs	SW8260	N	Vinyl chloride	UG/L	150	J+	6,400	J+	2	U
VOCs	SW8260	N	Xylene, o	UG/L	22		210		1	U
VOCs	SW8260	N	Xylenes (m&p)	UG/L	47		230		2	U
VOCs	SW8260	N	Xylenes, Total	UG/L	69		440		1	U
VOCs	SW8260	N	1,1,1-Trichloroethane	MG/KG						
VOCs	SW8260	N	1,1,2,2-Tetrachloroethane	MG/KG						
VOCs	SW8260	N	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	MG/KG						
VOCs	SW8260	N	1,1,2-Trichloroethane	MG/KG						
VOCs	SW8260	N	1,1-Dichloroethane	MG/KG						
VOCs	SW8260	N	1,1-Dichloroethene	MG/KG						
VOCs	SW8260	N	1,2,3-Trichlorobenzene	MG/KG						
VOCs	SW8260	N	1,2,4-Trichlorobenzene	MG/KG						
VOCs	SW8260	N	1,2,4-Trimethylbenzene	MG/KG						
VOCs	SW8260	N	1,2-Dibromo-3-chloropropane	MG/KG						
VOCs	SW8260	N	1,2-Dibromoethane	MG/KG						
VOCs	SW8260	N	1,2-Dichlorobenzene	MG/KG						
VOCs	SW8260	N	1,2-Dichloroethane	MG/KG						
VOCs	SW8260	N	1,2-Dichloropropane	MG/KG						
VOCs	SW8260	N	1,3,5-Trimethylbenzene	MG/KG						
VOCs	SW8260	N	1,3-Dichlorobenzene	MG/KG						
VOCs	SW8260	N	1,4-Dichlorobenzene	MG/KG						
VOCs	SW8260	N	1,4-Dioxane	MG/KG						
VOCs	SW8260	N	2-Butanone	MG/KG						
VOCs	SW8260	N	2-Hexanone	MG/KG						
VOCs	SW8260	N	4-iso-Propyltoluene	MG/KG						
VOCs	SW8260	N	4-Methyl-2-pentanone	MG/KG						
VOCs	SW8260	N	Acetic acid, methyl ester	MG/KG						
VOCs	SW8260	N	Acetone	MG/KG						
VOCs	SW8260	N	Benzene	MG/KG						
VOCs	SW8260	N	Bromochloromethane	MG/KG						
VOCs	SW8260	N	Bromodichloromethane	MG/KG						
VOCs	SW8260	N	Bromoform	MG/KG						
VOCs	SW8260	N	Bromomethane	MG/KG						
VOCs	SW8260	N	Carbon disulfide	MG/KG						
VOCs	SW8260	N	Carbon tetrachloride	MG/KG						

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
DECEMBER 2022 SAMPLING EVENT
ELITE VOGUE DRY CLEANERS
ROCHESTER, NEW YORK

				Location	IW-3		MW-03		QC	
				Lab Sample Delivery Group	22L1356		22L1356		22L1356	
				Field Sample Date	12/7/2022		12/7/2022		12/7/2022	
				Field Sample ID	828164-IW03012		828164-MW03014		Trip Blank/Water	
				Qc Code	FS		FS		TB	
Method Class	**Method**	**Fraction**	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	SW8260	N	Chlorobenzene	MG/KG						
VOCs	SW8260	N	Chloroethane	MG/KG						
VOCs	SW8260	N	Chloroform	MG/KG						
VOCs	SW8260	N	Chloromethane	MG/KG						
VOCs	SW8260	N	cis-1,2-Dichloroethene	MG/KG						
VOCs	SW8260	N	cis-1,3-Dichloropropene	MG/KG						
VOCs	SW8260	N	Cyclohexane	MG/KG						
VOCs	SW8260	N	Dibromochloromethane	MG/KG						
VOCs	SW8260	N	Dichlorodifluoromethane	MG/KG						
VOCs	SW8260	N	Ethylbenzene	MG/KG						
VOCs	SW8260	N	Isopropylbenzene	MG/KG						
VOCs	SW8260	N	Methyl cyclohexane	MG/KG						
VOCs	SW8260	N	Methyl Tertbutyl Ether	MG/KG						
VOCs	SW8260	N	Methylene chloride	MG/KG						
VOCs	SW8260	N	n-Butylbenzene	MG/KG						
VOCs	SW8260	N	Naphthalene	MG/KG						
VOCs	SW8260	N	Propylbenzene	MG/KG						
VOCs	SW8260	N	sec-Butylbenzene	MG/KG						
VOCs	SW8260	N	Styrene	MG/KG						
VOCs	SW8260	N	tert-Butylbenzene	MG/KG						
VOCs	SW8260	N	Tetrachloroethene	MG/KG						
VOCs	SW8260	N	Toluene	MG/KG						
VOCs	SW8260	N	trans-1,2-Dichloroethene	MG/KG						
VOCs	SW8260	N	trans-1,3-Dichloropropene	MG/KG						
VOCs	SW8260	N	Trichloroethene	MG/KG						
VOCs	SW8260	N	Trichlorofluoromethane	MG/KG						
VOCs	SW8260	N	Vinyl chloride	MG/KG						
VOCs	SW8260	N	Xylene, o	MG/KG						
VOCs	SW8260	N	Xylenes (m&p)	MG/KG						

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
DECEMBER 2022 SAMPLING EVENT
ELITE VOGUE DRY CLEANERS
ROCHESTER, NEW YORK

				Location	QC		T-1		T-2	
				Lab Sample Delivery Group	22L1356		22L1356		22L1356	
				Field Sample Date	12/7/2022		12/8/2022		12/8/2022	
				Field Sample ID	Blank Soil		828164-T1/ Outside		828164-T2/ Inside	
				Qc Code	TB		FS		FS	
Method Class	**Method**	**Fraction**	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	SW8260	N	1,1,1-Trichloroethane	UG/L						
VOCs	SW8260	N	1,1,2,2-Tetrachloroethane	UG/L						
VOCs	SW8260	N	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	UG/L						
VOCs	SW8260	N	1,1,2-Trichloroethane	UG/L						
VOCs	SW8260	N	1,1-Dichloroethane	UG/L						
VOCs	SW8260	N	1,1-Dichloroethene	UG/L						
VOCs	SW8260	N	1,2,3-Trichlorobenzene	UG/L						
VOCs	SW8260	N	1,2,4-Trichlorobenzene	UG/L						
VOCs	SW8260	N	1,2,4-Trimethylbenzene	UG/L						
VOCs	SW8260	N	1,2-Dibromo-3-chloropropane	UG/L						
VOCs	SW8260	N	1,2-Dibromoethane	UG/L						
VOCs	SW8260	N	1,2-Dichlorobenzene	UG/L						
VOCs	SW8260	N	1,2-Dichloroethane	UG/L						
VOCs	SW8260	N	1,2-Dichloropropane	UG/L						
VOCs	SW8260	N	1,3,5-Trimethylbenzene	UG/L						
VOCs	SW8260	N	1,3-Dichlorobenzene	UG/L						
VOCs	SW8260	N	1,4-Dichlorobenzene	UG/L						
VOCs	SW8260	N	1,4-Dioxane	UG/L						
VOCs	SW8260	N	2-Butanone	UG/L						
VOCs	SW8260	N	2-Hexanone	UG/L						
VOCs	SW8260	N	4-iso-Propyltoluene	UG/L						
VOCs	SW8260	N	4-Methyl-2-pentanone	UG/L						
VOCs	SW8260	N	Acetic acid, methyl ester	UG/L						
VOCs	SW8260	N	Acetone	UG/L						
VOCs	SW8260	N	Benzene	UG/L						
VOCs	SW8260	N	Bromochloromethane	UG/L						
VOCs	SW8260	N	Bromodichloromethane	UG/L						
VOCs	SW8260	N	Bromoform	UG/L						
VOCs	SW8260	N	Bromomethane	UG/L						
VOCs	SW8260	N	Carbon disulfide	UG/L						
VOCs	SW8260	N	Carbon tetrachloride	UG/L						
VOCs	SW8260	N	Chlorobenzene	UG/L						
VOCs	SW8260	N	Chloroethane	UG/L						
VOCs	SW8260	N	Chloroform	UG/L						
VOCs	SW8260	N	Chloromethane	UG/L						
VOCs	SW8260	N	cis-1,2-Dichloroethene	UG/L						
VOCs	SW8260	N	cis-1,3-Dichloropropene	UG/L						
VOCs	SW8260	N	Cyclohexane	UG/L						
VOCs	SW8260	N	Dibromochloromethane	UG/L						
VOCs	SW8260	N	Dichlorodifluoromethane	UG/L						
VOCs	SW8260	N	Ethylbenzene	UG/L						
VOCs	SW8260	N	Isopropylbenzene	UG/L						
VOCs	SW8260	N	Methyl cyclohexane	UG/L						
VOCs	SW8260	N	Methyl Tertbutyl Ether	UG/L						
VOCs	SW8260	N	Methylene chloride	UG/L						
VOCs	SW8260	N	n-Butylbenzene	UG/L						

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
DECEMBER 2022 SAMPLING EVENT
ELITE VOGUE DRY CLEANERS
ROCHESTER, NEW YORK

			Location	QC		T-1		T-2	
			Lab Sample Delivery Group	22L1356		22L1356		22L1356	
			Field Sample Date	12/7/2022		12/8/2022		12/8/2022	
			Field Sample ID	Blank Soil		828164-T1/ Outside		828164-T2/ Inside	
			Qc Code	TB		FS		FS	
Method Class	**Method**	**Fraction**	**Parameter**	**Units**	Result Qualifier	Result Qualifier		Result Qualifier	
VOCs	SW8260	N	Naphthalene	UG/L					
VOCs	SW8260	N	Propylbenzene	UG/L					
VOCs	SW8260	N	sec-Butylbenzene	UG/L					
VOCs	SW8260	N	Styrene	UG/L					
VOCs	SW8260	N	tert-Butylbenzene	UG/L					
VOCs	SW8260	N	Tetrachloroethene	UG/L					
VOCs	SW8260	N	Toluene	UG/L					
VOCs	SW8260	N	trans-1,2-Dichloroethene	UG/L					
VOCs	SW8260	N	trans-1,3-Dichloropropene	UG/L					
VOCs	SW8260	N	Trichloroethene	UG/L					
VOCs	SW8260	N	Trichlorofluoromethane	UG/L					
VOCs	SW8260	N	Vinyl chloride	UG/L					
VOCs	SW8260	N	Xylene, o	UG/L					
VOCs	SW8260	N	Xylenes (m&p)	UG/L					
VOCs	SW8260	N	Xylenes, Total	UG/L					
VOCs	SW8260	N	1,1,1-Trichloroethane	MG/KG	0.002 U	11 U		0.24 U	
VOCs	SW8260	N	1,1,2,2-Tetrachloroethane	MG/KG	0.001 U	5.6 U		0.12 U	
VOCs	SW8260	N	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	MG/KG	0.01 U	23 U		0.49 U	
VOCs	SW8260	N	1,1,2-Trichloroethane	MG/KG	0.002 U	11 U		0.24 U	
VOCs	SW8260	N	1,1-Dichloroethane	MG/KG	0.002 U	11 U		0.24 U	
VOCs	SW8260	N	1,1-Dichloroethene	MG/KG	0.004 U	11 UJ		0.24 UJ	
VOCs	SW8260	N	1,2,3-Trichlorobenzene	MG/KG	0.002 U	56 U		1.2 U	
VOCs	SW8260	N	1,2,4-Trichlorobenzene	MG/KG	0.002 U	11 U		0.24 U	
VOCs	SW8260	N	1,2,4-Trimethylbenzene	MG/KG	0.002 U	550		8	
VOCs	SW8260	N	1,2-Dibromo-3-chloropropane	MG/KG	0.002 U	56 U		1.2 U	
VOCs	SW8260	N	1,2-Dibromoethane	MG/KG	0.001 U	5.6 U		0.12 U	
VOCs	SW8260	N	1,2-Dichlorobenzene	MG/KG	0.002 U	11 U		0.24 U	
VOCs	SW8260	N	1,2-Dichloroethane	MG/KG	0.002 U	11 U		0.24 U	
VOCs	SW8260	N	1,2-Dichloropropane	MG/KG	0.002 U	11 U		0.24 U	
VOCs	SW8260	N	1,3,5-Trimethylbenzene	MG/KG	0.002 U	200		0.83	
VOCs	SW8260	N	1,3-Dichlorobenzene	MG/KG	0.002 U	11 U		0.24 U	
VOCs	SW8260	N	1,4-Dichlorobenzene	MG/KG	0.002 U	11 U		0.24 U	
VOCs	SW8260	N	1,4-Dioxane	MG/KG	0.1 U	560 U		12 U	
VOCs	SW8260	N	2-Butanone	MG/KG	0.04 U	230 U		0.84 J	
VOCs	SW8260	N	2-Hexanone	MG/KG	0.02 U	110 U		2.4 U	
VOCs	SW8260	N	4-iso-Propyltoluene	MG/KG	0.002 U	39		0.46	
VOCs	SW8260	N	4-Methyl-2-pentanone	MG/KG	0.02 U	110 U		2.4 U	
VOCs	SW8260	N	Acetic acid, methyl ester	MG/KG	0.002 U	110 U		2.4 U	
VOCs	SW8260	N	Acetone	MG/KG	0.1 U	560 U		1.1 J+	
VOCs	SW8260	N	Benzene	MG/KG	0.002 U	11 U		0.24 U	
VOCs	SW8260	N	Bromochloromethane	MG/KG	0.002 U	11 U		0.24 U	
VOCs	SW8260	N	Bromodichloromethane	MG/KG	0.002 U	11 U		0.24 U	
VOCs	SW8260	N	Bromoform	MG/KG	0.002 U	23 U		0.49 U	
VOCs	SW8260	N	Bromomethane	MG/KG	0.01 U	23 U		0.49 U	
VOCs	SW8260	N	Carbon disulfide	MG/KG	0.01 U	56 U		1.2 U	
VOCs	SW8260	N	Carbon tetrachloride	MG/KG	0.002 U	11 U		0.24 U	

TABLE 2 - SUMMARY OF ANALYTICAL RESULTS
DATA USABILITY SUMMARY REPORT
DECEMBER 2022 SAMPLING EVENT
ELITE VOGUE DRY CLEANERS
ROCHESTER, NEW YORK

				Location	QC		T-1		T-2	
				Lab Sample Delivery Group	22L1356		22L1356		22L1356	
				Field Sample Date	12/7/2022		12/8/2022		12/8/2022	
				Field Sample ID	Blank Soil		828164-T1/ Outside		828164-T2/ Inside	
				Qc Code	TB		FS		FS	
Method Class	**Method**	**Fraction**	**Parameter**	**Units**	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs	SW8260	N	Chlorobenzene	MG/KG	0.002	U	11	U	0.24	U
VOCs	SW8260	N	Chloroethane	MG/KG	0.02	U	23	U	0.49	U
VOCs	SW8260	N	Chloroform	MG/KG	0.004	U	23	U	0.49	U
VOCs	SW8260	N	Chloromethane	MG/KG	0.01	U	23	U	0.49	U
VOCs	SW8260	N	cis-1,2-Dichloroethene	MG/KG	0.002	U	11	U	0.24	U
VOCs	SW8260	N	cis-1,3-Dichloropropene	MG/KG	0.001	U	5.6	U	0.12	U
VOCs	SW8260	N	Cyclohexane	MG/KG	0.01	U	23	U	0.49	U
VOCs	SW8260	N	Dibromochloromethane	MG/KG	0.001	U	5.6	U	0.12	U
VOCs	SW8260	N	Dichlorodifluoromethane	MG/KG	0.02	U	23	U	0.49	U
VOCs	SW8260	N	Ethylbenzene	MG/KG	0.002	U	6.2	J	0.071	J
VOCs	SW8260	N	Isopropylbenzene	MG/KG	0.002	U	13		0.25	
VOCs	SW8260	N	Methyl cyclohexane	MG/KG	0.002	U	11	U	0.066	J
VOCs	SW8260	N	Methyl Tertbutyl Ether	MG/KG	0.004	U	11	U	0.24	U
VOCs	SW8260	N	Methylene chloride	MG/KG	0.02	U	56	UJ	1.2	UJ
VOCs	SW8260	N	n-Butylbenzene	MG/KG	0.002	U	34		0.7	
VOCs	SW8260	N	Naphthalene	MG/KG	0.004	U	16	J	0.12	J
VOCs	SW8260	N	Propylbenzene	MG/KG	0.002	U	41		0.76	
VOCs	SW8260	N	sec-Butylbenzene	MG/KG	0.002	U	32		0.57	
VOCs	SW8260	N	Styrene	MG/KG	0.002	U	11	U	0.24	U
VOCs	SW8260	N	tert-Butylbenzene	MG/KG	0.002	U	5.6	J	0.088	J
VOCs	SW8260	N	Tetrachloroethene	MG/KG	0.002	U	11	U	0.093	J
VOCs	SW8260	N	Toluene	MG/KG	0.002	U	11	U	0.24	U
VOCs	SW8260	N	trans-1,2-Dichloroethene	MG/KG	0.002	U	11	U	0.24	U
VOCs	SW8260	N	trans-1,3-Dichloropropene	MG/KG	0.001	U	5.6	U	0.12	U
VOCs	SW8260	N	Trichloroethene	MG/KG	0.002	U	11	U	0.24	U
VOCs	SW8260	N	Trichlorofluoromethane	MG/KG	0.01	U	23	U	0.49	U
VOCs	SW8260	N	Vinyl chloride	MG/KG	0.01	U	23	U	0.49	U
VOCs	SW8260	N	Xylene, o	MG/KG	0.002	U	4.2	J	0.24	U
VOCs	SW8260	N	Xylenes (m&p)	MG/KG	0.004	U	33		0.13	J

TABLE 3 - SUMMARY OF QUALIFICATION ACTIONS
DATA USABILITY SUMMARY REPORT
DECEMBER 2022 SAMPLING EVENT
ELITE VOGUE DRY CLEANERS
ROCHESTER, NEW YORK

Lab SDG	Lab Sample ID	Field Sample ID	Method	Fraction	Parameter	Lab Result	Lab Qualifier	Final Result	Final Qualifier	Val Reason Code	Units
22L1356	22L1356-01	828164-T1/ Outside	SW8260	N	1,1-Dichloroethene	11	U	11	UJ	CCV%D	MG/KG
22L1356	22L1356-01	828164-T1/ Outside	SW8260	N	Methylene chloride	56	U	56	UJ	CCV%D	MG/KG
22L1356	22L1356-02	828164-T2/ Inside	SW8260	N	2-Butanone	0.84	J	0.84	J	CCV%D	MG/KG
22L1356	22L1356-02	828164-T2/ Inside	SW8260	N	Methylene chloride	1.2	U	1.2	UJ	CCV%D	MG/KG
22L1356	22L1356-02	828164-T2/ Inside	SW8260	N	Acetone	1.1	J	1.1	J+	CCV%D, LCSH	MG/KG
22L1356	22L1356-02	828164-T2/ Inside	SW8260	N	1,1-Dichloroethene	0.24	U	0.24	UJ	CCV%D	MG/KG
22L1356	22L1356-05	828164-MW03014	SW8260	N	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	100	U	100	UJ	CCV%D	UG/L
22L1356	22L1356-05	828164-MW03014	SW8260	N	Methylene chloride	250	U	250	UJ	CCV%D	UG/L
22L1356	22L1356-05	828164-MW03014	SW8260	N	Vinyl chloride	6,400	E	6,400	J+	E, CCV%D, LCSH	UG/L
22L1356	22L1356-05	828164-MW03014	SW8260	N	Bromomethane	100	U	100	UJ	CCV%D	UG/L
22L1356	22L1356-05	828164-MW03014	SW8260	N	cis-1,2-Dichloroethene	18,000	E	18,000	J	E	UG/L
22L1356	22L1356-05	828164-MW03014	SW8260	N	Naphthalene	60	JD	60	J+	CCV%D, LCSH	UG/L
22L1356	22L1356-05	828164-MW03014	SW8260	N	Propylbenzene	110	D	110	J+	LCSH	UG/L
22L1356	22L1356-06	828164-IW03012	SW8260	N	Methylene chloride	50	U	50	UJ	CCV%D	UG/L
22L1356	22L1356-06	828164-IW03012	SW8260	N	Vinyl chloride	150		150	J+	CCV%D, LCSH	UG/L
22L1356	22L1356-06	828164-IW03012	SW8260	N	Bromomethane	20	U	20	UJ	CCV%D	UG/L
22L1356	22L1356-06	828164-IW03012	SW8260	N	Acetone	81	J	81	J+	CCV%D, LCSH	UG/L
22L1356	22L1356-06	828164-IW03012	SW8260	N	Naphthalene	41	D	41	J+	CCV%D, LCSH	UG/L
22L1356	22L1356-06	828164-IW03012	SW8260	N	1,1,2-Trichloro-1,2,2-Trifluoroethane (Freon 113)	20	U	20	UJ	CCV%D	UG/L
22L1356	22L1356-06	828164-IW03012	SW8260	N	Propylbenzene	110	D	110	J+	LCSH	UG/L

Created by: KLD 3/23/23
Checked by: CLC 3/23/23

ATTACHMENT A
SUMMARY OF VALIDATION QC LIMITS FOR SURROGATES, SPIKES, AND DUPLICATES
BASED ON THE REGION 2 VALIDATION GUIDELINES

PARAMETER	QC TEST	ANALYTE	Soil (%R)	Soil (RPD)	WATER (%R)	Water (RPD)
Volatiles	Surrogate	All Surrogate Compounds	70 - 130		80 - 120	
	LCS	All Target Compounds	70 - 130		70 - 130	
	MS/MSD	All Target Compounds	70 - 130	35	70 - 130	20
	Field Duplicate	All Target Compounds		100		50

Notes:
LCS - Laboratory Control Sample
MS/MSD - Matrix spike/ Matrix Spike Duplicate
RPD = Relative percent difference
%R = percent recovery
QC Limits are based on USEPA Region II Data Validation Guidelines and Project QA/QC Objectives
Surrogates for air samples are not specified in the Region II Data Validation Guidelines (2016)

DATA USABILITY SUMMARY REPORT
DECEMBER 2022 SAMPLING EVENT
ELITE VOGUE DRY CLEANERS
ROCHESTER, NEW YORK

ATTACHMENT B

VOCs

NYSDEC DUSR PROJECT CHEMIST REVIEW RECORD

Project: Elite Vogue

Method: 8260D

Laboratory: Pace Longmeadow **SDG(s):** 22L1356

Date: 2/2/2023

Reviewer: Casey Cormier

Review Level [X] NYSDEC DUSR [ ] USEPA Region II Guideline

Check if Reviewed

1. [✓] **Case Narrative Review and COC/Data Package Completeness**
   Were problems noted? YES [✓] NO [ ]

   Are Field Sample IDs and Locations assigned correctly? YES [✓] NO [ ]

   Were all the samples on the COC analyzed for the requested analyses? YES [✓] NO [ ]

2. [✓] **Holding time and Sample Collection**
   All samples were analyzed within the 14-day holding time. YES [✓] NO [ ]

3. [✓] **QC Blanks**
   Are method blanks free of contamination? YES [✓] NO [ ]

   Are Trip blanks free of contamination? YES [✓] NO [ ]

   Are Rinse blanks free of contamination? YES [ ] NO [ ] NA [✓]

4. [✓] **Instrument Tuning – Data Package Narrative Review**
   Did the laboratory narrative identify any results that were not within method criteria?
   YES [ ] NO [✓]

   If yes, use professional judgment to evaluate data and qualify results if needed

5. [✓] **Instrument Calibration – Data Package Narrative Review**
   Did the laboratory narrative identify compounds that were not within criteria in the initial and/or continuing calibration standards? YES [✓] NO [ ]

   Initial Calibration %RSD = 20% **(30% for 1,1-DCE, chloroform, 1,2-DCP, toluene, ethylbenzene, VC)**
   Initial Avg RRF and Continuing RRF should be ≥ 0.05 and 0.10 for Chloromethane, 1,1-Dichloroethane, Bromoform and 0.30 for Chlorobenzene and 1,1,2,2-Tetrachloroethane

   Continuing Calibration %D = 20%

   Did the laboratory qualify results based on initial or continuing calibration exceedances?
   YES [✓] NO [ ]

If yes to above, use professional judgment to evaluate data and qualify results if needed

See QC Backup

6. **Internal Standards – Data Package Narrative Review**
(Area Limits = -50% to +100%, RTs within 30 seconds of daily CCAL standard (or ICAL mid-point if samples follow ICAL)

Did the laboratory narrative identify any sample internal standards that were not within criteria?
YES ☐ NO ☑

Did the laboratory qualify results based on internal standard exceedances? YES ☐ NO ☑
If yes to above, use professional judgment to evaluate data and qualify results if needed

7. ☑ **Surrogate Recovery** - Region II limits (water 80-120%, soil 70-130%)
Were all results within Region II limits? YES ☑ NO ☐

8. ☑ **Matrix Spike** - Region II limits (water and soil 70-130%, water RPD 20, soil RPD 35)
Were MS/MSDs submitted/analyzed? YES ☐ NO ☑

Were all results within the Region II limits? YES ☐ NO ☐ NA ☑

9. ☑ **Duplicates** - Region II Limits (water RPD 50, soil RPD 100)
Were Field Duplicates submitted/analyzed? YES ☐ NO ☑

Were all results within Region II limits? (soil RPD<100, water RPD<50) YES ☐ NO ☐ NA ☑

10. ☑ **Laboratory Control Sample Results** - Region II (Water and soil 70-130%)
Were all results within Region II control limits? YES ☐ NO ☑

See QC Backup

11. ☑ **Reporting Limits:** Were samples analyzed at a dilution? YES ☑ NO ☐

All field samples analyzed at various dilutions

12. ☑ **Raw Data Review and Calculation Checks**

13. ☑ **Electronic Data Review and Edits**
Does the EDD match the Form Is? YES ☑ NO ☐

14. ☑ **Tables and TIC Review**
Table 1 (Samples and Analytical Methods)
Table 2 (Analytical Results)
Table 3 (Qualification Actions)
Were all tables produced and reviewed? YES ☑ NO ☐

Table 4 (TICs) Did lab report TICs? YES ☐ NO ☑

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

SW-846 8260D

Qualifications:

E

Reported result is estimated. Value reported over verified calibration range.

Analyte & Samples(s) Qualified:

cis-1,2-Dichloroethylene
22L1356-05[828164-MW03014]

Vinyl Chloride
22L1356-05[828164-MW03014]

L-02

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

Analyte & Samples(s) Qualified:

1,2,3-Trichlorobenzene
B325928-BS1, B325928-BSD1, S080837-CCV1

1,4-Dioxane
B325928-BS1, B325928-BSD1, S080837-CCV1

Chloromethane
B325138-BS1, B325138-BSD1, S080828-CCV1

Methyl Acetate
B325138-BS1, B325138-BSD1, B325928-BS1, B325928-BSD1, S080828-CCV1, S080837-CCV1

Vinyl Chloride
B325138-BS1, B325138-BSD1, S080828-CCV1

L-06

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

Analyte & Samples(s) Qualified:

Naphthalene
22L1356-05[828164-MW03014], 22L1356-06[828164-IW03012], B325928-BS1, B325928-BSD1, S080837-CCV1

Vinyl Chloride
22L1356-05[828164-MW03014], 22L1356-06[828164-IW03012], B325928-BS1, B325928-BSD1, S080837-CCV1

L-07

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:

1,1,2,2-Tetrachloroethane
B325928-BS1

RL-11

Elevated reporting limit due to high concentration of target compounds.

Analyte & Samples(s) Qualified:

22L1356-01[828164-T1/ Outside], 22L1356-02[828164-T2/ Inside], 22L1356-05[828164-MW03014], 22L1356-06[828164-IW03012]

RL-13

Elevated reporting limit due to high concentration of non-target compounds.

Analyte & Samples(s) Qualified:

22L1356-01[828164-T1/ Outside], 22L1356-02[828164-T2/ Inside]

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

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:

J/UJ CCV%D

1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)
22L1356-04[Trip Blank/Water], 22L1356-05[828164-MW03014], 22L1356-06[828164-IW03012], B325928-BLK1, B325928-BS1, B325928-BSD1, S080837-CCV1

1,1-Dichloroethylene
22L1356-01[828164-T1/ Outside], 22L1356-02[828164-T2/ Inside], B325138-BLK1, B325138-BS1, B325138-BSD1, S080828-CCV1

1,2-Dibromo-3-chloropropane (DBCP)
22L1356-03[Blank Soil], B325510-BLK1, B325510-BS1, B325510-BSD1, S080548-CCV1

Bromomethane
22L1356-04[Trip Blank/Water], 22L1356-05[828164-MW03014], 22L1356-06[828164-IW03012], B325928-BLK1, B325928-BS1, B325928-BSD1, S080837-CCV1

Methylene Chloride
22L1356-01[828164-T1/ Outside], 22L1356-02[828164-T2/ Inside], 22L1356-04[Trip Blank/Water], 22L1356-05[828164-MW03014], 22L1356-06[828164-IW03012], B325138-BLK1, B325138-BS1, B325138-BSD1, B325928-BLK1, B325928-BS1, B325928-BSD1, S080828-CCV1, S080837-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: J CCV%D

2-Butanone (MEK)
22L1356-02[828164-T2/ Inside], B325138-BS1, B325138-BSD1, S080828-CCV1

Acetone
22L1356-02[828164-T2/ Inside], 22L1356-06[828164-IW03012], B325138-BS1, B325138-BSD1, B325928-BS1, B325928-BSD1, S080828-CCV1, S080837-CCV1

Naphthalene
22L1356-05[828164-MW03014], 22L1356-06[828164-IW03012], B325928-BS1, B325928-BSD1, S080837-CCV1

Vinyl Chloride
22L1356-05[828164-MW03014], 22L1356-06[828164-IW03012], B325928-BS1, B325928-BSD1, S080837-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:

1,2,3-Trichlorobenzene
B325138-BS1, B325138-BSD1, B325928-BS1, B325928-BSD1, S080828-CCV1, S080837-CCV1

1,4-Dioxane
B325928-BS1, B325928-BSD1, S080837-CCV1

2-Butanone (MEK)
B325928-BS1, B325928-BSD1, S080837-CCV1

2-Hexanone (MBK)
B325138-BS1, B325138-BSD1, B325928-BS1, B325928-BSD1, S080828-CCV1, S080837-CCV1

4-Methyl-2-pentanone (MIBK)
B325138-BS1, B325138-BSD1, B325928-BS1, B325928-BSD1, S080828-CCV1, S080837-CCV1

Chloroethane
B325138-BS1, B325138-BSD1, S080828-CCV1

Chloromethane
B325138-BS1, B325138-BSD1, S080828-CCV1

Methyl Acetate
B325138-BS1, B325138-BSD1, B325928-BS1, B325928-BSD1, S080828-CCV1, S080837-CCV1

Vinyl Chloride
B325138-BS1, B325138-BSD1, S080828-CCV1

con-test® A Pace Analytical® Laboratory
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Rochester, NY | Sample Description: | Work Order: 22L1356

Date Received: 12/9/2022

Field Sample #: Trip Blank/Water | Sampled: 12/7/2022 00:00

Sample ID: 22L1356-04

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	50	2.0	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
Benzene	ND	1.0	0.20	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
Bromochloromethane	ND	1.0	0.28	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
Bromodichloromethane	ND	0.50	0.16	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
Bromoform	ND	2.0	0.41	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
Bromomethane	ND	2.0	1.3	µg/L	1	V-05	SW-846 8260D	12/15/22	12/16/22 17:19	EEH
2-Butanone (MEK)	ND	20	1.7	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
n-Butylbenzene	ND	1.0	0.15	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
sec-Butylbenzene	ND	1.0	0.11	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
tert-Butylbenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
Carbon Disulfide	ND	5.0	1.6	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
Carbon Tetrachloride	ND	5.0	0.16	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
Chlorobenzene	ND	1.0	0.12	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
Chlorodibromomethane	ND	0.50	0.20	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
Chloroethane	ND	2.0	0.34	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
Chloroform	0.92	2.0	0.14	µg/L	1	J	SW-846 8260D	12/15/22	12/16/22 17:19	EEH
Chloromethane	ND	2.0	0.50	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
Cyclohexane	ND	5.0	1.8	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	5.0	0.85	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
1,2-Dibromoethane (EDB)	ND	0.50	0.16	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
1,2-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
1,3-Dichlorobenzene	ND	1.0	0.14	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
1,4-Dichlorobenzene	ND	1.0	0.13	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	0.16	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
1,1-Dichloroethane	ND	1.0	0.14	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
1,2-Dichloroethane	ND	1.0	0.30	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
1,1-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
cis-1,2-Dichloroethylene	ND	1.0	0.14	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
trans-1,2-Dichloroethylene	ND	1.0	0.17	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
1,2-Dichloropropane	ND	1.0	0.19	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
cis-1,3-Dichloropropene	ND	0.50	0.16	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
trans-1,3-Dichloropropene	ND	0.50	0.14	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
1,4-Dioxane	ND	50	18	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
Ethylbenzene	ND	1.0	0.21	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
2-Hexanone (MBK)	ND	10	1.2	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
Isopropylbenzene (Cumene)	ND	1.0	0.11	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	0.097	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
Methyl Acetate	ND	1.0	0.61	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	0.17	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
Methyl Cyclohexane	ND	1.0	0.16	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
Methylene Chloride	ND	5.0	0.18	µg/L	1	V-05	SW-846 8260D	12/15/22	12/16/22 17:19	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	1.3	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
Naphthalene	ND	2.0	0.24	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH
n-Propylbenzene	ND	1.0	0.086	µg/L	1		SW-846 8260D	12/15/22	12/16/22 17:19	EEH

Sample conc >> TB conc, no quals

con-test® A Pace Analytical® Laboratory

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

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B325138 - SW-846 5035											
Blank (B325138-BLK1)				Prepared: 12/08/22 Analyzed: 12/16/22							
Trichloroethylene	ND	0.050	mg/Kg wet								
Trichlorofluoromethane (Freon 11)	ND	0.10	mg/Kg wet								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	0.050	mg/Kg wet								
1,2,4-Trimethylbenzene	ND	0.050	mg/Kg wet								
1,3,5-Trimethylbenzene	ND	0.050	mg/Kg wet								
Vinyl Chloride	ND	0.10	mg/Kg wet								
m+p Xylene	ND	0.10	mg/Kg wet								
o-Xylene	ND	0.050	mg/Kg wet								
Xylenes (total)	ND	0.0010	mg/Kg wet								
Surrogate: 1,2-Dichloroethane-d4	*0.0265*		mg/Kg wet	0.0250		106	70-130				
Surrogate: 1,2-Dichloroethane-d4	*0.0265*		mg/Kg wet	0.0250		106	70-130				
Surrogate: Toluene-d8	*0.0246*		mg/Kg wet	0.0250		98.4	70-130				
Surrogate: Toluene-d8	*0.0246*		mg/Kg wet	0.0250		98.4	70-130				
Surrogate: 4-Bromofluorobenzene	*0.0249*		mg/Kg wet	0.0250		99.6	70-130				
Surrogate: 4-Bromofluorobenzene	*0.0249*		mg/Kg wet	0.0250		99.6	70-130				
LCS (B325138-BS1)				Prepared: 12/08/22 Analyzed: 12/16/22							
Acetone 22L1356-02 J+ LCSH	7.06	2.5	mg/Kg wet	5.00		141	70-160			V-06	†
Benzene	0.496	0.050	mg/Kg wet	0.500		99.3	70-130				
Bromochloromethane	0.574	0.050	mg/Kg wet	0.500		115	70-130				
Bromodichloromethane	0.514	0.050	mg/Kg wet	0.500		103	70-130				
Bromoform	0.502	0.050	mg/Kg wet	0.500		100	70-130				
Bromomethane	0.522	0.10	mg/Kg wet	0.500		104	40-130				†
2-Butanone (MEK)	6.50	1.0	mg/Kg wet	5.00		130	70-160			V-06	†
n-Butylbenzene	0.492	0.050	mg/Kg wet	0.500		98.3	70-130				
sec-Butylbenzene	0.472	0.050	mg/Kg wet	0.500		94.3	70-130				
tert-Butylbenzene	0.500	0.050	mg/Kg wet	0.500		99.9	70-160				†
Carbon Disulfide	5.03	0.25	mg/Kg wet	5.00		101	70-130				
Carbon Tetrachloride	0.508	0.050	mg/Kg wet	0.500		102	70-130				
Chlorobenzene	0.536	0.050	mg/Kg wet	0.500		107	70-130				
Chlorodibromomethane	0.526	0.025	mg/Kg wet	0.500		105	70-130				
Chloroethane	0.647	0.10	mg/Kg wet	0.500		129	70-130			V-20	
Chloroform	0.518	0.10	mg/Kg wet	0.500		104	70-130				
Chloromethane Samples ND, no quals	0.675	0.10	mg/Kg wet	0.500		**135**	70-130	*		L-02, V-20	
Cyclohexane	0.604	0.10	mg/Kg wet	0.500		121	70-130				
1,2-Dibromo-3-chloropropane (DBCP)	0.536	0.25	mg/Kg wet	0.500		107	70-130				
1,2-Dibromoethane (EDB)	0.552	0.025	mg/Kg wet	0.500		110	70-130				
1,2-Dichlorobenzene	0.528	0.050	mg/Kg wet	0.500		106	70-130				
1,3-Dichlorobenzene	0.505	0.050	mg/Kg wet	0.500		101	70-130				
1,4-Dichlorobenzene	0.509	0.050	mg/Kg wet	0.500		102	70-130				
Dichlorodifluoromethane (Freon 12)	0.520	0.10	mg/Kg wet	0.500		104	40-160				†
1,1-Dichloroethane	0.508	0.050	mg/Kg wet	0.500		102	70-130				
1,2-Dichloroethane	0.528	0.050	mg/Kg wet	0.500		106	70-130				
1,1-Dichloroethylene	0.511	0.050	mg/Kg wet	0.500		102	70-130			V-05	
cis-1,2-Dichloroethylene	0.548	0.050	mg/Kg wet	0.500		110	70-130				
trans-1,2-Dichloroethylene	0.498	0.050	mg/Kg wet	0.500		99.6	70-130				
1,2-Dichloropropane	0.511	0.050	mg/Kg wet	0.500		102	70-130				
cis-1,3-Dichloropropene	0.496	0.025	mg/Kg wet	0.500		99.1	70-130				
trans-1,3-Dichloropropene	0.478	0.025	mg/Kg wet	0.500		95.7	70-130				
1,4-Dioxane	5.67	2.5	mg/Kg wet	5.00		113	40-160				†
Ethylbenzene	0.526	0.050	mg/Kg wet	0.500		105	70-130				
2-Hexanone (MBK) Samples ND, no quals	6.78	0.50	mg/Kg wet	5.00		136	70-160			V-20	†

Associated with samples 22L1356-01 & -02

con-test® A Pace Analytical® Laboratory

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

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B325138 - SW-846 5035												
LCS (B325138-BS1)				Prepared: 12/08/22 Analyzed: 12/16/22								
Isopropylbenzene (Cumene)	0.521	0.050	mg/Kg wet	0.500		104		70-130				
p-Isopropyltoluene (p-Cymene)	0.490	0.050	mg/Kg wet	0.500		97.9		70-130				
Methyl Acetate Samples ND, no quals	0.690	0.50	mg/Kg wet	0.500		**138**	*	70-130			L-02, V-20	
Methyl tert-Butyl Ether (MTBE)	0.556	0.050	mg/Kg wet	0.500		111		70-130				
Methyl Cyclohexane	0.549	0.050	mg/Kg wet	0.500		110		70-130				
Methylene Chloride	0.403	0.25	mg/Kg wet	0.500		80.6		40-160			V-05	†
4-Methyl-2-pentanone (MIBK) Samples ND, no quals	6.57	0.50	mg/Kg wet	5.00		131		70-160			V-20	†
Naphthalene	0.547	0.10	mg/Kg wet	0.500		109		40-130				†
n-Propylbenzene	0.522	0.050	mg/Kg wet	0.500		104		70-130				
Styrene	0.521	0.050	mg/Kg wet	0.500		104		70-130				
1,1,2,2-Tetrachloroethane	0.580	0.025	mg/Kg wet	0.500		116		70-130				
Tetrachloroethylene	0.528	0.050	mg/Kg wet	0.500		106		70-130				
Toluene	0.514	0.050	mg/Kg wet	0.500		103		70-130				
1,2,3-Trichlorobenzene	0.610	0.25	mg/Kg wet	0.500		122		70-130			V-20	
1,2,4-Trichlorobenzene	0.524	0.050	mg/Kg wet	0.500		105		70-130				
1,1,1-Trichloroethane	0.518	0.050	mg/Kg wet	0.500		104		70-130				
1,1,2-Trichloroethane	0.566	0.050	mg/Kg wet	0.500		113		70-130				
Trichloroethylene	0.548	0.050	mg/Kg wet	0.500		110		70-130				
Trichlorofluoromethane (Freon 11)	0.542	0.10	mg/Kg wet	0.500		108		70-130				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.470	0.050	mg/Kg wet	0.500		93.9		70-130				
1,2,4-Trimethylbenzene	0.494	0.050	mg/Kg wet	0.500		98.8		70-130				
1,3,5-Trimethylbenzene	0.534	0.050	mg/Kg wet	0.500		107		70-130				
Vinyl Chloride Samples ND, no quals	1.49	0.10	mg/Kg wet	0.500		**297**	*	40-130			L-02, V-20	†
m+p Xylene	1.08	0.10	mg/Kg wet	1.00		108		70-130				
o-Xylene	0.542	0.050	mg/Kg wet	0.500		108		70-130				
Surrogate: 1,2-Dichloroethane-d4	*0.0261*		mg/Kg wet	0.0250		104		70-130				
Surrogate: 1,2-Dichloroethane-d4	*0.0261*		mg/Kg wet	0.0250		104		70-130				
Surrogate: Toluene-d8	*0.0249*		mg/Kg wet	0.0250		99.5		70-130				
Surrogate: Toluene-d8	*0.0249*		mg/Kg wet	0.0250		99.5		70-130				
Surrogate: 4-Bromofluorobenzene	*0.0263*		mg/Kg wet	0.0250		105		70-130				
Surrogate: 4-Bromofluorobenzene	*0.0263*		mg/Kg wet	0.0250		105		70-130				
LCS Dup (B325138-BSD1)				Prepared: 12/08/22 Analyzed: 12/16/22								
Acetone 22L1356-02 J+ LCSH	7.20	2.5	mg/Kg wet	5.00		144		70-160	1.98	25	V-06	†
Benzene	0.502	0.050	mg/Kg wet	0.500		100		70-130	1.20	25		
Bromochloromethane	0.576	0.050	mg/Kg wet	0.500		115		70-130	0.348	25		
Bromodichloromethane	0.521	0.050	mg/Kg wet	0.500		104		70-130	1.35	25		
Bromoform	0.522	0.050	mg/Kg wet	0.500		104		70-130	4.10	25		
Bromomethane	0.592	0.10	mg/Kg wet	0.500		118		40-130	12.7	25		†
2-Butanone (MEK)	6.42	1.0	mg/Kg wet	5.00		128		70-160	1.31	25	V-06	†
n-Butylbenzene	0.500	0.050	mg/Kg wet	0.500		100		70-130	1.81	25		
sec-Butylbenzene	0.504	0.050	mg/Kg wet	0.500		101		70-130	6.66	25		
tert-Butylbenzene	0.513	0.050	mg/Kg wet	0.500		103		70-160	2.67	25		†
Carbon Disulfide	5.04	0.25	mg/Kg wet	5.00		101		70-130	0.278	25		
Carbon Tetrachloride	0.502	0.050	mg/Kg wet	0.500		100		70-130	0.990	25		
Chlorobenzene	0.545	0.050	mg/Kg wet	0.500		109		70-130	1.57	25		
Chlorodibromomethane	0.512	0.025	mg/Kg wet	0.500		102		70-130	2.89	25		
Chloroethane	0.610	0.10	mg/Kg wet	0.500		122		70-130	5.89	25	V-20	
Chloroform	0.535	0.10	mg/Kg wet	0.500		107		70-130	3.23	25		
Chloromethane Samples ND, no quals	0.676	0.10	mg/Kg wet	0.500		**135**	*	70-130	0.222	25	L-02, V-20	
Cyclohexane	0.609	0.10	mg/Kg wet	0.500		122		70-130	0.907	25		
1,2-Dibromo-3-chloropropane (DBCP)	0.547	0.25	mg/Kg wet	0.500		109		70-130	2.03	25		

con-test® A Pace Analytical® Laboratory

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

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B325138 - SW-846 5035												
LCS Dup (B325138-BSD1)				Prepared: 12/08/22 Analyzed: 12/16/22								
1,2-Dibromoethane (EDB)	0.540	0.025	mg/Kg wet	0.500		108		70-130	2.11	25		
1,2-Dichlorobenzene	0.534	0.050	mg/Kg wet	0.500		107		70-130	0.942	25		
1,3-Dichlorobenzene	0.524	0.050	mg/Kg wet	0.500		105		70-130	3.69	25		
1,4-Dichlorobenzene	0.509	0.050	mg/Kg wet	0.500		102		70-130	0.00	25		
Dichlorodifluoromethane (Freon 12)	0.534	0.10	mg/Kg wet	0.500		107		40-160	2.65	25		†
1,1-Dichloroethane	0.512	0.050	mg/Kg wet	0.500		102		70-130	0.588	25		
1,2-Dichloroethane	0.525	0.050	mg/Kg wet	0.500		105		70-130	0.664	25		
1,1-Dichloroethylene	0.580	0.050	mg/Kg wet	0.500		116		70-130	12.7	25	V-05	
cis-1,2-Dichloroethylene	0.540	0.050	mg/Kg wet	0.500		108		70-130	1.47	25		
trans-1,2-Dichloroethylene	0.496	0.050	mg/Kg wet	0.500		99.1		70-130	0.503	25		
1,2-Dichloropropane	0.515	0.050	mg/Kg wet	0.500		103		70-130	0.780	25		
cis-1,3-Dichloropropene	0.498	0.025	mg/Kg wet	0.500		99.6		70-130	0.503	25		
trans-1,3-Dichloropropene	0.470	0.025	mg/Kg wet	0.500		94.0		70-130	1.79	25		
1,4-Dioxane	5.88	2.5	mg/Kg wet	5.00		118		40-160	3.71	50		† ‡
Ethylbenzene	0.541	0.050	mg/Kg wet	0.500		108		70-130	2.81	25		
2-Hexanone (MBK) Samples ND, no quals	6.67	0.50	mg/Kg wet	5.00		133		70-160	1.71	25	V-20	†
Isopropylbenzene (Cumene)	0.537	0.050	mg/Kg wet	0.500		107		70-130	3.02	25		
p-Isopropyltoluene (p-Cymene)	0.511	0.050	mg/Kg wet	0.500		102		70-130	4.30	25		
Methyl Acetate Samples ND, no quals	0.728	0.50	mg/Kg wet	0.500		146	*	70-130	5.43	25	L-02, V-20	
Methyl tert-Butyl Ether (MTBE)	0.538	0.050	mg/Kg wet	0.500		108		70-130	3.29	25		
Methyl Cyclohexane	0.572	0.050	mg/Kg wet	0.500		114		70-130	4.02	25		
Methylene Chloride	0.408	0.25	mg/Kg wet	0.500		81.7		40-160	1.36	25	V-05	†
4-Methyl-2-pentanone (MIBK)	6.47	0.50	mg/Kg wet	5.00		129		70-160	1.58	25	V-20	†
Naphthalene	0.570	0.10	mg/Kg wet	0.500		114		40-130	4.21	25		†
n-Propylbenzene	0.536	0.050	mg/Kg wet	0.500		107		70-130	2.74	25		
Styrene	0.530	0.050	mg/Kg wet	0.500		106		70-130	1.71	25		
1,1,2,2-Tetrachloroethane	0.582	0.025	mg/Kg wet	0.500		116		70-130	0.430	25		
Tetrachloroethylene	0.530	0.050	mg/Kg wet	0.500		106		70-130	0.378	25		
Toluene	0.522	0.050	mg/Kg wet	0.500		104		70-130	1.45	25		
1,2,3-Trichlorobenzene	0.608	0.25	mg/Kg wet	0.500		122		70-130	0.246	25	V-20	
1,2,4-Trichlorobenzene	0.534	0.050	mg/Kg wet	0.500		107		70-130	1.89	25		
1,1,1-Trichloroethane	0.517	0.050	mg/Kg wet	0.500		103		70-130	0.0967	25		
1,1,2-Trichloroethane	0.574	0.050	mg/Kg wet	0.500		115		70-130	1.32	25		
Trichloroethylene	0.560	0.050	mg/Kg wet	0.500		112		70-130	1.99	25		
Trichlorofluoromethane (Freon 11)	0.564	0.10	mg/Kg wet	0.500		113		70-130	3.89	25		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	0.458	0.050	mg/Kg wet	0.500		91.6		70-130	2.48	25		
1,2,4-Trimethylbenzene	0.516	0.050	mg/Kg wet	0.500		103		70-130	4.36	25		
1,3,5-Trimethylbenzene	0.568	0.050	mg/Kg wet	0.500		114		70-130	6.08	25		
Vinyl Chloride Samples ND, no quals	1.38	0.10	mg/Kg wet	0.500		276	*	40-130	7.61	25	L-02, V-20	†
m+p Xylene	1.10	0.10	mg/Kg wet	1.00		110		70-130	1.89	25		
o-Xylene	0.553	0.050	mg/Kg wet	0.500		111		70-130	1.92	25		
Surrogate: 1,2-Dichloroethane-d4	*0.0264*		mg/Kg wet	0.0250		106		70-130				
Surrogate: 1,2-Dichloroethane-d4	*0.0264*		mg/Kg wet	0.0250		106		70-130				
Surrogate: Toluene-d8	*0.0246*		mg/Kg wet	0.0250		98.2		70-130				
Surrogate: Toluene-d8	*0.0246*		mg/Kg wet	0.0250		98.2		70-130				
Surrogate: 4-Bromofluorobenzene	*0.0262*		mg/Kg wet	0.0250		105		70-130				
Surrogate: 4-Bromofluorobenzene	*0.0262*		mg/Kg wet	0.0250		105		70-130				

con-test® A Pace Analytical® Laboratory
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B325928 - SW-846 5030B											
Blank (B325928-BLK1)				Prepared: 12/15/22 Analyzed: 12/16/22							
Trichloroethylene	ND	1.0	µg/L								
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L								
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	ND	1.0	µg/L							V-05	
1,2,4-Trimethylbenzene	ND	1.0	µg/L								
1,3,5-Trimethylbenzene	ND	1.0	µg/L								
Vinyl Chloride	ND	2.0	µg/L								
m+p Xylene	ND	2.0	µg/L								
o-Xylene	ND	1.0	µg/L								
Xylenes (total)	ND	1.0	µg/L								
Surrogate: 1,2-Dichloroethane-d4	*23.1*		µg/L	25.0		92.4	70-130				
Surrogate: 1,2-Dichloroethane-d4	*23.1*		µg/L	25.0		92.4	70-130				
Surrogate: Toluene-d8	*24.2*		µg/L	25.0		96.6	70-130				
Surrogate: Toluene-d8	*24.2*		µg/L	25.0		96.6	70-130				
Surrogate: 4-Bromofluorobenzene	*25.8*		µg/L	25.0		103	70-130				
Surrogate: 4-Bromofluorobenzene	*25.8*		µg/L	25.0		103	70-130				
LCS (B325928-BS1)				Prepared: 12/15/22 Analyzed: 12/16/22							
Acetone	143	50	µg/L	100		143	70-160			V-06	†
Benzene	9.69	1.0	µg/L	10.0		96.9	70-130				
Bromochloromethane	10.5	1.0	µg/L	10.0		105	70-130				
Bromodichloromethane	10.7	0.50	µg/L	10.0		107	70-130				
Bromoform	11.9	1.0	µg/L	10.0		119	70-130				
Bromomethane	9.50	2.0	µg/L	10.0		95.0	40-160			V-05	†
2-Butanone (MEK)	136	20	µg/L	100		136	40-160			V-20	†
n-Butylbenzene	10.5	1.0	µg/L	10.0		105	70-130				
sec-Butylbenzene	10.3	1.0	µg/L	10.0		103	70-130				
tert-Butylbenzene	10.8	1.0	µg/L	10.0		108	70-130				
Carbon Disulfide	92.3	5.0	µg/L	100		92.3	70-130				
Carbon Tetrachloride	9.74	5.0	µg/L	10.0		97.4	70-130				
Chlorobenzene	11.7	1.0	µg/L	10.0		117	70-130				
Chlorodibromomethane	10.9	0.50	µg/L	10.0		109	70-130				
Chloroethane	11.1	2.0	µg/L	10.0		111	70-130				
Chloroform	10.0	2.0	µg/L	10.0		100	70-130				
Chloromethane	11.6	2.0	µg/L	10.0		116	40-160				†
Cyclohexane	11.6	5.0	µg/L	10.0		116	70-130				
1,2-Dibromo-3-chloropropane (DBCP)	11.7	5.0	µg/L	10.0		117	70-130				
1,2-Dibromoethane (EDB)	11.6	0.50	µg/L	10.0		116	70-130				
1,2-Dichlorobenzene	11.2	1.0	µg/L	10.0		112	70-130				
1,3-Dichlorobenzene	10.9	1.0	µg/L	10.0		109	70-130				
1,4-Dichlorobenzene	10.4	1.0	µg/L	10.0		104	70-130				
Dichlorodifluoromethane (Freon 12)	9.46	2.0	µg/L	10.0		94.6	40-160				†
1,1-Dichloroethane	10.0	1.0	µg/L	10.0		100	70-130				
1,2-Dichloroethane	10.8	1.0	µg/L	10.0		108	70-130				
1,1-Dichloroethylene	10.5	1.0	µg/L	10.0		105	70-130				
cis-1,2-Dichloroethylene	10.2	1.0	µg/L	10.0		102	70-130				
trans-1,2-Dichloroethylene	9.30	1.0	µg/L	10.0		93.0	70-130				
1,2-Dichloropropane	11.0	1.0	µg/L	10.0		110	70-130				
cis-1,3-Dichloropropene	10.7	0.50	µg/L	10.0		107	70-130				
trans-1,3-Dichloropropene	10.6	0.50	µg/L	10.0		106	70-130				
1,4-Dioxane	163	50	µg/L	100		**163**	* 40-130			L-02, V-20	†
Ethylbenzene	11.6	1.0	µg/L	10.0		116	70-130				
2-Hexanone (MBK)	153	10	µg/L	100		153	70-160			V-20	†

Associated with samples 22L1356-05 & -06

Sample 22L1356-06 J+ LCSH

Samples ND, no quals

Samples ND, no quals

Samples ND, no quals

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

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B325928 - SW-846 5030B												
LCS (B325928-BS1)				Prepared: 12/15/22 Analyzed: 12/16/22								
Isopropylbenzene (Cumene)	11.5	1.0	µg/L	10.0		115		70-130				
p-Isopropyltoluene (p-Cymene)	10.6	1.0	µg/L	10.0		106		70-130				
Methyl Acetate Samples ND, no quals	15.4	1.0	µg/L	10.0		**154**	*	70-130			L-02, V-20	
Methyl tert-Butyl Ether (MTBE)	11.3	1.0	µg/L	10.0		113		70-130				
Methyl Cyclohexane	11.6	1.0	µg/L	10.0		116		70-130				
Methylene Chloride	7.35	5.0	µg/L	10.0		73.5		70-130			V-05	
4-Methyl-2-pentanone (MIBK)	144	10	µg/L	100		144		70-160			V-20	†
Naphthalene J+ LCSH	13.8	2.0	µg/L	10.0		**138**	*	40-130			L-06, V-06	†
n-Propylbenzene J+ LCSH	11.6	1.0	µg/L	10.0		116		70-130				
Styrene	11.7	1.0	µg/L	10.0		117		70-130				
1,1,2,2-Tetrachloroethane Samples ND, no quals	13.1	0.50	µg/L	10.0		**131**	*	70-130			L-07	
Tetrachloroethylene	11.8	1.0	µg/L	10.0		118		70-130				
Toluene	11.0	1.0	µg/L	10.0		110		70-130				
1,2,3-Trichlorobenzene Samples ND, no quals	14.4	5.0	µg/L	10.0		**144**	*	70-130			L-02, V-20	
1,2,4-Trichlorobenzene	12.7	1.0	µg/L	10.0		127		70-130				
1,1,1-Trichloroethane	9.99	1.0	µg/L	10.0		99.9		70-130				
1,1,2-Trichloroethane	12.0	1.0	µg/L	10.0		120		70-130				
Trichloroethylene	11.3	1.0	µg/L	10.0		113		70-130				
Trichlorofluoromethane (Freon 11)	10.1	2.0	µg/L	10.0		101		70-130				
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	8.52	1.0	µg/L	10.0		85.2		70-130			V-05	
1,2,4-Trimethylbenzene	10.6	1.0	µg/L	10.0		106		70-130				
1,3,5-Trimethylbenzene	12.3	1.0	µg/L	10.0		123		70-130				
Vinyl Chloride J+ LCSH	18.1	2.0	µg/L	10.0		**181**	*	40-160			L-06, V-06	†
m+p Xylene	23.6	2.0	µg/L	20.0		118		70-130				
o-Xylene	12.1	1.0	µg/L	10.0		121		70-130				
Xylenes (total)	35.7	1.0	µg/L	30.0		119		0-200				
Surrogate: 1,2-Dichloroethane-d4	*23.7*		µg/L	25.0		94.7		70-130				
Surrogate: 1,2-Dichloroethane-d4	*23.7*		µg/L	25.0		94.7		70-130				
Surrogate: Toluene-d8	*25.0*		µg/L	25.0		100		70-130				
Surrogate: Toluene-d8	*25.0*		µg/L	25.0		100		70-130				
Surrogate: 4-Bromofluorobenzene	*27.0*		µg/L	25.0		108		70-130				
Surrogate: 4-Bromofluorobenzene	*27.0*		µg/L	25.0		108		70-130				
LCS Dup (B325928-BSD1)				Prepared: 12/15/22 Analyzed: 12/16/22								
Acetone Sample 22L1356-06 J+ LCSH	140	50	µg/L	100		140		70-160	2.12	25	V-06	†
Benzene	9.79	1.0	µg/L	10.0		97.9		70-130	1.03	25		
Bromochloromethane	11.0	1.0	µg/L	10.0		110		70-130	4.10	25		
Bromodichloromethane	10.6	0.50	µg/L	10.0		106		70-130	0.842	25		
Bromoform	11.5	1.0	µg/L	10.0		115		70-130	3.51	25		
Bromomethane	10.5	2.0	µg/L	10.0		105		40-160	10.2	25	V-05	†
2-Butanone (MEK) Samples ND, no quals	139	20	µg/L	100		139		40-160	1.70	25	V-20	†
n-Butylbenzene	10.3	1.0	µg/L	10.0		103		70-130	2.60	25		
sec-Butylbenzene	10.2	1.0	µg/L	10.0		102		70-130	1.36	25		
tert-Butylbenzene	10.6	1.0	µg/L	10.0		106		70-130	1.96	25		
Carbon Disulfide	95.2	5.0	µg/L	100		95.2		70-130	3.01	25		
Carbon Tetrachloride	9.88	5.0	µg/L	10.0		98.8		70-130	1.43	25		
Chlorobenzene	11.2	1.0	µg/L	10.0		112		70-130	4.37	25		
Chlorodibromomethane	10.9	0.50	µg/L	10.0		109		70-130	0.275	25		
Chloroethane	12.9	2.0	µg/L	10.0		129		70-130	14.9	25		
Chloroform	10.1	2.0	µg/L	10.0		101		70-130	0.597	25		
Chloromethane Samples ND, no quals	13.9	2.0	µg/L	10.0		139		40-160	17.7	25		†
Cyclohexane	11.9	5.0	µg/L	10.0		119		70-130	2.56	25		

con-test®
A Pace Analytical® Laboratory

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

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B325928 - SW-846 5030B												
LCS Dup (B325928-BSD1)				Prepared: 12/15/22 Analyzed: 12/16/22								
1,2-Dibromo-3-chloropropane (DBCP)	11.4	5.0	µg/L	10.0		114		70-130	2.77	25		
1,2-Dibromoethane (EDB)	11.7	0.50	µg/L	10.0		117		70-130	1.12	25		
1,2-Dichlorobenzene	11.2	1.0	µg/L	10.0		112		70-130	0.536	25		
1,3-Dichlorobenzene	11.0	1.0	µg/L	10.0		110		70-130	1.18	25		
1,4-Dichlorobenzene	10.7	1.0	µg/L	10.0		107		70-130	2.46	25		
Dichlorodifluoromethane (Freon 12)	9.39	2.0	µg/L	10.0		93.9		40-160	0.743	25		†
1,1-Dichloroethane	9.84	1.0	µg/L	10.0		98.4		70-130	1.71	25		
1,2-Dichloroethane	11.0	1.0	µg/L	10.0		110		70-130	1.65	25		
1,1-Dichloroethylene	10.0	1.0	µg/L	10.0		100		70-130	5.16	25		
cis-1,2-Dichloroethylene	10.5	1.0	µg/L	10.0		105		70-130	2.62	25		
trans-1,2-Dichloroethylene	9.52	1.0	µg/L	10.0		95.2		70-130	2.34	25		
1,2-Dichloropropane	11.2	1.0	µg/L	10.0		112		70-130	1.89	25		
cis-1,3-Dichloropropene	10.7	0.50	µg/L	10.0		107		70-130	0.375	25		
trans-1,3-Dichloropropene	10.5	0.50	µg/L	10.0		105		70-130	0.0948	25		
1,4-Dioxane Sample ND, no quals	169	50	µg/L	100		**169**	*	40-130	3.88	50	L-02, V-20	† ‡
Ethylbenzene	11.3	1.0	µg/L	10.0		113		70-130	2.70	25		
2-Hexanone (MBK)	155	10	µg/L	100		155		70-160	1.32	25	V-20	†
Isopropylbenzene (Cumene)	11.2	1.0	µg/L	10.0		112		70-130	2.99	25		
p-Isopropyltoluene (p-Cymene)	10.6	1.0	µg/L	10.0		106		70-130	0.755	25		
Methyl Acetate Samples ND, no quals	15.3	1.0	µg/L	10.0		**153**	*	70-130	0.781	25	L-02, V-20	
Methyl tert-Butyl Ether (MTBE)	11.6	1.0	µg/L	10.0		116		70-130	2.54	25		
Methyl Cyclohexane	11.9	1.0	µg/L	10.0		119		70-130	2.47	25		
Methylene Chloride	7.85	5.0	µg/L	10.0		78.5		70-130	6.58	25	V-05	
4-Methyl-2-pentanone (MIBK)	147	10	µg/L	100		147		70-160	1.99	25	V-20	†
Naphthalene J+ LCSH	13.4	2.0	µg/L	10.0		**134**	*	40-130	2.71	25	L-06, V-06	†
n-Propylbenzene	11.2	1.0	µg/L	10.0		112		70-130	3.60	25		
Styrene	11.6	1.0	µg/L	10.0		116		70-130	1.29	25		
1,1,2,2-Tetrachloroethane	12.2	0.50	µg/L	10.0		122		70-130	6.73	25		
Tetrachloroethylene	11.7	1.0	µg/L	10.0		117		70-130	0.849	25		
Toluene	10.8	1.0	µg/L	10.0		108		70-130	2.29	25		
1,2,3-Trichlorobenzene Sample ND, no quals	14.7	5.0	µg/L	10.0		**147**	*	70-130	1.79	25	L-02, V-20	
1,2,4-Trichlorobenzene	12.7	1.0	µg/L	10.0		127		70-130	0.236	25		
1,1,1-Trichloroethane	10.2	1.0	µg/L	10.0		102		70-130	2.28	25		
1,1,2-Trichloroethane	12.2	1.0	µg/L	10.0		122		70-130	1.24	25		
Trichloroethylene	11.3	1.0	µg/L	10.0		113		70-130	0.531	25		
Trichlorofluoromethane (Freon 11)	9.90	2.0	µg/L	10.0		99.0		70-130	2.20	25		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	9.00	1.0	µg/L	10.0		90.0		70-130	5.48	25	V-05	
1,2,4-Trimethylbenzene	10.5	1.0	µg/L	10.0		105		70-130	1.42	25		
1,3,5-Trimethylbenzene	12.0	1.0	µg/L	10.0		120		70-130	3.04	25		
Vinyl Chloride J+ LCSH	21.0	2.0	µg/L	10.0		**210**	*	40-160	15.1	25	L-06, V-06	†
m+p Xylene	23.0	2.0	µg/L	20.0		115		70-130	2.27	25		
o-Xylene	11.6	1.0	µg/L	10.0		116		70-130	4.48	25		
Xylenes (total)	34.6	1.0	µg/L	30.0		115		0-200	3.02			
Surrogate: 1,2-Dichloroethane-d4	*24.1*		µg/L	25.0		96.2		70-130				
Surrogate: 1,2-Dichloroethane-d4	*24.1*		µg/L	25.0		96.2		70-130				
Surrogate: Toluene-d8	*24.7*		µg/L	25.0		99.0		70-130				
Surrogate: Toluene-d8	*24.7*		µg/L	25.0		99.0		70-130				
Surrogate: 4-Bromofluorobenzene	*26.6*		µg/L	25.0		107		70-130				
Surrogate: 4-Bromofluorobenzene	*26.6*		µg/L	25.0		107		70-130				

CONTINUING CALIBRATION VERIFICATION

SW-846 8260D

Laboratory:	Pace New England	Work Order:	22L1356
Client:	NYDEC_Wood - Portland, ME	Project:	Elite Vogue Dry Cleaners - CO 146927
Instrument ID:	GCMSVOA5	Calibration:	2200387
Lab File ID:	E22V34959.D	Calibration Date:	07/07/22 12:43
Sequence:	S080837	Injection Date:	12/16/22
Lab Sample ID:	S080837-CCV1	Injection Time:	13:41

		CONC. (µg/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Acetone	A	100	130	9.101406E-02	0.1180393		29.7	20	*
Benzene	A	10.0	8.73	1.063173	0.9285223		-12.7	20	
Bromochloromethane	A	10.0	9.68	0.1808582	0.1749947		-3.2	20	
Bromodichloromethane	A	10.0	9.42	0.225037	0.2119117		-5.8	20	
Bromoform	A	10.0	10.5	0.2532449	0.2650461		4.7	20	
Bromomethane	A	10.0	7.91	0.2376271	0.1880434		-20.9	20	*
2-Butanone (MEK)	A	100	121	8.919309E-02	0.1078566		20.9	20	*
n-Butylbenzene	A	10.0	9.10	1.134508	1.032523		-9.0	20	
sec-Butylbenzene	A	10.0	8.97	1.591628	1.4272		-10.3	20	
tert-Butylbenzene	A	10.0	9.49	1.104901	1.048244		-5.1	20	
Carbon Disulfide	A	100	82.1	0.812931	0.6671689		-17.9	20	
Carbon Tetrachloride	A	10.0	8.75	0.3842661	0.3364023		-12.5	20	
Chlorobenzene	A	10.0	10.3	1.070716	1.10278		3.0	20	
Chlorodibromomethane	A	10.0	10.2	0.1767305	0.179565		1.6	20	
Chloroethane	A	10.0	11.1	0.2105891	0.2335905		10.9	20	
Chloroform	A	10.0	9.15	0.4863716	0.4452537		-8.5	20	
Chloromethane	A	10.0	11.7	0.2406294	0.2821228		17.2	20	
Cyclohexane	A	10.0	10.2	0.363488	0.3727476		2.5	20	
1,2-Dibromo-3-chloropropane (DBCP)	A	10.0	10.8	5.308492E-02	5.719212E-02		7.7	20	
1,2-Dibromoethane (EDB)	A	10.0	10.6	0.1635486	0.1735266		6.1	20	
1,2-Dichlorobenzene	A	10.0	10.0	0.6779016	0.6779886		0.01	20	
1,3-Dichlorobenzene	A	10.0	9.95	0.7754591	0.7716259		-0.5	20	
1,4-Dichlorobenzene	A	10.0	9.79	0.8084011	0.7910882		-2.1	20	
Dichlorodifluoromethane (Freon 12)	A	10.0	8.30	0.4022097	0.3336787		-17.0	20	
1,1-Dichloroethane	A	10.0	8.90	0.4334408	0.3855962		-11.0	20	
1,2-Dichloroethane	A	10.0	10.1	0.2350683	0.2377564		1.1	20	
1,1-Dichloroethylene	A	10.0	8.71	0.5529267	0.4813452		-12.9	20	
cis-1,2-Dichloroethylene	A	10.0	9.36	0.3344812	0.3129748		-6.4	20	
trans-1,2-Dichloroethylene	A	10.0	8.34	0.3529381	0.2942251		-16.6	20	

7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8260D

Laboratory:	Pace New England	Work Order:	22L1356
Client:	NYDEC_Wood - Portland, ME	Project:	Elite Vogue Dry Cleaners - CO 146927
Instrument ID:	GCMSVOA5	Calibration:	2200387
Lab File ID:	E22V34959.D	Calibration Date:	07/07/22 12:43
Sequence:	S080837	Injection Date:	12/16/22
Lab Sample ID:	S080837-CCV1	Injection Time:	13:41

		CONC. (µg/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
1,2-Dichloropropane	A	10.0	10.0	0.1612025	0.1620498		0.5	20	
cis-1,3-Dichloropropene	A	10.0	9.65	0.2342481	0.2260723		-3.5	20	
trans-1,3-Dichloropropene	A	10.0	9.66	0.1836711	0.1774159		-3.4	20	
1,4-Dioxane	A	100	150	1.714151E-03	2.578462E-03		50.4	20	*
Ethylbenzene	A	10.0	10.2	1.660609	1.691473		1.9	20	
2-Hexanone (MBK)	A	100	145	0.0842195	0.1224625		45.4	20	*
Isopropylbenzene (Cumene)	A	10.0	10.1	1.689125	1.712121		1.4	20	
p-Isopropyltoluene (p-Cymene)	A	10.0	9.33	1.265358	1.180062		-6.7	20	
Methyl Acetate	A	10.0	14.3	0.2091366	0.2996492		43.3	20	*
Methyl tert-Butyl Ether (MTBE)	A	10.0	10.4	0.5700071	0.590689		3.6	20	
Methyl Cyclohexane	A	10.0	10.5	0.2508493	0.26233		4.6	20	
Methylene Chloride	A	10.0	7.28	0.4397685	0.3200223		-27.2	20	*
4-Methyl-2-pentanone (MIBK)	A	100	138	0.1236491	0.1710556		38.3	20	*
Naphthalene	A	10.0	13.0	0.6376513	0.8271953		29.7	20	*
n-Propylbenzene	A	10.0	10.3	1.848886	1.907033		3.1	20	
Styrene	A	10.0	10.6	0.9584286	1.013248		5.7	20	
1,1,2,2-Tetrachloroethane	A	10.0	11.8	0.4058312	0.4801255		18.3	20	
Tetrachloroethylene	A	10.0	10.4	0.2086485	0.2172356		4.1	20	
Toluene	A	10.0	9.56	0.7544425	0.7212821		-4.4	20	
1,2,3-Trichlorobenzene	A	10.0	12.9	0.2240913	0.2885864		28.8	20	*
1,2,4-Trichlorobenzene	A	10.0	11.6	0.2997155	0.3469505		15.8	20	
1,1,1-Trichloroethane	A	10.0	8.97	0.4067151	0.3648308		-10.3	20	
1,1,2-Trichloroethane	A	10.0	11.1	0.1442387	0.1607243		11.4	20	
Trichloroethylene	A	10.0	10.1	0.18644	0.1878399		0.8	20	
Trichlorofluoromethane (Freon 11)	A	10.0	8.60	0.6601166	0.5676462		-14.0	20	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	A	10.0	7.65	0.3506838	0.2682663		-23.5	20	*
1,2,4-Trimethylbenzene	A	10.0	9.45	1.235382	1.167147		-5.5	20	
1,3,5-Trimethylbenzene	A	10.0	10.9	1.182357	1.289538		9.1	20	

CONTINUING CALIBRATION VERIFICATION

SW-846 8260D

Laboratory:	Pace New England	Work Order:	22L1356
Client:	NYDEC_Wood - Portland, ME	Project:	Elite Vogue Dry Cleaners - CO 146927
Instrument ID:	GCMSVOA5	Calibration:	2200387
Lab File ID:	E22V34959.D	Calibration Date:	07/07/22 12:43
Sequence:	S080837	Injection Date:	12/16/22
Lab Sample ID:	S080837-CCV1	Injection Time:	13:41

		CONC. (µg/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Vinyl Chloride	L	10.0	17.1	0.2956986	0.3495202		70.7	20	*
m+p Xylene	A	20.0	20.6	1.329008	1.368006		2.9	20	
o-Xylene	A	10.0	10.5	1.284711	1.350906		5.2	20	
1,2-Dichloroethane-d4	A	25.0	23.5	0.5146619	0.4832332		-6.1		
Toluene-d8	A	25.0	24.7	1.158716	1.146135		-1.1		
4-Bromofluorobenzene	A	25.0	27.0	0.8438215	0.9112969		8.0		

Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

* Values outside of QC limits

CONTINUING CALIBRATION VERIFICATION

SW-846 8260D

Laboratory:	Pace New England	Work Order:	22L1356
Client:	NYDEC_Wood - Portland, ME	Project:	Elite Vogue Dry Cleaners - CO 146927
Instrument ID:	GCMSVOA5	Calibration:	2200387
Lab File ID:	E22V34930.D	Calibration Date:	07/07/22 12:43
Sequence:	S080828	Injection Date:	12/16/22
Lab Sample ID:	S080828-CCV1	Injection Time:	00:21

		CONC. (µg/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
Acetone	A	100	138	9.101406E-02	0.1255154		37.9	20	*
Benzene	A	10.0	9.91	1.063173	1.053846		-0.9	20	
Bromochloromethane	A	10.0	11.6	0.1808582	0.2089843		15.6	20	
Bromodichloromethane	A	10.0	9.88	0.225037	0.2223904		-1.2	20	
Bromoform	A	10.0	10.1	0.2532449	0.2557053		1.0	20	
Bromomethane	A	10.0	8.96	0.2376271	0.2129136		-10.4	20	
2-Butanone (MEK)	A	100	123	8.919309E-02	0.1096784		23.0	20	*
n-Butylbenzene	A	10.0	10.1	1.134508	1.142139		0.7	20	
sec-Butylbenzene	A	10.0	10.0	1.591628	1.594125		0.2	20	
tert-Butylbenzene	A	10.0	10.1	1.104901	1.118871		1.3	20	
Carbon Disulfide	A	100	99.9	0.812931	0.8118282		-0.1	20	
Carbon Tetrachloride	A	10.0	10.2	0.3842661	0.3926768		2.2	20	
Chlorobenzene	A	10.0	10.9	1.070716	1.170958		9.4	20	
Chlorodibromomethane	A	10.0	10.2	0.1767305	0.179339		1.5	20	
Chloroethane	A	10.0	13.8	0.2105891	0.2912662		38.3	20	*
Chloroform	A	10.0	10.5	0.4863716	0.510292		4.9	20	
Chloromethane	A	10.0	13.2	0.2406294	0.3169945		31.7	20	*
Cyclohexane	A	10.0	11.9	0.363488	0.4321831		18.9	20	
1,2-Dibromo-3-chloropropane (DBCP)	A	10.0	9.91	5.308492E-02	0.0525917		-0.9	20	
1,2-Dibromoethane (EDB)	A	10.0	10.7	0.1635486	0.1743307		6.6	20	
1,2-Dichlorobenzene	A	10.0	10.6	0.6779016	0.7199097		6.2	20	
1,3-Dichlorobenzene	A	10.0	10.6	0.7754591	0.8247641		6.4	20	
1,4-Dichlorobenzene	A	10.0	10.0	0.8084011	0.8108872		0.3	20	
Dichlorodifluoromethane (Freon 12)	A	10.0	10.5	0.4022097	0.4229639		5.2	20	
1,1-Dichloroethane	A	10.0	10.4	0.4334408	0.4485603		3.5	20	
1,2-Dichloroethane	A	10.0	10.6	0.2350683	0.2484811		5.7	20	
1,1-Dichloroethylene	A	10.0	7.88	0.5529267	0.4357875		-21.2	20	*
cis-1,2-Dichloroethylene	A	10.0	10.7	0.3344812	0.3566937		6.6	20	
trans-1,2-Dichloroethylene	A	10.0	9.55	0.3529381	0.3371487		-4.5	20	

7 - FORM VII

CONTINUING CALIBRATION VERIFICATION

SW-846 8260D

Laboratory:	Pace New England	Work Order:	22L1356
Client:	NYDEC_Wood - Portland, ME	Project:	Elite Vogue Dry Cleaners - CO 146927
Instrument ID:	GCMSVOA5	Calibration:	2200387
Lab File ID:	E22V34930.D	Calibration Date:	07/07/22 12:43
Sequence:	S080828	Injection Date:	12/16/22
Lab Sample ID:	S080828-CCV1	Injection Time:	00:21

		CONC. (µg/L)		RESPONSE FACTOR			% DIFF / DRIFT		
COMPOUND	TYPE	STD	CCV	ICAL	CCV	MIN (#)	CCV	LIMIT (#)	
1,2-Dichloropropane	A	10.0	10.2	0.1612025	0.1650991		2.4	20	
cis-1,3-Dichloropropene	A	10.0	9.51	0.2342481	0.2227965		-4.9	20	
trans-1,3-Dichloropropene	A	10.0	9.41	0.1836711	0.1727944		-5.9	20	
1,4-Dioxane	A	100	120	1.714151E-03	2.052741E-03		19.8	20	
Ethylbenzene	A	10.0	10.5	1.660609	1.751071		5.4	20	
2-Hexanone (MBK)	A	100	124	0.0842195	0.1047893		24.4	20	*
Isopropylbenzene (Cumene)	A	10.0	10.5	1.689125	1.775766		5.1	20	
p-Isopropyltoluene (p-Cymene)	A	10.0	10.3	1.265358	1.302845		3.0	20	
Methyl Acetate	A	10.0	13.2	0.2091366	0.2758637		31.9	20	*
Methyl tert-Butyl Ether (MTBE)	A	10.0	10.9	0.5700071	0.6213888		9.0	20	
Methyl Cyclohexane	A	10.0	11.2	0.2508493	0.2810218		12.0	20	
Methylene Chloride	A	10.0	7.67	0.4397685	0.3371182		-23.3	20	*
4-Methyl-2-pentanone (MIBK)	A	100	123	0.1236491	0.151827		22.8	20	*
Naphthalene	A	10.0	10.8	0.6376513	0.6867128		7.7	20	
n-Propylbenzene	A	10.0	10.7	1.848886	1.975624		6.9	20	
Styrene	A	10.0	10.6	0.9584286	1.020235		6.4	20	
1,1,2,2-Tetrachloroethane	A	10.0	11.3	0.4058312	0.4571632		12.6	20	
Tetrachloroethylene	A	10.0	10.4	0.2086485	0.2168745		3.9	20	
Toluene	A	10.0	10.2	0.7544425	0.7680148		1.8	20	
1,2,3-Trichlorobenzene	A	10.0	12.1	0.2240913	0.2711232		21.0	20	*
1,2,4-Trichlorobenzene	A	10.0	10.7	0.2997155	0.3194531		6.6	20	
1,1,1-Trichloroethane	A	10.0	10.2	0.4067151	0.4142118		1.8	20	
1,1,2-Trichloroethane	A	10.0	11.1	0.1442387	0.1600096		10.9	20	
Trichloroethylene	A	10.0	11.1	0.18644	0.2075414		11.3	20	
Trichlorofluoromethane (Freon 11)	A	10.0	11.1	0.6601166	0.7304956		10.7	20	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	A	10.0	9.21	0.3506838	0.3230458		-7.9	20	
1,2,4-Trimethylbenzene	A	10.0	10.5	1.235382	1.291869		4.6	20	
1,3,5-Trimethylbenzene	A	10.0	11.2	1.182357	1.323655		12.0	20	

ATTACHMENT 3

TOD RESULTS

PO Box 358
Freeport, Illinois 61032
(815) 650-2230

VIA EMAIL: Charles.Staples@wsp.com

December 20, 2022

Mr. Chuck Staples, Associate Scientist
WSP, USA
511 Congress Street; Suite 200
Portland, ME 04101
Phone: (207) 775-5401

Subject: Provect-OX® Total Oxidant Demand Test Report
MACTEC Elite Vogue site, Rochester New York
Provectus Project No. PEP20-0054

Dear Chuck,

Provectus Environmental Products, Inc. (Provectus) is pleased to present WPS, USA (WSP) with the total oxidant demand (TOD) test results for the MACTEC Elite Vogue site in Rochester, NY. The objective of TOD testing was to determine the amount of Provect-OX® required to oxidize natural and anthropogenic sources of organic compounds in site soil samples. Site-specific information, such as site maps, boring logs and analytical data, was provided prior to testing, and utilized to develop bench testing recommendations. Bench testing was conducted in partnership with ReSolution Partners, LLC (Resolution Partners) located in Madison, Wisconsin.

Background

Constituents of interest (COI) for this project are chlorinated solvent volatile organic compounds (VOC), primarily tetrachloroethene (PCE) and trichloroethene (TCE)as well as trimethylbenzene. A total of 2 soil samples were received on December 9, 2022 at ReSolution Partners, LLC. The soil was received in good condition on ice and provided in 500 mL clear glass straight-sided jars. The soil samples selected by the project team for TOD testing, the sample information and soil descriptions are shown in **Table 1**.

Table 1. Samples Received for Bench Testing

Sample Name	Sample Date	Sample Description
828164-T1	12/8/2022	Silt, fine to coarse sand, few clay, occasional pebble, non-plastic, dark greyish brown, strong solvent odor, moist
828164-T2	12/8/2022	Silt, fine to coarse sand, trace fine gravel, brick pieces, non-plastic, dark grey, strong solvent odor, moist

Total Oxidant Demand Methodology

PO Box 358
Freeport, Illinois 61032
(815) 650-2230

Total oxidant demand testing conformed with procedures consistent with those discussed by Haselow et. al 2003. The samples were tested using a soil to liquid ratio of 30 g soil to 75 mL liquid. The liquid used for the soil testing included deionized water. Each soil sample was lightly and quickly homogenized to obtain consistent results for potential replicates and to minimize loss of any volatile compounds that may contribute to the TOD.

The samples were set up with Provect-OX® dosages of 0 g/kg, 2,5 g/kg, 17.5 g/kg and 125 g/kg on December 12, 2022. Each sample was reacted in a closed container at ambient temperature for 7 days. During the incubation period, the sample reaction containers were occasionally agitated to expose solid particle surfaces to amendments. Samples were centrifuged and/or filtered to assist in the visual titration process. Residual persulfate was determined by back titration of a standard ferrous ammonium sulfate (FAS) solution using a standard potassium permanganate solution. The titrations were performed on December 19, 2022.

Analysis of residual persulfate in samples with large excesses of the Provect-OX® can show a positive bias for the TOD because the series of complex post-activated persulfate products. The sample with the least amount of residual persulfate is likely to have the least positive bias. Therefore, the result for the dosage having the lowest positive test for Provect-OX® is reported for TOD for each soil sample.

Total Oxidant Demand Results

The TOD values ranged from 1.4 to 1.6 grams of Provect-OX® per kilogram of soil (**Table 2**). The soil samples exhibited low TOD values based on our experience with similar sites (i.e., silts, sands, pebble / gravel, and solvent odor). Based on the TOD result, Provect-OX® is a viable and cost-effective remedial technology and should be considered for field-scale remediation.

Table 2. Provect-OX® TOD (7 day) Results

Sample Name	Provect-OX TOD (grams per kilogram of soil)
828164-T1	1.4
828164-T2	1.6

Please contact us if you have any questions regarding the tests or bench report. Thank you for your interest in our products, support and technologies.

Sincerely,

Provectus Environmental Products, Inc.